

DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT

Project No. 562189
SCH No. 2017051034

SUBJECT: MISSION BAY PARK MASTER PLAN – FIESTA ISLAND AMENDMENT: CITY COUNCIL APPROVAL AND ADOPTION of an Amendment to the Mission Bay Park Master Plan and the City of San Diego’s Local Costal Program, as further discussed below (“Fiesta Island Amendment”).

The City of San Diego Planning Department proposes the following Fiesta Island Amendment:

PROJECT LOCATION: Fiesta Island is located in the eastern half of Mission Bay Park. To the east of Fiesta Island is Interstate 5 (I-5) and the railroad tracks. Just north of the Fiesta Island Road causeway is a small cove and the outfall of Tecolote Creek into Mission Bay. Further north, to the east of Fiesta Island, across the water, East Mission Bay Drive runs north-south and is adjacent and parallel to I-5. To the southwest and south of Fiesta Island is SeaWorld San Diego and the Hubbs-SeaWorld Research Institute. To the south and southeast of Fiesta Island is South Shores Park.

Fiesta Island includes approximately 470 acres and 6 miles of shoreline. Fiesta Island is connected to the mainland only by the Fiesta Island Road causeway which intersects East Mission Bay Drive. Sea World Drive is the primary thoroughfare that provides access to East Mission Bay Drive, I-5 to the east, and the beach communities to the west.

PROJECT DESCRIPTION: The proposed project is an amendment to the Mission Bay Park Master Plan (Master Plan) to update the land uses and vision for Fiesta Island. The proposed project includes maps, diagrams, and supporting policy recommendations in the Master Plan that will guide future improvements to the approximately 470-acre planning area in four subareas. The proposed project includes two options, Option A and Option B, with different elements in one of the four subareas, the Southwest Subarea.

The project includes recommendations for Island-wide improvements to recreation facilities, access and circulation, changes to parking, construction of soft-surface trails and paved multi-use paths linking different areas together, grading and landscaping, habitat improvements, water quality improvements, eelgrass bed plantings, enhancements to directional signs, and utilities upgrades.

Proposed roadway improvements include the realignment of Fiesta Island Road between the North Subarea and the Central Subarea, and a realignment in the Southeast Subarea; new crossover roadways between the North Subarea and the Central Subarea, and between the Central Subarea and the Southeastern Subarea;

new roadway segments in the interior of Fiesta Island; a change in the one-way travel direction on Fiesta Island Road from counterclockwise to clockwise; a widening of the causeway onto Fiesta Island; the construction of a roundabout at the entrance to Fiesta Island; and enhancement of the existing roadway.

Fiesta Island improvements are discussed within four subareas:

North Subarea: The North Subarea would remain preserved habitat and a habitat buffer area with recreation limited to use of the perimeter roadway and permitted beach areas for swimming, fishing, and parking. Along the northern side of the crossover roadway there would be a small area for nature viewing and wildlife observation. The existing least tern nesting site, berm, and fencing surrounding it would remain. A wetland habitat area would be expanded adjacent to the least tern nesting site. Dredging is planned to occur on both the western and eastern side of the island to support new wetland habitat and improve water circulation by creating a channel that cuts through the Island.

Central Subarea: Planned improvements in the Central Subarea include relocating the existing sand management area (currently in the Southeast Subarea). The unimproved land surrounding the sand management area would be enhanced through the creation of a habitat preserve, sand dune habitat, and native vegetation plantings. No changes are planned to the existing San Diego Youth Aquatic Center and the Fiesta Island Youth Camp, except an existing habitat area is identified within the northern portion of the lease area. Creation of new berms is planned to provide wind protection and arena seating as part of the sand recreation area. The sand arena used for recreational events is also identified as a location for an emergency large animal shelter. New sand volleyball courts and other sand-oriented recreation facilities would be created in the expanded sand recreation area.

Southeast Subarea: Planned improvements to the Southeast Subarea include two active recreation parks, plazas and public restrooms, a group day use and primitive camp area, public parking areas, playgrounds, public art, ADA shore access at Enchanted Cove and Hidden Anchorage, an expanded fenced habitat, and wetland restoration. Creation of large habitat preserve is planned to the west of the realigned Fiesta Island Road and north of the southern shore of the Southeast Subarea. Wetland restoration would occur in the water near the outfall of Tecolote Creek, on the north side of the causeway, and would include a portion of the beach on the Island. The remaining land area would be revegetated with coastal landscape habitat allowing for passive recreation uses, trails, and the multi-use path.

Southwest Subarea – Option A: Option A for the Southwest Subarea includes a fenced off-leash dog park and shoreline park. New developed facilities are also planned as part of the dog park, including a small dog fenced off-leash area, a dog special event area, a special event obstacle course, and a canine competition staging area. Other facilities for the dog park would be created as part of the improvements, such as a series of fences and double-gates to help contain off-leash dogs. A new parking lot would also be constructed as part of the developed dog park facilities. Recreational trails would be enhanced throughout the fenced off-leash dog area.

A new roadway that extends south to a public parking area with trailer spaces would provide access to a non-motorized boat storage, nearby beach watercraft storage areas, and shore launching area for non-motorized watercrafts. Adjacent to the

boat storage, a plaza, a playground, a lifeguard tower, and public restrooms would all be located next to a supervised swimming beach along with ADA shore access as well as a pier, ramp, and floating dock. The existing Stony Point least tern nesting site would remain, as would the existing seasonal closure fencing and buffer. Eelgrass restoration is planned off the southeast shore of Stony Point.

Southwest Subarea – Option B: Option B for the Southwest Subarea includes a fenced off-leash dog park and shoreline park. New developed facilities would include a proposed small dog fenced off-leash area. Other facilities for the dog park would be created as part of the improvements, such as a series of fences and double-gates to help contain off-leash dogs. Recreational trails would be enhanced throughout the fenced off-leash dog area. A view pavilion, plaza, and seating are also proposed as part of the trail improvements. Two new parking lots would also be constructed, one near the new developed dog park facility and one near Hidden Anchorage Bay adjacent to Fiesta Island Road. The existing Stony Point least tern nesting site would remain, as would the existing seasonal closure fencing and buffer. Eelgrass restoration is also planned off the southeast shore of Stony Point.

The Mission Bay Park Master Plan – Fiesta Island Amendment is available on the Planning Department's website at:

<http://fiestaislandamendment.com/>

ENVIRONMENTAL DETERMINATION:

Based on the analysis conducted for the project described above, the City of San Diego has prepared the following Draft Program Environmental Impact Report (PEIR) in accordance with the California Environmental Quality Act (CEQA). The analysis conducted identified that the Fiesta Island Amendment could result in significant and unavoidable impacts related to **Transportation/Circulation (Vehicular Traffic Circulation)**, and less than significant impacts with implementation of mitigation measures related to **Air Quality (Construction Emissions)** and **Biological Resources (Sensitive Species, Sensitive Habitats, Wetlands, Migratory Corridors, Conservation Planning [Environmental Plans], and Edge Effects)**. All other impacts analyzed in the Draft PEIR would be less than significant.

The purpose of this document is to inform decision-makers, agencies, and the public of the significant environmental effects that could result if the Fiesta Island Amendment is approved and implemented, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

PUBLIC REVIEW DISTRIBUTION:

The following agencies, organizations, and individuals received a copy or notice of the Draft PEIR and were invited to comment on its accuracy and sufficiency. Copies of the Draft PEIR and any technical appendices may be reviewed at the Planning Department, located at 9485 Aero Drive, San Diego, CA 92123, or purchased for the cost of reproduction.

FEDERAL GOVERNMENT

U.S. Environmental Protection Agency (19)
U.S. Fish and Wildlife Service (23)
U.S. Army Corps of Engineers (26)

STATE OF CALIFORNIA

Caltrans, District 11 (31)
California Department of Fish & Wildlife (32)
Department of Toxic Substance Control (39)
California Regional Water Quality Control Board (44)
State Clearinghouse (46A)
California Coastal Commission (47)
California Air Resources Board (49)
California Transportation Commission (51)
California Department of Transportation (51A)
California Department of Transportation (51B)
Native American Heritage Commission (56)
State Lands Commission

COUNTY OF SAN DIEGO

Air Pollution Control District (65)
County of San Diego Department of Planning and Land Use (68)
County Water Authority (73)

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Wetlands Advisory Board (91A)

Other City Governments

San Diego Association of Governments (108)

Metropolitan Transit System (112/115)

San Diego Gas & Electric (114)

School Districts

San Diego Unified School District (132)

Other Agencies, Organizations and Individuals

San Diego Association of Governments (108)

Metropolitan Transit System (112)

San Diego Gas & Electric (114)

Metropolitan Transit System (115)

The San Diego River Park Foundation (163)

Sierra Club (165)

San Diego Natural History Museum (166)

San Diego Audubon Society (167)

Mr. Jim Peugh (167A)

California Native Plant Society (170)

Endangered Habitats League (182)

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San Diego River Conservancy (168)

Citizens Coordinate for Century 3 (179)

Carmen Lucas (206)

South Coast Information Center (210)

San Diego Archaeological Center (212)

Save Our Heritage Organisation (214)

Clint Linton (215B)

Frank Brown, Inter-Tribal Cultural Resources Council (216)

Campo Band of Mission Indians (217)

San Diego Archaeological Society Inc. (218)

Kuumeyaay Cultural Heritage Preservation (223)

Kuumeyaay Cultural Repatriation Committee (225)

Native American Distribution (225A-S)

Clairemont Mesa Planning Committee (248)

Clairemont Town Council (257)

Linda Vista Community Planning Group (267)

Pacific Beach Community Planning Committee (375)

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RESULTS OF PUBLIC REVIEW:

- () No comments were received during the public input period.
- () Comments were received but did not address the accuracy or completeness of the draft environmental document. No response is necessary and the letters are incorporated herein.
- () Comments addressing the accuracy or completeness of the draft environmental document were received during the public input period. The letters and responses are incorporated herein.



Alyssa Muto, Deputy Director
Planning Department

December 7, 2018
Date of Draft Report

Date of Final Report

Analyst: Rebecca Malone, AICP

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MISSION BAY PARK MASTER PLAN – FIESTA ISLAND AMENDMENT DRAFT PEIR

for City of San Diego

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Abbreviations and Acronyms

ABBREVIATIONS AND ACRONYMS

°F	Fahrenheit
AAQS	ambient air quality standards
AB	Assembly Bill
ACM	asbestos-containing materials
ADT	average daily traffic
AIA	Airport Influence Area
Airport Authority	San Diego County Regional Airport Authority
ALUCP	Airport Land Use Compatibility Plan
ANSI	American National Standards Institute
AQIA	Air Quality Impact Analysis
AQMP	air quality management plan
AST	aboveground storage tank
BAU	business as usual
BBN	Bolt Beranek and Newman
bgs	below ground surface
BMP	best management practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	corporate average fuel economy
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
CalEMA	California Emergency Management Agency
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources, Recycling, and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code

Abbreviations and Acronyms

CCAA	California Clean Air Act
CCC	California Coastal Commission
CCR	California Code of Regulations
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CESA	California Endangered Species Act
CFC	California Fire Code
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geologic Survey
CMP	congestion management program
CNDDB	California Natural Diversity Database
CNEL	community noise equivalent level
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
Corps	U.S. Army Corps of Engineers
CRHR	California Register of Historic Resources
CSO	combined sewer overflows
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
DPM	diesel particulate matter
DTSC	California Department of Toxic Substances Control
EIR	environmental impact report
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act

Abbreviations and Acronyms

ESL	Environmentally Sensitive Lands
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FIS	Flood Insurance Study
FTA	Federal Transit Administration
GDP	general development plan
GHG	greenhouse gases
GWP	global warming potential
HCM	Highway Capacity Manual
HNC	California Harbors and Navigation Code
HSC	California Health and Safety Code
HQTA	high quality transit area
HVAC	heating, ventilating, and air conditioning system
Hz	hertz
I-5	Interstate 5
I-8	Interstate 8
IFS	Impact Fee Studies
IPCC	Intergovernmental Panel on Climate Change
JRMP	Jurisdictional Runoff Management Plan
L_{dn}	day-night noise level
L_{eq}	equivalent continuous noise level
LBP	lead-based paint
LCFS	low-carbon fuel standard
LCP	Local Coastal Program
LDC	Land Development Code
LID	low-impact development
LOS	level of service
LST	localized significance thresholds
M_w	moment magnitude
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level

Abbreviations and Acronyms

MEP	maximum extent practicable
mgd	million gallons per day
MHPA	Multi-Habitat Planning Area
MMPA	Marine Mammal Protection Act
MMT	million metric tons
MOE	measure of effectiveness
mph	miles per hour
MPO	metropolitan planning organization
MS4 Permit	Municipal Separate Storm Sewer System Permit
MSCP	Multiple Species Conservation Program
msl	mean sea level
MT	metric ton
MTS	San Diego Metropolitan Transit System
MWD	Metropolitan Water District of Southern California
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NFIP	National Flood Insurance Program
NMFS	National Marine Fisheries Service
NO _x	nitrogen oxides
NO ₂	nitrogen dioxide
NOP	Notice of Preparation
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	ozone
OES	California Office of Emergency Services
OPR	California Office of Planning and Research
PB	lead
PEIR	Program Environmental Impact Report
PM	particulate matter
PM _{2.5}	coarse inhalable particulate matter
PM ₁₀	fine inhalable particulate matter
POTW	publicly owned treatment works
ppm	parts per million

Abbreviations and Acronyms

PPV	peak particle velocity
RAQS	Regional Air Quality Strategy
RCRA	Resource Conservation and Recovery Act
REC	recognized environmental condition
RH	relative humidity
RMP	risk management plan
RMS	root mean square
RPS	renewable portfolio standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDG&E	San Diego Gas & Electric
SDIA	San Diego International Airport
SDMC	San Diego Municipal Code
SFHA	Special Flood Hazard Area
SHMA	Seismic Hazard Mapping Act
SIP	state implementation plan
SLC	State Lands Commission
SLM	sound level meter
SoCAB	South Coast Air Basin
SO _x	sulfur oxides
SO ₂	sulfur dioxide
SQMP	stormwater quality management plan
SRA	source receptor area [or state responsibility area]
SUSMP	standard urban stormwater mitigation plan
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan

Abbreviations and Acronyms

SWRCB	State Water Resources Control Board
TAC	toxic air contaminants
TNM	transportation noise model
TPA	transit priority area
tpd	tons per day
TRI	toxic release inventory
TTCP	traditional tribal cultural places
U.S. DOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	underground storage tank
UWMP	urban water management plan
V/C	volume-to-capacity ratio
VdB	velocity decibels
VHFHSZ	very high fire hazard severity zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WAMP	watershed asset management plan
WMA	watershed management area
WQIP	Water Quality Improvement Plan
WQMP	water quality management plan
WSA	water supply assessment

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ES.1 PROJECT LOCATION AND SETTING

Fiesta Island is located within Mission Bay Park. It is located in the eastern half of Mission Bay and the water that surrounds Fiesta Island provides opportunities for a variety of water recreation activities. In the vicinity to the east of Fiesta Island is Interstate 5 (I-5) and the railroad tracks.

Just north of the Fiesta Island Road causeway is a small cove and the outfall of Tecolote Creek into Mission Bay. Further north, to the east of Fiesta Island, across the water, East Mission Bay Drive runs north-south and is adjacent to and parallels I-5. East Mission Bay Drive provides access to Tecolote Shores North, the Hilton Hotel, and Playa Pacifica on the eastern shore of Mission Bay.

To the south-west and south of Fiesta Island is SeaWorld San Diego and the Hubbs-SeaWorld Research Institute. SeaWorld San Diego is located just east of Ingraham Street and north of Sea World Drive. SeaWorld San Diego is an aquatic animal theme park. The park is owned by the City of San Diego and operated by SeaWorld Entertainment. Adjacent to the property is the Hubbs-SeaWorld Research Institute, which conducts research on marine biology and provides education and outreach on marine issues to the public. To the south and south-east of Fiesta Island is South Shores Park. It is a small park mainly for boating purposes with a boat ramp and RV Dump.

ES.2 PROJECT DESCRIPTION

The proposed project analyzed in this draft Program Environmental Impact Report (PEIR) is an amendment to the Mission Bay Park Master Plan (Master Plan) to update the Fiesta Island Concept Plan (proposed project). The proposed project includes maps, diagrams, and supporting policies in the Master Plan that will guide future improvements to the approximately 470-acre island in four subareas. The proposed project includes two options, Option A and Option B, with different elements in one of the four subareas, the Southwest Subarea. Unless otherwise specified, the term project area or plan area refers only to the area affected by the proposed project. Further details on the proposed project are provided in Chapter 3, *Project Description*.

ES.3 PROJECT OBJECTIVES

In accordance with CEQA Guidelines Section 15124(b), the following are basic objectives for the project.

- Create a focused long-range concept plan for Fiesta Island as part of the Mission Bay Park Master Plan.
- Improve water quality by reducing erosion along the existing perimeter roadway.

ES. Executive Summary

- Improve water quality by providing hydraulic connectivity under the existing causeway.
- Improve beach quality throughout Mission Bay Park by maintaining and enhancing the sand management area on Fiesta Island.
- Utilize and enhance the unique landscape of Fiesta Island by creating a regional recreation area with a number of active and passive uses.
- Enhance the existing habitat areas for the Least Tern, and create new habitat preserves and wetlands.
- Maintain the dog friendly nature of Fiesta Island by improving the existing fenced off-leash dog park.
- Improve safety for cyclists and pedestrians by improving the existing roadway and adding both hard surface and soft surface multi-use trails.
- Provide improved shoreline access to bay waters through the implementation of an on-site non-motorized water craft storage area, improved launching area, and convenient parking for vehicles with trailers for non-motorized watercraft near the launching point (Option A only).

ES.4 AREAS OF CONTROVERSY

Areas of controversy include the size of the proposed dog park, design of improvements. Environmental impacts classified as significant and unavoidable that may generate controversy have been identified in the resource topics of transportation/circulation, which is described in Section 5.9.

ES.5 PROJECT ALTERNATIVES

Project alternatives are assessed in further detail in Chapter 9, *Alternatives to the Proposed Project*.

ES.5.1 No Project Alternative

The No Project (existing Mission Bay Park Master Plan) Alternative would not amend the Master Plan to provide a new Concept Plan for Fiesta Island. None of the improvements such as the roadway regrading, expanded causeway, bicycle, pedestrian trails, or fenced dog park would be made part of the Master Plan. The recreation amenities envisioned by the current Master Plan would be developed, and the island would resemble the existing Concept Plan as shown in the Mission Bay Park Master Plan.

ES.5.2 Existing Conditions Alternative

During the public scoping meeting, many attendees requested that the island be left “as-is” with no development or improvement at all. While the No Project Alternative would implement the existing Mission Bay Park Master Plan, this alternative would result in no physical improvements to the island. This alternative assumes that maintenance of existing roadways and habitat areas and eel grass replanting would occur.

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ES.5.3 Northern Subarea Reconfiguration Alternative

During the public comment period for the NOP, the California Department of Fish and Wildlife recommended analyzing a revised concept plan that would reconfigure the northern subarea of the Fiesta Island so that the least tern nesting site would be adjacent to bay water. The least tern site is currently surrounded by uplands that support tern-nest predators (such as snakes and rats), and it is separated from the bay water by a road. This alternative would remove or reroute public road access currently allowed in the northern subarea to the south of the nest site, and would restore intertidal habitats, including mudflat and coastal salt marsh, between the nest site and bay water. Furthermore, this alternative would establish an additional least tern nesting site on the western shore of the island, opposite of FAA island. While this alternative would remove the road for public access in the northern subarea, some form of vehicular access would be made available for maintenance of the northern subarea of the island. This alternative assumes all other improvements proposed by the project would occur.

ES.6 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table ES-1 summarizes the conclusions of the environmental analysis in this EIR. Impacts are identified as significant or less than significant, and mitigation measures are identified for all significant impacts. The level of significance after imposition of the mitigation measures is also presented. The only significant and unavoidable impact associated with the proposed project is the widening of Sea World Drive, East Mission Bay Drive, and Fiesta Island Road associated with mitigation measures TRANS-1, TRANS-2, TRANS-3, TRANS-4 and TRANS-5.

Implementation of Mitigation Measures TRANS-1, TRANS-2, TRANS-3, TRANS-4 option 'b', and TRANS-5 involve road widening that would create less-favorable conditions for active transportation users. These mitigation measures would impede on the existing bike lanes and create conflicts with the recommended buffering of bicycle facilities, the completion of the sidewalks along Sea World Drive, and the existing sidewalk used for pedestrian mobility. Widening on the west side of Sea World Drive would likely result in environmental issues due to the proximity to the Bay. Therefore, these mitigation measures are not recommended, and these impacts would remain unmitigated, significant, and unavoidable.

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
5.1 AIR QUALITY AND ODOR			
5.1-1 Construction activities associated with Options A and B of the proposed project would generate short-term emissions in exceedance of City's significance determination threshold for NOx.	With mitigation the impacts of construction can be reduced to less than significant. The mitigation includes limitations on truck trips per day for the import and export of soil.	AQ-1 Construction contractors shall be required to use equipment that meets the EPA Tier 4 Interim emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower, unless it can be demonstrated to the City that such equipment is not available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine, as defined by CARB's regulations. Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 4 Interim or higher emissions standards for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.	Less Than Significant

ES. Executive Summary

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
		AQ-2 Construction contractors shall limit the number of soil haul trucks to no more than 32 trucks per day (64 truck trips). Prior to construction, the project engineer shall ensure that all grading plans clearly show the requirement to limit the number of soil haul trucks.	
5.1-2 Implementation of the proposed project would not result in long-term emissions that would exceed the City's operation-phase significance threshold criteria.	The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.1-3 Implementation of the proposed project would not expose nearby sensitive receptors to substantial pollutant concentrations.	The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.1-4 Implementation of the proposed project would not result in objectionable odors that would affect a substantial number of people.	The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.1-5 Implementation of the proposed project would not result in a substantial alteration in air movement.	The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.1-6 The proposed project would be consistent with the SDAPCDs RAQS.	The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.2 BIOLOGICAL RESOURCES			
5.2-1 Project development would have significant impacts on the following sensitive species: plants (Nuttall's lotus [<i>Acmispon prostratus</i>], coast woolly-heads [<i>Nemacaulis denudata</i> var. <i>denudata</i>], estuary seablite [<i>Suaeda esteroa</i>]); breeding shorebirds (California least tern, [<i>Sterna antillarum browni</i>], light-footed clapper rail [<i>Rallus longirostris levipes</i>], Belding's savannah sparrow [<i>Passerculus sandwichensis beldingi</i>]); raptors (northern harrier [<i>Circus cyaneus</i>], white-tailed kite [<i>Elanus leucurus</i>], burrowing owl [<i>Athene cunicularia</i>]); upland bird species (California horned lark [<i>Eremophila alpestris actia</i>], loggerhead shrike [<i>Lanius</i>	Both the temporary impacts of construction and the permanent impacts of operation could impact sensitive plant and animal species. The proposed project maintains protection for the least tern, and requires pre-construction surveys for migratory birds. With mitigation, impacts to sensitive species would be reduced to a less than significant level.	BIO-1 Habitat/Sensitive Plant Species. Prior to any construction or grading activities, the City shall prepare a mitigation plan in accordance with the requirements of the City's Biology Guidelines, MSCP Subarea Plan, and Land Use Adjacency Guidelines. The mitigation plan shall be reviewed and approved by the Development Services Department, MSCP staff, and appropriate regulatory agencies. At a minimum the mitigation plan shall address the following: Mitigation for impacts to Nuttals lotus, coast	Less Than Significant

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
<i>ludovicianus</i>); mammal (San Diego black-tailed jackrabbit [<i>Lepus californicus bennettii</i>]); and sea mammal (green sea turtle [<i>Chelonia mydas</i>]).		woolly heads, and estuary seablite. Mitigation measures for these species should include avoidance, translocation/salvaging of impacted individuals, propagation, and/or incorporation of species into the restoration area(s). Specific methods will be determined during preparation of the habitat restoration plan by the project biologist. • Planting of seeds or translocation of impacted individual as mitigation for the impacts to Nuttall's lotus and coast woolly-heads. • Mitigation to ensure that the plant palette for proposed improvements is consistent with the MHPA. • Mitigation for impacts to southern foredunes and Diegan coastal sage scrub habitats shall be at the ratios defined in the City Biological Guidelines. • Mitigation for impacts to estuary seablite, including measures such as flagging and avoiding individuals during habitat creation/restoration construction activities or salvaging and transplanting these individuals to existing or restored, suitable wetland habitat in the study area. • Mitigation for eelgrass including an eelgrass survey would be conducted before and after construction of improvements related to dredging in Mission Bay. Temporary impacts associated with eelgrass planting shall be mitigated at the same ratio as permanent impacts.	

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
		- Any construction or dredging project disturbing the substrate in Mission Bay or the Flood Control Channel shall use silt curtains or similar devices around disturbance areas. - Any wetland impact shall be mitigated at a minimum ratio of 1:1. BIO-2 Avian Species. To avoid any direct impacts to raptors and/or any upland, native/migratory birds, removal of habitat that may support active nests in the proposed area of disturbance shall occur outside of the breeding season for these species (February 1 to September 15), unless a Qualified Biologist conducts a preconstruction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. Any preconstruction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The results of the preconstruction survey shall be submitted to the City for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines, MSCP Subarea Plan, Land Use Adjacency Guidelines, and applicable State and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that the take of birds or eggs or the disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and	

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
		implemented to the satisfaction of the City. The City's Mitigation Monitoring Coordination Section or Resident Engineer shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. The report or mitigation plan shall include the following provisions: • If an active northern harrier nest is found in the MHPA, construction and grading activities shall remain at least 900 feet from the nest until the chicks have fledged and are independent of the nest. • If an active Cooper's hawk nest is found in the MHPA, construction and grading activities shall remain at least 300 feet from the nest until the chicks have fledged and are independent of the nest. • Prior to grading or construction, a preconstruction burrowing owl survey shall be conducted to determine the presence or absence of burrowing owls. If the burrowing owl is absent, then no mitigation is required. If present, the following mitigation shall be implemented. • Direct and indirect impacts to burrowing owls located within the MHPA shall be avoided. - Outside the MHPA, the following measure shall apply: - If the burrowing owl and its habitat can be protected in place on or adjacent to a construction site, then disturbance impacts shall be minimized through the	

ES. Executive Summary

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
		use of buffer zones, visual screens, or other measures (CDFW 2012). - Occupied burrows—that is, those shows sign of burrowing owl occupancy within the last three years—shall be avoided during the breeding period from February 1 through August 31 (CDFW 2012). - Occupied burrows shall also be avoided during the nonbreeding season. Burrow exclusion is a technique of installing one-way doors in burrow openings during the nonbreeding season to temporarily exclude burrowing owl, or permanently exclude burrowing owl and close burrows after verifying burrows are empty by site monitoring and scoping. Eviction of burrowing owl during the nonbreeding season requires CDFW approval of a Burrowing Owl Exclusion Plan (CDFW 2012). - Mitigation for permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat shall be required such that the habitat acreage and the number of burrows and burrowing owl impacted are replaced based on the burrowing owl life history information provided in “Staff Report on Burrowing Owl Mitigation” (CDFW 2012). A Burrowing Owl Mitigation Plan shall be prepared and submitted to the City and CDFW for each project phase that results in impacts to burrowing owls and/or their habitat.	

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
		BIO-3 Least Tern. In order to prevent impacts to California least tern and other sensitive nesting shorebirds (e.g., the light-footed clapper rail, Belding's savannah sparrow, etc.), no clearing, grubbing or grading, or active wetland creation/restoration shall take place within or adjacent to the MHPA, California least tern preserves, and coastal salt marsh habitats during the City's general avian breeding season of February 1 to September 15. Activities must comply with the City's Biology Guidelines, MSCP Subarea Plan, Land Use Adjacency Guidelines, and applicable State and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.). Additionally, the following requirements from the Mission Bay Natural Resource Management Plan and Mission Bay Master Plan for the California least tern shall be met: 1. In-water construction or dredging shall not be permitted in Mission Bay from April 1 through September 15, unless otherwise approved in writing by the City, CDFW, and USFWS. Any exception would have to meet the following criteria to preserve least tern nesting and foraging: use of silt curtains or similar devices around in-water construction activity; use of noise reduction or low noise equipment; and use of timing and location restrictions on activity to avoid interfering with breeding sites or major least tern foraging areas. 2. Direct impacts to permanently designated least tern nesting sites shall not be permitted.	

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
		3. The following buffer zones for each least tern nesting site shall be free of structures with heights over six feet, including fencing, to avoid providing raptors perches from which to prey on least tern chicks. • North Subarea – 150 feet • Stony Point (Southwest Subarea) – 150 feet 4. There shall be a seasonal buffer (that extends the habitat during the mating and nesting seasons) and fencing between the habitat and the leash-free dog area at Stony Point in the Southwest Subarea. 5. Noise attenuation berms surrounding the Sand Management Facility to prevent any significant noise from reaching the MHPA and the North Island least tern preserve shall remain in accordance with the Mission Bay Natural Resource Management Plan and Mission Bay Master Plan. 6. If perimeter road construction or wetland creation/restoration construction activities take place during the California least tern breeding season, significant impacts may occur to least tern in the MHPA. To avoid significant noise impacts to breeding least terns, construction within 500 feet of the least tern preserves shall take place outside of the least tern breeding season, which ranges from April 1st to September 15th. BIO-4 San Diego Black-Tailed Jackrabbit. Grading and other ground disturbing activity shall occur outside of the breeding season for the San Diego black-tailed jackrabbit (January – September), unless a Qualified Biologist	

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
		conducts a preconstruction survey to determine the presence or absence of black-tailed jackrabbits on the proposed area of disturbance. Any preconstruction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The results of the preconstruction survey shall be submitted to the City for review and approval prior to initiating any construction activities. If jackrabbits are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines, MSCP Subarea Plan, Land Use Adjacency Guidelines, and applicable State and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that the disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's Mitigation Monitoring Coordination Section, or Resident Engineer, and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. The mitigation plan required in BIO-1 shall also include mitigation for potential injury or mortality of individuals during construction activities, as well as mitigation for the loss of habitat. BIO-5 Marine Mammals and Sea Turtles. Should pile driving be required as part of the proposed project, the following mitigation measures shall	

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
		be followed, or similar measures as may be required by the National Marine Fisheries Service: 1. Noise dampening measures, such as the use of a nylon or wooden block, shall be employed between the impact hammer and piles to dampen underwater noise generated by hammer strikes. 2. All impact pile driving activities shall incorporate a "soft start" approach whereby hammer strikes on each pile begin at low pressure and slowly increase to full hammer strength in order to drive fish away from the piles before the acoustics generated by pile driving approach levels that could result in animal injury. For any cessation of pile driving for greater than one hour, the soft start procedures shall be repeated to reinitiate behavioral relocation of mammals, turtles, or fish from the acoustic impact area. If a marine mammal or green sea turtle is observed in the area during impact pile driving, activities shall be halted until the animal leaves the vicinity beyond 500 feet from the work site.	
5.2-2 Project development would have significant impacts on the following vegetation communities/land cover types: southern coastal salt marsh, saltpan/mudflats, open water, eelgrass beds, beach, southern foredunes, and Diegan coastal sage scrub.	Both the temporary impacts of construction and the permanent impacts of operation, will be addressed through the creation and enhancement of habitat on the island as shown in the project design. As the impacts are a direct result of the creation and enhancement of habitat, no mitigation is necessary.	Implementation of mitigation measure BIO-1	Less Than Significant

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
5.2-3 Project development would permanently impact approximately 0.55 acre of wetland (Option A and Option B) and approximately 0.66 acre (Option A) and 0.57 acre (Option B) of waters consisting of saltpan/mudflats, open water, eelgrass beds, and beach.	Project impacts include both temporary and permanent impacts to some habitat types. The permits required to create the habitat will include ratios that will address both the permanent and temporary impacts.	BIO-6 Prior to any impacts to wetlands, mitigation will be required in accordance with federal, State, and City “no net-loss” policies. The creation/restoration of habitat as mitigation shall be described in a mitigation plan (see Mitigation Measure BIO-1) following the outline provided in the City’s Biology Guidelines. The conceptual mitigation plan shall include success criteria that must be met, as well as maintenance and monitoring requirements for typically up to five years following completion of the initial planting program.	Less Than Significant
5.2-4 The proposed project could interfere with wildlife movement during eelgrass planting and clearing of vegetation.	Project impacts include both temporary and permanent impacts to some habitat types. The permits required to create the habitat will include ratios that will address both the permanent and temporary impacts.	Implementation of mitigation measures BIO-1 through BIO-5.	Less Than Significant
5.2-5 The proposed project would require compliance with the San Diego County Multiple Species Conservation Program, Mission Bay Park Natural Resources Management Plan, and the City of San Diego Environmentally Sensitive Lands Regulations.	Mitigation is needed to ensure future programs and activities under the PEIR meet the requirements of the MHPA.	Implementation of mitigation measures BIO-1 through BIO-5.	Less Than Significant
5.2-6 The project could create adverse edge effects.	Mitigation is needed to ensure construction and future programs and activities under the PEIR would follow the Land Use Adjacency Guidelines.	Implementation of mitigation measures BIO-1 and BIO-2.	Less Than Significant
5.3 GEOLOGIC CONDITIONS			
5.3-1 Project development could expose people and structures to seismic hazards such as earthquakes and liquefaction.	The project does not have design features susceptible to seismic hazards.	No mitigation measures required	Less Than Significant
5.3-2 Development of the proposed project could result in soil erosion.	Design of the project perimeter roadway will direct stormflow back onto the island minimizing	No mitigation measures required	Less Than Significant

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
	off-island erosion. Planting and maintenance of the island will further limit soil erosion.		
5.3-3 Development of the proposed project could expose people and structures to hazards from unstable soils, such as such as collapsible soils and expansive soils.	With the exception of restrooms and maintenance sheds, no structures are proposed.	No mitigation measures required	Less Than Significant
5.4 GREENHOUSE GAS EMISSIONS			
5.4-1 The proposed project would not generate an increase in GHG emissions greater than emissions that would be generated under the adopted Mission Bay Park Master Plan and would not have a significant impact on the environment.	The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.4-2 The proposed project would be consistent with the applicable plans to reduce GHG emissions.	The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.5 HYDROLOGY AND WATER QUALITY			
5.5-1 Development pursuant to the proposed project would increase the amount of impervious surfaces on the site and would therefore increase surface water flows into drainage systems within the watershed. Project development would not cause increased flooding on- or off-site.	Design of the project addresses the increase in paved surfaces by keeping stormwater flow on the island.	No mitigation measures required	Less Than Significant
5.5-2 Development pursuant to the proposed project increases the amount of impervious surfaces on the site and would therefore impact opportunities for groundwater recharge.	Design of the project addresses the increase in paved surfaces by keeping stormwater flow on the island.	No mitigation measures required	Less Than Significant
5.5-3 During the construction phase of the proposed project, there is the potential for short-term unquantifiable increases in pollutant concentrations from the site. After project development, the quality of storm runoff (sediment, nutrients, metals, pesticides, pathogens, and hydrocarbons) may be altered.	Design of the project addresses the increase in paved surfaces by keeping stormwater flow on the island. During construction, best management practices would be implemented to reduce the amount of pollutants from entering receiving waters.	No mitigation measures required	Less Than Significant

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
5.5-4 Portions of the project site proposed for development are located within a 100-year flood hazard area.	No buildings intended for habitation are part of the project. All buildings will be outside of the anticipated flood area.	No mitigation measures required	Less Than Significant
5.5-5 The southeast margin of the project site is located within the inundation area of the El Capitan dam. The project site is not in an area mapped as protected from 100-year floods by levees.	No buildings intended for habitation are part of the project. All buildings will be outside of the anticipated flood area.	No mitigation measures required	Less Than Significant
5.5-6 The site would not be subject to inundation by seiche or mudflow. The edges of Fiesta Island are in tsunami inundation zones; however, project development would not place people or structures in tsunami inundation zones.	No buildings intended for habitation are part of the project. All buildings will be outside of the anticipated flood area.	No mitigation measures required	Less Than Significant
5.6 LAND USE			
5.6-1 The proposed Fiesta Island Amendment project would not conflict with any adopted goals, objectives, and recommendations of the City of San Diego General Plan, Land Development Code, Climate Action Plan, San Diego River Park Master Plan, Mission Bay Park Master Plan, or any other applicable land use plan.	The project refines the recreation features that are currently part of the Mission Bay Park Plan. The proposed use(s) are consistent with the existing plan.	No mitigation measures required	Less Than Significant
5.6-2 Implementation of the Fiesta Island Amendment would not result in the development or conversion of general plan or community plan designated open space or prime farmland to a more intensive land use.	The project refines the recreation features that are currently part of the Mission Bay Park Plan. The proposed use(s) are consistent with the existing plan.	No mitigation measures required	Less Than Significant
5.6-3 Implementation of the Fiesta Island Amendment would not result in incompatible uses as defined in an airport land use plan or inconsistency with an airport's Comprehensive Land Use Plan (ACLUP) as adopted by the Airport Land Use Commission (ALUC).	The proposed project remains open space.	No mitigation measures required	Less Than Significant
5.6-4 The proposed Fiesta Island Amendment could conflict with the adopted MSCP.	With mitigation, the biological impacts of the project are reduced to less than significant.	Implementation of mitigation measures BIO-1 through BIO-5.	Less Than Significant

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
5.7 NOISE			
5.7-1 The project would not result in a significant increase in ambient noise levels.	Traffic noise would increase but would not exceed the City's traffic noise significance thresholds.	No mitigation measures required	Less Than Significant
5.7-2 The proposed project would not expose people to significant temporary construction noise or vibration.	Sensitive receptors are located far enough from the island that noise and vibration impacts would be less than significant. The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.7-3 The proposed project would not expose people to noise levels that would exceed property line limits established in the Noise Abatement and Control Ordinance of the Municipal Code.	Sensitive receptors are located far enough from the island that noise and vibration impacts would be less than significant. The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.8 PUBLIC SERVICES AND FACILITIES			
5.8-1 Increases in visitors to the proposed project site would increase the need for fire protection facilities and personnel.	The island is adequately served from existing fire and police facilities.	No mitigation measures required	Less Than Significant
5.8-2 Increases in visitors to the proposed project site would increase the need for police protection.		No mitigation measures required	Less Than Significant
5.9 TRANSPORTATION/CIRCULATION			
5.9-1 Intersections, roadway segments, and/or freeway segments affected by the project would operate at LOS E or F and exceed the adopted threshold for delay.	Mitigation for the near term would ensure that access to the island is acceptable. Widening of Sea World Drive and East Mission Bay Drive associated with the 2050 condition is neither fully funded, nor designed. Therefore, even with the mitigation measure(s), the cumulative impact is significant and unavoidable.	The mitigation for this impact has already been completed. An all-way stop was added at this intersection. No additional mitigation is required for existing plus project conditions. TRANS-1 Widen Sea World Drive from Friars Road to E. Mission Bay Drive-Pacific Highway.	Significant and Unavoidable

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
		Specifically, widen and restripe Sea World Drive to provide a third southbound through lane that transitions to a trap left-turn lane at the intersection of Sea World Drive and Friars Road. TRANS-2 Widen E. Mission Bay Drive from Sea World Drive to Fiesta Island Road to include two southbound through lanes. Transition the inside southbound through lane into the existing left-turn lanes at Sea World Drive. TRANS-3 Widen Fiesta Island Road causeway between E. Mission Bay Drive and the Loop Road from a two-lane collector with no fronting property to a three-lane collector without a two-way left turn lane. TRANS-4 At the intersection of E. Mission Bay Drive and Fiesta Island Road, one of the following: a. Install a traffic signal and restripe the intersection with stop bars and crosswalks at Fiesta Island Road/E. Mission Bay Drive; or, b. Widen the intersection and construct a roundabout. TRANS-5 At the intersection of Sea World Drive and E. Mission Bay Drive-Pacific Highway, widen Sea World Drive north of E. Mission Bay Drive to accommodate a southbound right-turn lane. Restripe the existing southbound right turn to a third southbound through lane. Also modify the traffic signal and optimize signal timing.	

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
5.9-2 The project would be broadly supportive of policies, plans, and programs supporting alternative transportation roads.	The project would be consistent with adopted policies, plans, or programs supporting alternative transportation. Additionally, the proposed project would provide facilities and policies that support improvements to pedestrian and bicycle facilities.	No mitigation measures required	Less Than Significant
5.10 PUBLIC UTILITIES			
5.10-1 Project-generated wastewater will not result in a need for new sewer systems, but will require alterations to existing utilities, the construction of which would create physical impacts.	Utilities will be extended to the island to serve the restrooms and camp area. No significant increase in water or wastewater need is expected.	No mitigation measures required	Less Than Significant
5.10-2 Increased water demands from projects within the project site could result in a need for new water infrastructure and potentially require alterations to existing utilities, the construction of which would create physical impacts.	Impacts associated with the physical construction of water, sewer, and power lines is addressed through the City's construction standards.	No mitigation measures required	Less Than Significant
5.10-3 Alterations to site drainage as a result of the project would not result in significant environmental effects.	Improvements to the perimeter road would improve drainage and reduce runoff into Mission Bay.	No mitigation measures required	Less Than Significant
5.10-4 Existing facilities would be able to accommodate project-generated solid waste and comply with related solid waste regulations.	The project would not exceed any thresholds therefore mitigation is not needed.	No mitigation measures required	Less Than Significant
5.10-5 Project construction and operation would not consume excessive fuel.	The project is not expected to use natural gas and proposes limited development.	No mitigation measures required	Less Than Significant
5.10-6 The project would not use excessive electric power.	The project would not use excessive electricity.	No mitigation measures required	Less Than Significant
5.11 ENERGY USE			
5.11-1 Construction activities associated with the proposed project would not result in wasteful, inefficient, and unnecessary use of energy or have excessive energy requirements.	Construction involves grading, soil movement, and planting of plants and shrubs. No excessive energy use is anticipated.	No mitigation measures required	Less Than Significant

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Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Levels of Significance after Mitigation

Environmental Issue	Results of Impact Analysis	Mitigation	Impact Level After Mitigation
5.11-2 Operation of the proposed project does not create a land use pattern that would cause a wasteful, inefficient, and unnecessary use of energy.	The proposed project is a park with a number of design features intended to encourage outdoor activities. There are no large structures or activities that would use energy.	No mitigation measures required	Less Than Significant
5.11-3 Operation of the proposed project would not create facilities that would have excessive energy requirements.	Proposed facilities include restrooms, maintenance shed, and primitive campgrounds. None of these facilities are expected to use excessive energy.	No mitigation measures required	Less Than Significant
5.12 VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER			
5.12-1 The proposed project would not block public views or access from designated open space areas, roads, or parks or to significant visual landmarks or scenic vistas (Pacific Ocean, downtown skyline, mountains, canyons, waterways).	The project will remain open space and nothing proposed on the island will block views.	No mitigation measures required	Less Than Significant
5.12-2 The proposed project would not contrast substantially with the surrounding neighborhood character and visual appearance or result in removal of a distinctive landmark or tree.	The proposed project is an island and will contain park improvements similar to those on public lands surrounding Mission Bay. There is no distinctive landmark or tree on the site.	No mitigation measures required	Less Than Significant
5.12-3 The proposed project would not result in a substantial change in the existing landform.	There is no distinctive landform on the island.	No mitigation measures required	Less Than Significant
5.12-4 The proposed project would not emit or reflect a significant amount of light and glare.	Lighting is regulated for compliance with the MHPA, as well as city development standards to restrict glare and light.	No mitigation measures required	Less Than Significant

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1. Introduction

This draft Program Environmental Impact Report (PEIR) for the proposed Mission Bay Park Master Plan – Fiesta Island Amendment and associated discretionary actions (referred to throughout this PEIR as the “proposed project”) has been prepared by the City of San Diego (City) in accordance with the California Environmental Quality Act (CEQA) Statute and Guidelines (Public Resources Code [PRC], Section 21000 et seq. and the California Code of Regulations [CCR], Title 14, Section 15000, et seq.) and in accordance with the City’s *Environmental Impact Report Guidelines* (2005) and the City’s *CEQA Significance Determination Thresholds* (2016).

The proposed Mission Bay Park Master Plan – Fiesta Island Amendment analyzed in this PEIR is a comprehensive planning document that provides a policy framework to realize the recreational potential of Fiesta Island.

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

In accordance with CEQA Guidelines Section 15121, the purpose of this PEIR is to provide public agency decision-makers and members of the public with detailed information about the potential significant environmental effects of the proposed Mission Bay Park Master Plan – Fiesta Island Amendment, possible ways to minimize its significant effects, and reasonable alternatives that would reduce or avoid any identified significant effects. The PEIR includes recommended mitigation measures, which—when implemented—would lessen project impacts and provide the City with ways to substantially lessen or avoid the significant effects of the proposed project on the environment.

1.1.1 Type of EIR

This document is a PEIR, as defined in Section 15168 of the CEQA Guidelines. A PEIR is prepared for a series of actions that are characterized as one large project through reasons of geography, similar rules or regulations, or where individual activities will occur under the same regulatory process with similar environmental impacts that can be mitigated in similar ways. In this instance, with the exception of the causeway improvements and eel grass planting in the bay, all improvements will be limited to Fiesta Island. General Development Plans (GDPs) which will be developed over time and will provide precise engineering and construction plans for the recreational elements included in the proposed project. These plans are currently not available, however their environmental impacts can be estimated at the program level, and a mitigation strategy developed that would apply to future improvements. When the GDPs are available for all or portions of the project area, the City will evaluate these detailed plans against this PEIR, and determine if the mitigation is adequate or if additional mitigation is warranted. If, when examining future development actions within the project area, the City finds no new effects could occur or no new mitigation measures

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would be required other than those analyzed and/or required in this PEIR, the City can approve the activity without additional environmental documentation.

If additional analysis is required, it can be streamlined by tiering from this PEIR pursuant to CEQA Guidelines Sections 15152, 15153, and 15168 (e.g., through preparation of a Mitigated Negative Declaration, Addendum, or Supplemental or Subsequent EIR).

1.2 LEGAL AUTHORITY

1.2.1 Lead Agency

The lead agency means “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment” (Guidelines § 15050). The City of San Diego, as the lead agency, has the principal responsibility for approval of the proposed project.

1.2.2 Responsible and Trustee Agencies

California State Lands Commission (SLC). The SLC has jurisdiction and management authority over all tidelands and submerged lands and the beds of navigable lakes and waterways. The SLC also has certain authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions. The SLC holds these lands in trust for the benefit of all people of the State for statewide Public Trust purposes including waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space, among others. On tidal waterways, the State's sovereign fee ownership extends landward to the mean high-tide line, except for areas of fill or artificial accretion or where the boundary has been fixed by agreement or a court decision. On navigable non-tidal waterways, including lakes, the State holds fee ownership of the bed of the waterway landward to the ordinary low-water mark and a Public Trust easement landward to the ordinary high-water mark, except where the boundary has been fixed by an agreement or a court decision. These boundaries may not be readily apparent from present day site inspections. The SLC also manages State-owned school lands granted to the State in 1853 by the federal government to support public schools.

California Coastal Commission (CCC). California's coastal management program is carried out through a partnership between state and local governments. Implementation of Coastal Act policies is accomplished primarily through the preparation of Local Coastal Programs (LCPs) that are required to be completed. An LCP includes a land use plan which may be the relevant portion of the local general plan, including any maps necessary to administer it, and the zoning ordinances, zoning district maps, and other legal instruments necessary to implement the land use plan. Coastal Act policies are the standards by which the CCC evaluates the adequacy of LCPs. Amendments to certified land use plans and LCPs only become effective after approval by the CCC. To ensure that coastal resources are effectively protected in light of changing circumstances, such as new information and changing development pressures and impacts, the CCC is required to review each certified LCP at least once every five years.

Development within the coastal zone may not commence until a coastal development permit has been issued by either the CCC or a local government that has a CCC-certified local coastal program. After certification of an LCP, coastal development permit authority is delegated to the appropriate local government, but the CCC

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retains original permit jurisdiction over certain specified lands (such as tidelands and public trust lands). The CCC also has appellate authority over development approved by local governments in specified geographic areas as well as certain other developments.

Under the 1990 amendments to the federal Coastal Zone Management Act, the CCC and the State Water Resources Control Board have prepared, adopted, and are now implementing a Coastal Nonpoint Source Water Pollution Control Program. The CCC also implements a Coastal Access Program, in partnership with other state agencies such as the Coastal Conservancy, SLC, California State Parks and federal, regional and local park and recreation entities.

California Department of Transportation (Caltrans). The proposed project may affect facilities within the jurisdiction of Caltrans, including Interstate 5 (I-5) and the ramps at Tecolote Road. Although the proposed project does not include construction permits, Caltrans approval would be required for any encroachments or future construction of facilities in a Caltrans right-of-way. This potential impact is discussed in Section 5.9, *Transportation / Circulation*.

California Department of Fish and Wildlife (CDFW). CDFW has the authority to reach an Agreement Regarding Proposed Stream or Lake Alteration (Streambed Alteration Agreement) with an agency or private party proposing to alter the bed, banks, or floor of any watercourse/stream, pursuant to Section 1600 et. seq. of the State Fish and Game Code. The purpose of Sections 1600 to 1616 is to protect and conserve fish and wildlife resources that could be adversely affected by a substantial diversion or obstruction of the natural flow of, or a substantial change to or use of material from the bed, bank, or channel of, any river, stream, or lake. CDFW generally evaluates information gathered during preparation of the environmental documentation to determine if it can be used in any permit application.

San Diego County Air Pollution Control District (SDAPCD). The County Board of Supervisors sits as the board of the SDAPCD, which regulates sources of air pollution in the county. This is accomplished through monitoring, engineering, and compliance divisions within the SDAPCD, designed to protect the public from the adverse impacts of polluted air. The SDAPCD would be responsible for issuing permits for construction and operation of future improvements.

San Diego Regional Water Quality Control Board (RWQCB). The RWQCB regulates water quality through the Section 401 certification process and oversees the National Pollutant Discharge Elimination System (NPDES), Permit No. CA 0108758, which consists of wastewater discharge requirements.

San Diego County Regional Airport Authority (Airport Authority). The Airport Authority operates the airports and oversees implementation of adopted plans for regional air transportation needs. The Airport Authority also serves as the San Diego County Airport Land Use Commission, responsible for land use planning relating to public safety surrounding airports. The proposed project is in Review Area 2 as defined by the San Diego International Airport's (SDIA) Airport Land Use Compatibility Plan (ALUCP).

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1.3 NOTICE OF PREPARATION

The scope of analysis for this PEIR was determined by the City as a result of initial project review and consideration of comments received in response to the Notice of Preparation (NOP) issued on May 9, 2017, (see Appendix 1-1). A public scoping meeting was held on May 23, 2017, at Mission Bay High School located at 2475 Grand Avenue, San Diego, CA 92109. Public outreach for the NOP included distribution using the following methods:

- NOP: Publication on May 9, 2017, San Diego Daily Transcript
- NOP: Posted at the Office of the San Diego County Assessor-County Clerk-Recorder.
- NOP: Distributed to 14 state agencies through the Governor’s Office of Planning and Research, State Clearinghouse.

The NOP was available to the public for review at the following web locations:

- <http://www.sandiego.gov/city-clerk/officialdocs/notices/index.shtml>
- <https://www.sandiego.gov/planning/programs/ceqa>

Comments received during the NOP public review period from May 9, 2017, to June 8, 2017, are in Appendix 1-2. A total of five agencies submitted comments to the NOP; 808 public comments were received during the NOP review period; and 44 comments were received at the scoping meeting held on May 23, 2017. Table 1-1 summarizes the issues identified by the commenting agencies and identifies the sections of the PEIR where the comments are addressed.

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Table 1-1 NOP Agency Comment Summary

Commenting Agency	Date	Comment Type	Comment Summary	Issue Addressed In:
Governor's Office of Planning and Research	May 10, 2017	Administrative	Notes the agencies the NOP was distributed to from the State Clearinghouse.	N/A
Native American Heritage Commission (NAHC)	May 12, 2017	Tribal Cultural Resources	- Letter identifies state and federal statutes, including Senate Bill 18 and Assembly Bill 52 requirements, relating to Native American historic properties and resources, and Native American contacts. - Provides recommendations for cultural resource assessments.	Chapter 8 – Effects Found Not to be Significant
Rincon Band of Luiseno Indians	May 15, 2017	Tribal Cultural Resources	Recommends locating tribe within the project area – project site is not within Luiseno Aboriginal Territory.	Chapter 8 - Effects Found Not to be Significant
San Diego County Archaeological Society	May 21, 2017	Cultural Resources	Include agency in draft PEIR mailing list.	Chapter 8 – Effects Found Not to be Significant
San Diego Metropolitan Transit System (MTS)	May 23, 2017	Transportation / Circulation	- Consideration of access to Fiesta Island via public transit and future trolley stations. - Convenient pedestrian connection to the trolley.	Section 5.9 – Transportation / Circulation

1.4 SCOPE OF THIS PEIR

The scope of this PEIR was determined by the City's CEQA Significance Determination Thresholds, comments received in response to the NOP, and comments received at the public scoping meeting. Through these scoping activities, the proposed project was determined to have the potential to result in significant environmental impacts to the following subject areas:

- Air Quality and Odor
- Biological Resources
- Energy
- Geologic Conditions
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services and Facilities
- Public Utilities
- Transportation/Circulation
- Visual Effects and Neighborhood Character

A brief overview of the various chapters of this PEIR is provided below.

- **Executive Summary.** Provides a summary of this PEIR and a brief description of the proposed project; identifies areas of controversy and issues to be resolved by the decision-makers; and includes a summary table of significant impacts, proposed mitigation measures, and significance of impact after

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mitigation. A summary of the project alternatives and comparison of the potential impacts of the alternatives with those of the proposed project is also provided.

- **Chapter 1, Introduction.** An overview of the legal authority, purpose, and intended uses of the PEIR, as well as its scope and content.
- **Chapter 2, Environmental Setting.** Provides a description of the proposed project's regional context, location, and existing physical characteristics and land use within the project area. An overview of available public infrastructure and services as well as the proposed project's relationship to relevant plans is also provided in this section.
- **Chapter 3, Project Description.** Provides a detailed discussion of the proposed project, including background, objectives, key features, and environmental design considerations.
- **Chapter 4, Regulatory Framework.** Provides a summary of the federal, state, regional and local regulations that apply to the proposed project.
- **Chapter 5, Environmental Analysis.** Provides a detailed evaluation of potential environmental impacts associated with the proposed project for several environmental and land use issues. The analysis of each issue begins with a discussion of the existing conditions, a statement of specific thresholds used to determine significance of impacts, followed by an evaluation of potential impacts and identification of specific mitigation measures to avoid, or reduce any significant impacts. Where mitigation measures are required, a statement regarding the significance of the impact after mitigation is provided.
- **Chapter 6, Significant Unavoidable Environmental Effects / Irreversible Environmental Changes.** Provides a summary of any significant and unavoidable impacts and use of nonrenewable resources during implementation of the proposed project.
- **Chapter 7, Growth Inducement.** Evaluates the potential influence the proposed project may have on economic or population growth within the project area as well as the region, either directly or indirectly.
- **Chapter 8, Effects Found Not to be Significant.** Identifies environmental issues determined to be not significant for the proposed project, and briefly summarizes the basis for these determinations.
- **Chapter 9, Alternatives to the Proposed Project.** Provides a description of alternatives to the project, including the No Project Alternative, the Existing Conditions Alternative, and the Northern Subarea Reconfiguration Alternative.
- **Chapter 10, Qualifications of Persons Preparing the EIR.** Lists the qualifications of the individuals who prepared the PEIR.

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- **Chapter 11, Listing of Individuals and Agencies Consulted.** Identifies all of the individuals and agencies contacted during preparation of the PEIR.
- **Chapter 12, References.** Lists all the reference materials cited in the PEIR.

1.5 INCORPORATION BY REFERENCE

As permitted by CEQA Guidelines Section 15150, this PEIR has referenced several technical studies and reports. Information from these documents has been briefly summarized in this analysis contained in this PEIR. These documents are included in Chapter 12.0, *References*, and are hereby incorporated by reference. They are available for review at the City's Planning Department, located at 9485 Aero Drive, San Diego, California 92123. Included within the list of materials incorporated by reference into this PEIR are the following:

- City of San Diego General Plan (2008)
- City of San Diego Program Environmental Impact Report for the General Plan (Final PEIR) (2007)
- City of San Diego Mission Bay Park Master Plan (as amended in 2002)
- City of San Diego Municipal Code (2008)

1.6 PEIR PROCESS

This draft PEIR is being circulated for public review for 45 days. Interested agencies and members of the public are invited to provide written comments on the PEIR to the City address shown on the title page of this document. Upon completion of the 45-day review period, the City will review all written comments received and prepare written responses for each. A final PEIR will incorporate the received comments, responses to the comments, and any changes to the draft PEIR that result from comments. The final PEIR will be presented for potential certification as the environmental document for the proposed project. All persons who comment on the draft PEIR will be notified of the availability of the final PEIR and the date of the public hearing before the City.

1. Introduction

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2. Environmental Setting

2.1 INTRODUCTION

This section provides a “description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, from both a local and a regional perspective” (Guidelines § 15125[a]), pursuant to the provisions of the California Environmental Quality Act (CEQA) and the CEQA Guidelines. The environmental setting provides the baseline physical conditions from which the lead agency will determine the significance of environmental impacts resulting from the proposed project.

2.2 REGIONAL LOCATION

Fiesta Island is located in the eastern half of Mission Bay Park. To the east of Fiesta Island is Interstate 5 (I-5) and the railroad tracks. The project location is shown in Figure 2-1 and its location within Mission Bay Park is shown on Figure 2-2.

Just north of the Fiesta Island Road causeway is a small cove and the outfall of Tecolote Creek into Mission Bay. Further north, to the east of Fiesta Island, across the water, East Mission Bay Drive runs north-south and is adjacent to and parallels I-5. East Mission Bay Drive provides access to Tecolote Shores North, the Hilton Hotel, and Playa Pacifica on the eastern shore of Mission Bay.

To the southwest and south of Fiesta Island is SeaWorld San Diego and the Hubbs-SeaWorld Research Institute. SeaWorld San Diego is located just east of Ingraham Street and north of Sea World Drive. SeaWorld San Diego is an aquatic animal theme park that is owned by the City of San Diego and operated by SeaWorld Entertainment. Adjacent to the property is the Hubbs-SeaWorld Research Institute, which conducts research on marine biology and provides education and outreach on marine issues to the public. To the south and southeast of Fiesta Island is South Shores Park. It is a small park mainly for boating purposes with a boat ramp and RV dump.

2.2.1 Regional Planning Considerations

2.2.1.1 CITY OF SAN DIEGO GENERAL PLAN

The City’s General Plan was adopted in 2008, incorporating the City of Villages strategy, which in turn was developed and adopted as part of the Strategic Framework Element in 2002. The Strategic Framework Element represented the City’s approach for shaping how the City will grow while attempting to preserve the character of its communities and its most treasured natural resources and amenities. It was developed to provide the overall structure to guide the General Plan update and future community plan updates and amendments, as well as the implementation of an action plan. The General Plan also included ten elements to guide future development in the planning area: Land Use and Community Planning; Mobility; Urban Design;

2. Environmental Setting

Economic Prosperity; Public Facilities, Services, and Safety; Recreation; Conservation; Noise; Historic Preservation; and Housing.

The General Plan also references a series of community plans, which serve as the land use plan for a given area and are intended to provide more area-specific guidance on development in the communities of San Diego. The applicable land use plan for Fiesta Island is the Mission Bay Park Master Plan / Local Coastal Program (LCP) Land Use Plan. The General Plan planned land use designation for the project area is Park, Open Space and Recreation.

2.2.1.2 MISSION BAY PARK MASTER PLAN

The project area is entirely within Mission Bay Park which is a council-recognized planning area. The Mission Bay Park Master Plan, which was adopted in 1994 and subsequently amended in 2002, serves as the guiding planning policy document for Mission Bay Park. Policies in the Mission Bay Park Master Plan address water quality, regional recreation, “natural” recreation areas, wildlife habitats, water recreation, and access and circulation.

The adopted Mission Bay Park Master Plan includes policies that apply to all of Mission Bay Park and includes the adopted Fiesta Island Concept Plan as well as policies that are specific to Fiesta Island. The adopted Concept Plan provides guidance for land uses on Fiesta Island (see Figure 2-3).

2.2.1.3 LAND DEVELOPMENT CODE REGULATIONS

The City of San Diego Municipal Code (SDMC) Chapters 11 through 15 contain the City’s Land Development Code (LDC). The LDC contains the City’s planning, zoning, subdivision, and building regulations that regulate how land is to be developed and organized within the planning area. The LDC includes overlay and base zones; specifies permitted land use, density, floor-area ratio (FAR); and provides other development requirements for given zoning classifications. The LDC also includes specific regulations for general development, environmentally sensitive lands, and historical resources.

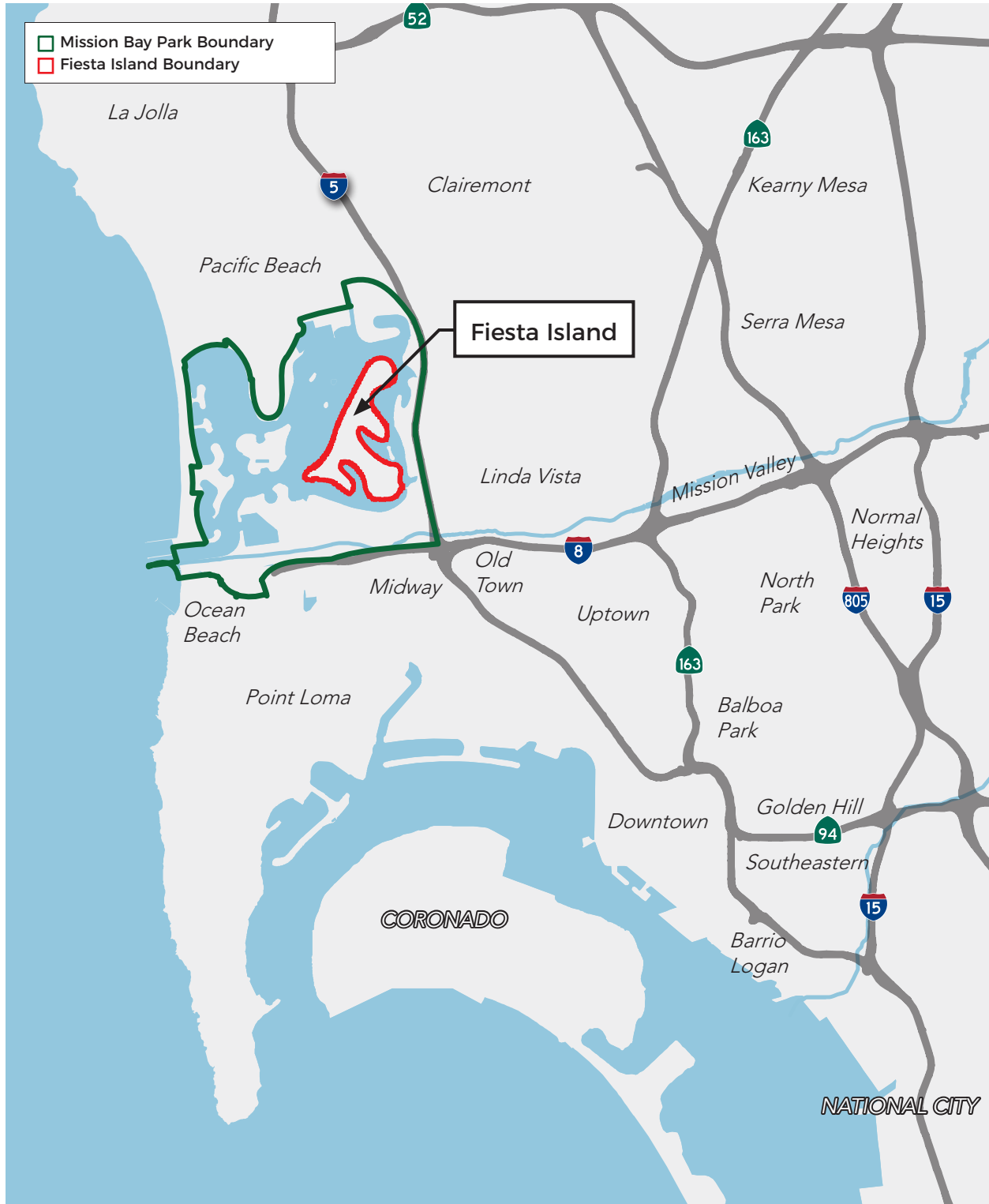
As shown on Figure 2-4, the southern portion of the proposed project area is zoned Residential (RS-1-7 and RM-4-10) and the northern portion does not have an identified zoning classification. Active and passive recreation uses are permitted within both zones. Regulations pertaining to a specific use may be referenced in the LDC.

2.3 PROJECT LOCATION AND LAND USE

Fiesta Island includes approximately 470 acres and 6 miles of shoreline. Fiesta Island is connected to the mainland only by the Fiesta Island Road causeway which intersects East Mission Bay Drive. Sea World Drive is the primary thoroughfare that provides access to East Mission Bay Drive, access to I-5 to the east and the beach communities to the west.

2. Environmental Setting

Figure 2-1 **Project Location**



Source: ESRI, SanGIS, Placeworks

2. Environmental Setting

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2. Environmental Setting

Figure 2-2 **Location of Fiesta Island in Mission Bay Park**



Source: ESRI, SanGIS, Placeworks

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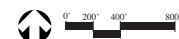
2. Environmental Setting

Figure 2-3 Adopted Fiesta Island Concept Plan



LEGEND

- General Regional Parkland** (Open Turf Play / Playgrounds / Picnic / Informal Play Field Use / Day RV Use / Restrooms)
- Natural Recreation Area** (Upland Native Vegetation / Dunes / Multi-use Trails / Picnic / Restrooms / Dog Walking)
- Sand Recreation Area** (Sand or Sand Dunes / Volleyball / OTL / Open Play / Picnic / Restrooms / Dog Walking)
- Shoreline Parkland** (Rustic Beach / RV Day Use / Beach Launching / Fishing / Fire Rings / Road Edge Parking / Dog Walking)
- Primitive Overnight Camping Area** (Native Vegetation / Dunes / Tent or Car Camping / Restrooms)
- Existing & Expanded Youth Camping** (Youth Camping / Picnic / Aquatic Activities / Trails / Group Meeting)
- Existing & Proposed Habitat Areas** (Native Vegetation / Dunes / Least Tern / Wetlands or Eelgrass)
- Swimming Beach** (Beach with Large Grain Sand / Wading / Swimming / Restrooms)
- Dredged Inlets** (Open Water / Eelgrass / Wetland Habitats)
- Pavement** (Parking / Roadways / Stripe- Parkland used for Overflow Parking)
- Trails** (Multi-purpose Hard Surface Trail with public art 'word walk' included)
- Playground** (Tot-Lot / Kids Playground)
- Restroom**



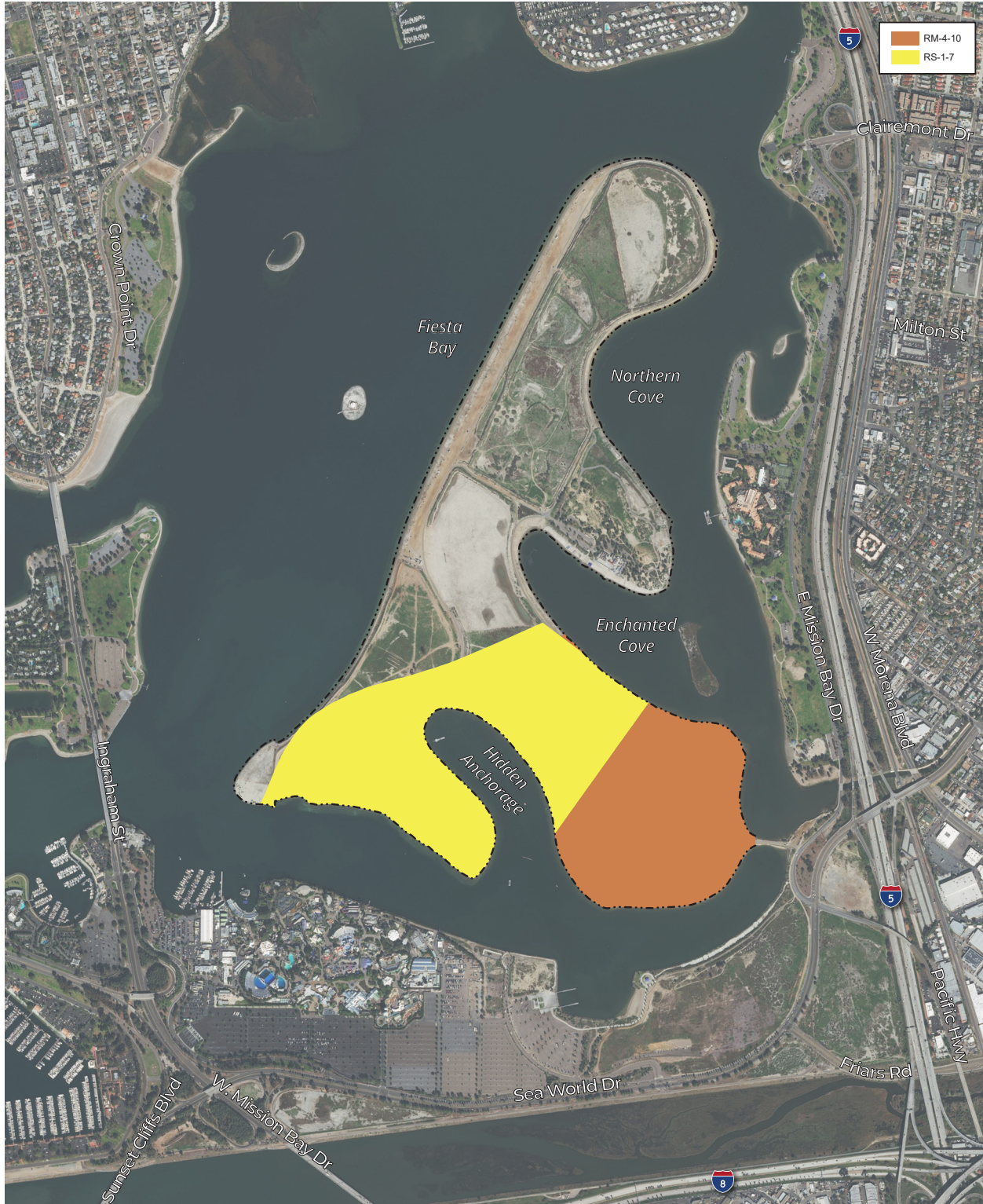
Source: KTUA, City of San Diego

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2. Environmental Setting

Figure 2-4 Existing Zoning



Source: ESRI, SanGIS, Placeworks

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2. Environmental Setting

Once on Fiesta Island, Fiesta Island Road is an approximately 4.7 mile one-way, one-lane loop road that circles the island in a counter-clockwise direction. The road has one cutover in the middle of the island, which allows traffic to bypass the northern half of the island and return toward the entry/exit of Fiesta Island. Fiesta Island Road does not have any formal parking on the road, but informal parking is permitted on the beach adjacent to the road. Fiesta Island Road also has sharrows markings, but no other bicycle facilities or sidewalks are present.

The perimeter of Fiesta Island mostly consists of a sandy beach that extends approximately 50-150 feet from the water until, throughout most of the island, it meets Fiesta Island Road on the inland side. Some areas of the beach are smaller due to the road and/or elevation changes and small cliffs that overlook the water. Most of Fiesta Island is hidden by containment sand berms that were used to help create it.

The project area is divided into four subareas: North, Central, Southeast, and Southwest, as shown in Figure 2-5.

2.3.1 North Subarea

The North Subarea of Fiesta Island is mostly undeveloped with a mix of native and non-native vegetation. Like all of Fiesta Island the perimeter is ringed by sandy beaches, with some areas armored with riprap. The North Subarea includes a protected area for nesting least terns, which is surrounded by a chain link fence to limit access.

2.3.2 Central Subarea

The Central Subarea of Fiesta Island is ringed by sandy beaches. The Central Subarea is bisected by the cutover of Fiesta Island Road, which is the only part of the road that crosses the island and does not ring the island. To the north of the road the Central Subarea is mostly undeveloped with a mix of native and non-native vegetation. To the south of the road is an area for sand recreation, including Over-the-Line games and other miscellaneous recreational activities. The sand recreation area is surrounded by a small ring of undeveloped park land that is covered by a mix of native and non-native vegetation; beyond the ring of undeveloped park land the sand recreation area is bordered by Fiesta Island Road.

The eastern part of the Central Subarea includes a finger of Fiesta Island that forms the north side of Enchanted Cove. It includes an area dedicated to camping and aquatic recreation for youth, including the San Diego Youth Aquatic Center and the Fiesta Island Youth Camp, and a small wetland area that is located north of the Fiesta Island Youth Camp.

The San Diego Youth Aquatic Center is available for use by youth groups and can accommodate special events. The Youth Aquatic Center provides instruction and recreational opportunities for sailing, canoeing, rowing, kayaking, swimming and windsurfing. Its facilities include a boat ramp, overnight dormitories, meeting and program rooms, a kitchen, courtyard, and marine biology labs. The Youth Aquatic Center includes boat storage for canoes, rowboats, kayaks, sailboards, sailboats, and catamarans.

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The Fiesta Island Youth Camp is adjacent to the Youth Aquatic Center. This area includes 25 campsites, each one with a fire pit, barbeque, and a picnic table. The area can accommodate up to 250 people. An amphitheater and a bonfire ring are also available for group use. Reserved parking is available for the Youth Aquatic Center and Fiesta Island Youth Camp, and access to these areas can be restricted by a locked gate. A small loop road exists within the youth area to provide internal circulation and connects to Fiesta Island Road.

2.3.3 Southeast Subarea

The Southeast Subarea is located near the main entrance to Fiesta Island, where the Fiesta Island Road causeway connects Fiesta Island to the mainland. Like the rest of Fiesta Island, the perimeter is ringed by sandy beaches. Most of the Southeast Subarea is undeveloped and covered by a mix of native and non-native vegetation. A portion of the area is used for sand management by the City. The sand management area is obscured behind a small berm.

2.3.4 Southwest Subarea

The Southwest Subarea consists of the primary off-leash dog park. Just to the north is a small dirt parking lot for the off-leash dog park. Stony Point, located on the very southwest tip of Fiesta Island, is a fenced habitat area for nesting least terns, and is reinforced by rip-rap. There are no roads or paved trails within the Southwest Subarea, and it can only be accessed through informal use trails.

2.4 CLIMATE AND AIR QUALITY

2.4.1 San Diego Air Basin

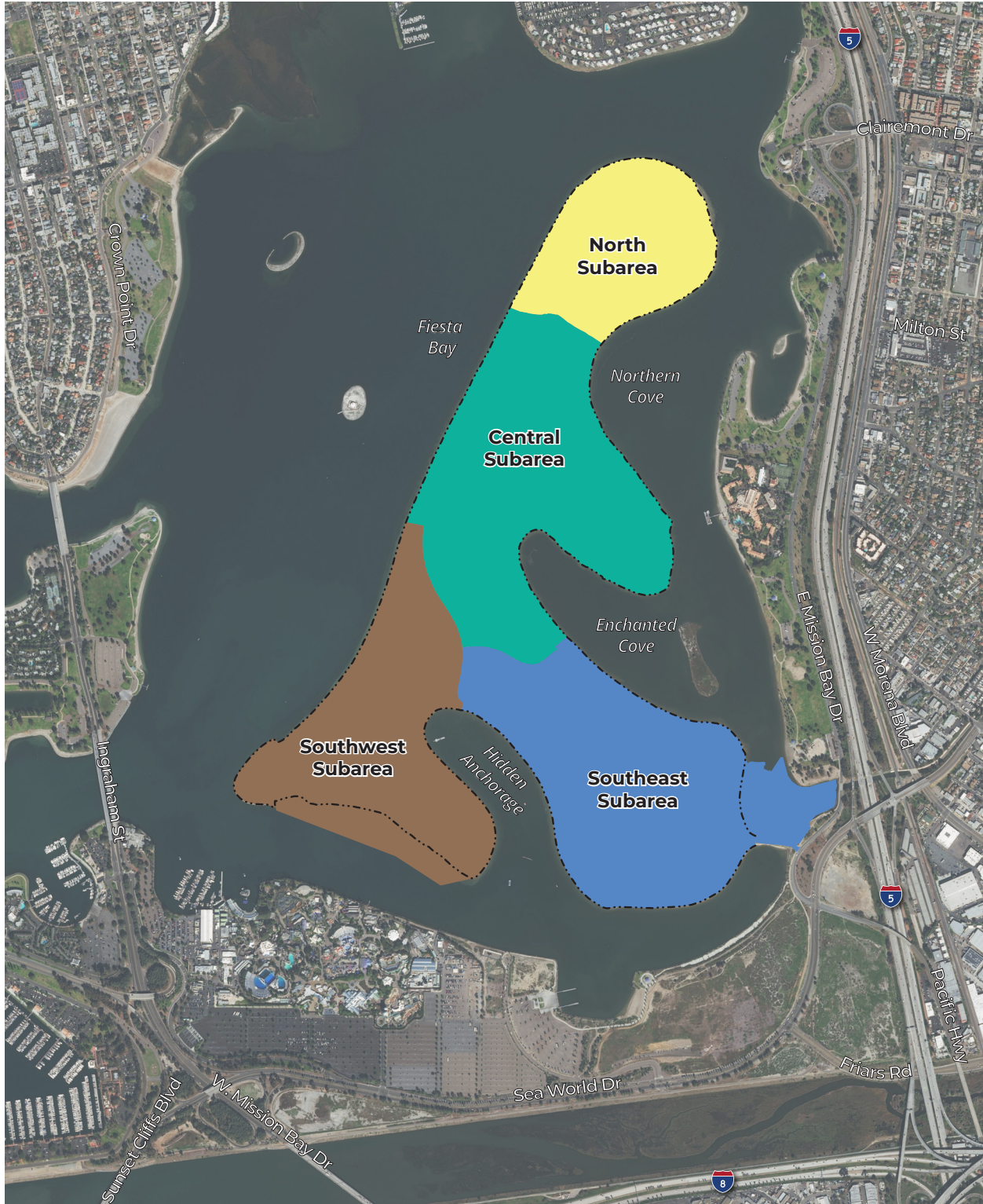
The project area is located within the San Diego Air Basin (SDAB) of the San Diego Air Pollution Control District (SDAPCD). Emissions sources within the SDAB are concentrated primarily in the western region and pollutant dispersion is affected by the region's climate and geography. The climate in the project area is dominated by the strength and position of the semi-permanent high pressure center over the Pacific Ocean near Hawaii. This high-pressure center creates cool summers, mild winters, and infrequent rainfall, and drives the cool, daytime breezes, maintaining a comfortable level of humidity and ample sunshine.

2.4.1.1 INVERSIONS

The influence of this semi-permanent high-pressure system results in strong high-altitude temperature inversions associated with warm descending air. The subsidence inversions within the SDAB generally occur during the warmer months (May through October) as descending air from the Pacific high-pressure cell comes into contact with cool marine air. Within the SDAB, the inversion layer is approximately 2,000 feet (610 meters) above mean sea level (msl) between May and October. During the winter months (November through April), the temperature inversion rises to approximately 3,000 feet (914 meters) above msl. Inversion layers are important elements of local air quality because they inhibit the dispersion of pollutants, resulting in a temporary degradation of air quality. On days without inversions or on days of winds averaging over 15 mph, smog potential is greatly reduced in the SDAB.

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Figure 2-5 **Fiesta Island Subareas**



Source: ESRI, SanGIS, Placeworks

2. Environmental Setting

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2. Environmental Setting

2.4.1.2 TEMPERATURE AND PRECIPITATION

The SDAB is characterized by a Mediterranean climate with average temperatures reaching 92°F in the summer and 38°F in the winter. High temperatures are often accompanied by very low relative humidity (often less than 20 percent). The Western Regional Climate Center maintains historical climate information for the western United States. Its closest meteorological monitoring station to the planning area is the San Diego Sea World, California Monitoring Station (ID No. 047741). The average low is reported at 47.9°F in December and the average high is 72.7°F in August (WRCC 2017).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. The total average annual precipitation is 9.58 inches as measured by the Western Regional Climate Center, and the majority of precipitation occurs between November and April (WRCC 2017).

2.4.1.3 WIND

Wind patterns across the south coastal region are characterized by westerly onshore winds during the day and occasional easterly breezes at night as a result of cold air drainage. Wind speed is somewhat greater during the dry summer months than during the rainy winter season. The offshore flow is less persistent in the winter when occasional hot, dry Santa Ana winds blow from the east with great force.

2.4.1.4 SDAB NONATTAINMENT AREAS

The San Diego Regional Air Quality Strategy (RAQS) provides the framework for the SDAB to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The attainment status for the SDAB is included in Table 2-1, *Attainment Status of Criteria Air Pollutants in the San Diego Air Basin*.

Table 2-1 Attainment Status of Criteria Air Pollutants in the San Diego Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Nonattainment	Revoked
Ozone – 8-hour	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Unclassified ¹
PM _{2.5}	Nonattainment ²	Attainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment
All others	Attainment/Unclassified	No federal standard

Source: SDAPCD 2017.

¹ At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

² The SDAB is designated as nonattainment for fine particulate matter due to the 8-hour ozone nonattainment designation. PM_{2.5} is precursor to ozone formation.

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2.4.1.5 EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the vicinity of the project site, are best documented by measurements taken by the SDAPCD. The SDAPCD air quality monitoring station closest to the project site is the San Diego – 1110 Beardsley Street Monitoring Station, which monitors Ozone (O₃), Carbon Monoxide (CO), Nitrogen Dioxide (NO₂), Coarse Particulates (PM₁₀), and Fine Particulates (PM_{2.5}). Data for Sulfur Dioxide (SO₂) is obtained from the El Cajon – Redwood Avenue Monitoring Station. The most current five years of data monitored at these monitoring stations are included in Table 2-2, *Ambient Air Quality Monitoring Summary*.

Table 2-2 Ambient Air Quality Monitoring Summary

Pollutant/Standard	2012	2013	2014	2015	2016
Ozone¹					
State 1-Hour $\geq$ 0.09 ppm (days exceed threshold)	0	0	0	0	0
State 8-Hour $>$ 0.070 ppm (days exceed threshold)	0	0	2	0	0
Federal 8-Hour $>$ 0.075 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.071	0.063	0.093	0.089	0.072
Max. 8-Hour Conc. (ppm)	0.065	0.053	0.082	0.067	0.061
Carbon Monoxide²					
State 8-Hour $>$ 9 ppm (days exceed threshold)	0	*	*	*	*
Federal 8-Hour $\geq$ 9 ppm (days exceed threshold)	0	*	*	*	*
Max. 8-Hour Conc. (ppm)	1.81	*	*	*	*
Nitrogen Dioxide¹					
State 1-Hour $\geq$ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.065	0.072	0.075	0.062	0.073
Sulfur Dioxide²					
State 24-Hour $\geq$ 0.04 ppm (days exceed threshold)	0	0	*	*	*
Federal 24-Hour $\geq$ 0.14 ppm (days exceed threshold)	0	0	*	*	*
Max 24-Hour Conc. (ppm)	0.001	0.001	*	*	*
Coarse Particulates (PM₁₀)²					
State 24-Hour $>$ 50 $\mu\text{g}/\text{m}^3$ (days exceed threshold)	0	1	0	1	1
Federal 24-Hour $>$ 150 $\mu\text{g}/\text{m}^3$ (days exceed threshold)	0	0	0	0	0
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	45.0	90.0	40.0	53.0	49.0
Fine Particulates (PM_{2.5})¹					
Federal 24-Hour $>$ 35 $\mu\text{g}/\text{m}^3$ (days exceed threshold)	1	1	1	0	0
Max. 24-Hour Conc. ($\mu\text{g}/\text{m}^3$)	39.8	37.4	36.7	33.4	34.4

Source: CARB 2017.

ppm: parts per million; $\mu\text{g}/\text{m}^3$: micrograms per cubic meter

Notes: * Data not available.

¹ Data from the San Diego – 1110 Beardsley Street Monitoring Station.

² Data from the El Cajon – Redwood Avenue Monitoring Station.

2.4.1.6 EXISTING EMISSIONS

Fiesta Island currently consists primarily of open space recreational areas and undeveloped natural habitat. The limited developed uses on site includes the SEACAMP San Diego (youth campsite) and the San Diego Youth Aquatic Center. Area source emissions include building energy use, consumer cleaning products, and

2. Environmental Setting

use of the existing fire rings at the open beach areas and youth campsites. Furthermore, mobile-source emissions are generated from vehicle trips associated with visitors. Table 2-3, *Existing Fiesta Island Daily Emissions Inventory*, shows the average daily emissions inventory of Fiesta Island.

Table 2-3 Existing Fiesta Island Daily Emissions Inventory

Phase	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Area	<1	<1	<1	0	<1	<1
Transportation	17	64	180	<1	35	10
Fire Rings/Camp Fires ¹	18	<1	254	3	27	23
Total	35	64	433	3	61	32

Source: CalEEMod Version 2016.3.1. Based on highest winter or summer emissions using 2017 transportation emission rates. Totals may not equal 100 percent due to rounding.

¹ Based on CARB Smoke Emission Estimator emission factors for wood with a diameter of three inches or larger (CARB).

2.4.1.7 SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, and the acutely and chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive to air pollution because residents tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution while industrial, commercial, retail, and office areas are considered the least sensitive to air pollution.

The nearest offsite sensitive receptors to the project area include the residences to the north and west across Fiesta Bay, the residences east of I-5, and Mission Bay High School further to the north.

2.5 BIOLOGICAL RESOURCES

2.5.1 Multi-Habitat Planning Area Lands

The entire project area is within the City's Multiple Species Conservation Program (MSCP) Planning Area per the City's MSCP Subarea Plan (SAP). An approximate total of 57 acres of habitat within the project area are included as Multi-Habitat Planning Areas (MHPA) per the City's MSCP SAP. The MHPA consists of mainly contiguous lands that will eventually become the City's Final MSCP Preserve, (approximately 90% will be conserved at build-out through public and private acquisition) and support the City's 85 MSCP Permit Covered Species. These lands have been determined to provide the necessary habitat quantity, quality and connectivity to support the future viability of San Diego's unique biodiversity and are thus considered sensitive biological resources under the City's Environmentally Sensitive Lands (ESL) Ordinance and

2. Environmental Setting

Regulations. MHPA areas of the project area are shown in Figure 2-6. Two of those locations support nesting habitat preserve for the federal and State endangered (and State fully protected) California least tern.

2.5.2 Vegetation Communities and Land Cover Types

Sensitive vegetation communities/habitats are those considered rare within the region or sensitive by CDFW and/or the City. These communities, in any form (e.g., disturbed), are considered sensitive because they have been historically depleted, are naturally uncommon, or support sensitive species. The following eight vegetation communities/habitats on Fiesta Island are considered sensitive:

- Southern coastal salt marsh
- Southern coastal salt marsh disturbed
- Saltpan/mudflats
- Beach
- Open water
- Eelgrass beds
- Southern foredunes
- Diegan coastal sage scrub

The preceding vegetation communities/habitats are also considered environmentally sensitive habitat areas (ESHAs) under the California Coastal Act.

Upland habitats are divided into five tiers of sensitivity (I being most sensitive and V least sensitive) based on rarity and ecological importance. Wetland habitats are not assigned a tier. A total of 57.1 acres of MHPA occur in three locations on site: the northern, southwestern, and southeastern tips of the island (Figures 2-7 and 2-8). The former two locations support nesting habitat preserve for the federal and State endangered (and State fully protected) California least tern.

Wetland and Waters Habitats

Southern Coastal Salt Marsh

Southern coastal salt marsh is a community typically comprised of plants growing in salty water and persists primarily from tidal influence. In San Diego County, this community is present within bays, lagoons, and estuaries in which the soils can have a broad range of salinities (e.g., saline, freshwater, brackish, hypersaline) based on the environmental setting (e.g., tidal estuary or closed lagoon), elevation, and seasonal conditions (e.g., dry or wet winter seasons). On Fiesta Island, the southern coastal salt marsh is found under tidal influence on the east side of the island at the mouth of Tecolote Creek and within a few isolated non-tidal saline basins on the island.

2. Environmental Setting

Figure 2-6 **MHPA Lands on Fiesta Island**



Source: ESRI, SanGIS, Placeworks

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Figure 2-7 Vegetation and Land Cover Types



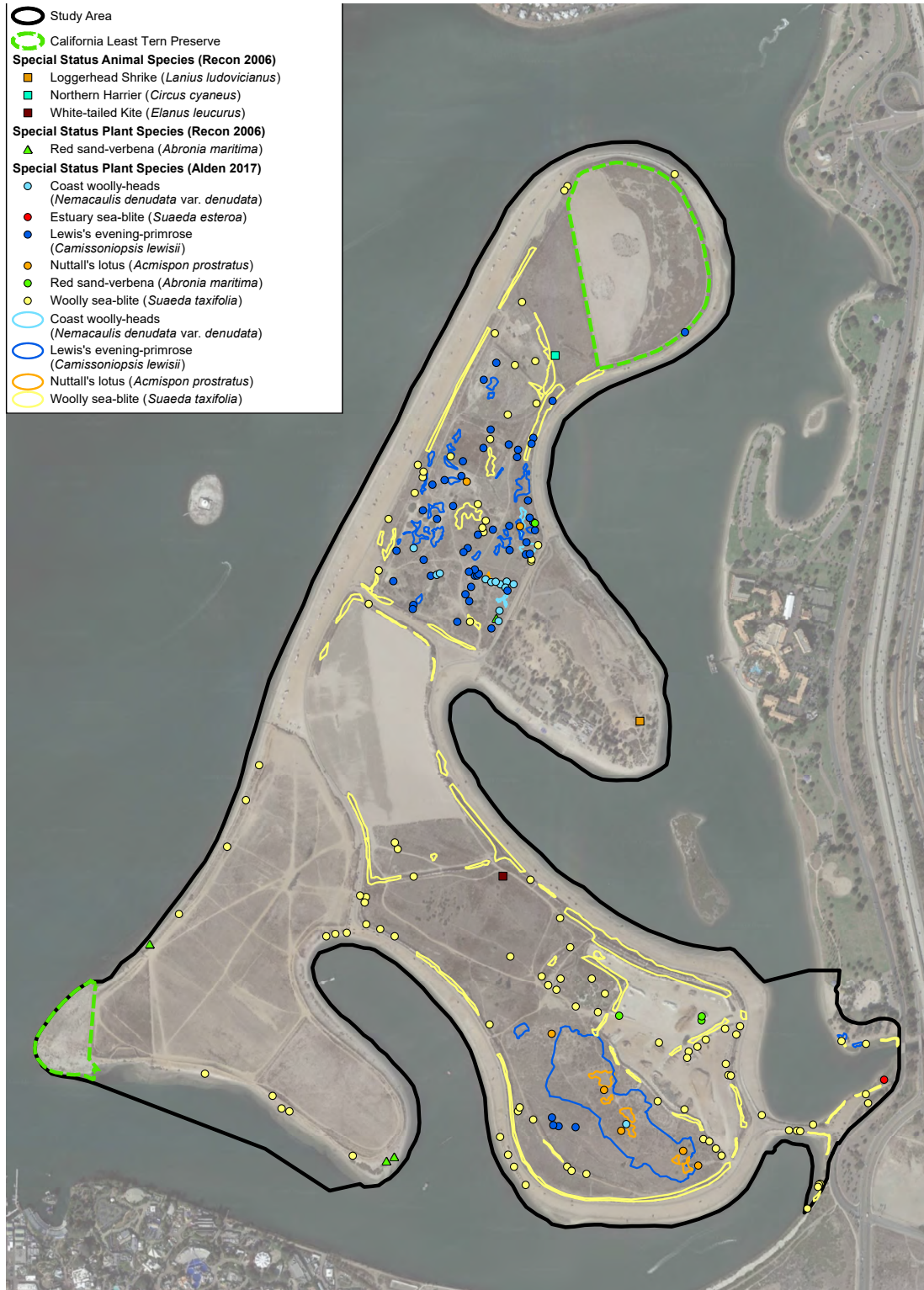
Source: ESRI, SanGIS, Placeworks, Alden Environmental

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Figure 2-8 Sensitive Plant Species Observed on Fiesta Island



Source: ESRI, SanGIS, Placeworks, Alden Environmental

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The tidally influenced marshlands are dominated by Pacific pickleweed (*Sarcocornia pacifica*), although a small amount of cordgrass (*Spartina foliosa*) also occurs at the mouth of Tecolote Creek. This marsh is very small and abutted by steep slopes on the south side of the marsh at the Fiesta Island Road causeway and the parking area located at the entrance to the island. Also present in this area is a small amount of California sea-lavender (*Limonium californicum*), saltwort (*Batis maritima*), and salty Susan (*Jaumea carnosa*). Some non-natives are also present along the margin of the community including garland (*Glebionis coronaria*).

Southern Coastal Salt Marsh Disturbed

Within the island's interior, small patches of non-tidal salt marsh plants occur within areas of low permeability soils with no drainage outlet to the ocean or Mission Bay. These areas concentrate salt in near surface soils due to evaporation and thus result in soil salinity levels that are toxic to most upland plants. As a result, small patches of low growing plants tolerating high salt concentrations (halophytes) occur in areas of otherwise open saltpan. Most of the plants within this habitat are non-succulent halophytes (e.g., alkali heath [*Frankenia salina*] and alkaliweed [*Cressa truxillensis*]). Non-native species are also present within this community, including iceplant (*Mesembryanthemum nodiflorum*, *M. crystallinum*), and to a lesser extent non-native grasses and forbs. It should be noted that only a very small patch of southern coastal salt marsh has been classified as "disturbed." This patch is present on the eastern portion of the island and is surrounded by non-native vegetation. Overall, these small, open-canopy communities are likely persisting in place due to the soil and/or potential historic revegetation attempts; however, these areas have a low biological value due to their isolation, adjacency to disturbed lands, and intrusion by non-native species.

Table 2-4 Vegetation Communities and Land Covers Onsite

Vegetation Community/Land Cover Type	Tier	Acreage		
		Outside MHPA	Inside MHPA	Total
Wetland Habitats				
Southern coastal salt marsh	NA	1.78	0.05	1.83
Southern coastal salt marsh disturbed	NA	<0.01	--	<0.01
Saltpan/Mudflats	NA	3.63	1.06	4.69
Open water	NA	21.05	0.89	21.94
Beach	NA	84.57	10.01	94.58
Subtotal		111.03	12.01	123.04
Upland Habitats				
Southern foredunes	I	5.5	0.0	5.5
Diegan coastal sage scrub	II	12.7	0.0	12.7
Disturbed Land	IV	298.1	43.3	341.4
Urban/Developed/Ornamental	IV	36.7	1.8	38.5
Subtotal		353	45.1	398.1
Total		464.03	57.11	464.03

Source: Alden 2017

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Saltpan/Mudflats

Saltpan/mudflats are coastal wetlands that form when mud is deposited by tides or rivers and are commonly found in sheltered areas such as bays and estuaries (Oberbauer, et al. 2008). They are typically devoid of vegetation as the ground is generally covered in salt or other minerals formed from evaporated water. Saltpans generally pool water when it rains, forming mudflats. On Fiesta Island, the saltpan/mudflats are limited to several low-lying areas that appear to pond. These areas are generally devoid of vegetation; however, sporadic vegetation is present within and/or along the fringe (i.e., most notably non-native, invasive iceplant). Overall, the on-site saltpan/mudflat on Fiesta Island has a low biological value due to the small size, isolation, and adjacency to disturbed lands. This community is also present along the shoreline and exposed during low tide.

Beach

The upper shoreline within the project area is comprised primarily of sand and transitional sandy silts. Portions, but not all, of the shoreline are regularly groomed by City maintenance crews. Where adequate sand exists within the beach profile, the grooming by the City maintenance crews flattens the beach profile as needed to eliminate development of beach scarps. This facilitates public utility of the beaches and enhances safety. The City staff also concurrently groom sand to remove trash and debris from these intensively utilized public beaches. At lower intertidal elevations, the beach is generally smooth sandy slopes that extend from near mean sea level down to approximately 0 feet mean lower low water (MLLW) where eelgrass beds begin as a nearly unbroken fringe along the perimeter of the bay.

Open Water

Open water in the project area consists of a mosaic of unvegetated and vegetated, unconsolidated soft bottom habitats. Unvegetated soft bottom habitat supports clean, mobile sands to fine, silty sediments. The benthic sediments within Mission Bay support a broad range of infaunal and epifaunal organisms that vary depending upon the nature of the substrate and position within the bay. In the sandier sediments, purple olive snail (*Olivella biplacata*), sea pansy (*Renilla koellikeri*), and moon snails (*Neverita lewisii*) are the visually dominant epifaunal species (M&A 1988 in M&A 2017a). In muddier conditions, sponges, slender sea pen (*Stylatula elongata*), the solitary hydroid, *Corymorpha*, and burrowing anemones (*Harenactis attenuata*) and tube-dwelling anemones (*Pachycerianthus fimbriatus*) are common. The mud bottoms typically show evidence of burrowing by macroinfaunal invertebrates such as bivalves (*Chione* spp., *Macoma nasuta*), the amphipod (*Grandidierella japonica*), and bay ghost shrimp (*Callinassa californiensis*). The non-native bryozoan (*Zoobotryon verticillatum*) is seasonally encountered in both unvegetated as well as vegetated portions of the bay floor. Fish that are regularly observed on the unvegetated bottom are principally demersal fish of warm water embayments and include round stingray (*Urolophus halleri*) and bat ray (*Myliobatis californica*), barred sand bass (*Paralabrax nebulifer*), gobies (Family Gobiidae), and specklefin midshipman (*Porichthys myriaster*). In the more westerly portions of the bay, the unvegetated bottom often supports California halibut (*Paralichthys californicus*) and other flat fish such as diamond turbot (*Hypsopsetta guttulata*), which become less prevalent further into the bay. Vegetated soft bottom habitat supports eelgrass beds that function as important habitat for a variety of invertebrate, fish, and avian species.

2. Environmental Setting

2.5.2.1 UPLAND HABITATS

Southern Foredunes

The southern foredune community occurs on sandy sites in proximity to the high surf line. Southern foredunes are subject to strong winds with their desiccating effects and shifting sands. According to Cooper (1967 in RECON 2011), only 23 percent of California's coastline was originally covered by beach or dune habitat; the rest of the coast consisted of rocky cliffs and tide pools. Southern foredunes have been greatly reduced by urban and other development between Point Conception and the Mexican border (Holland 1986). Very few examples of this community type are still present in southern California, and all are disturbed to varying degrees.

Plant species present are typical of the southern foredune community and include red sand verbena (*Abronia maritima*), beach sand verbena (*Abronia umbellata*), beach bur-sage (*Ambrosia chamissonis*), sea rocket (*Cakile* sp.), Lewis's evening primrose (*Camissoniopsis lewisii*), beach evening primrose (*Camissonia cheiranthifolia*), and coast wooly-heads (*Nemacaulis denudata* var. *denudata*). Despite the fragmented and isolated nature of the habitat, the number and diversity of the foredune species is high.

Diegan Coastal Sage Scrub

Common species in this community include California buckwheat (*Eriogonum fasciculatum*), coyote bush (*Baccharis pilularis*), and broom baccharis (*Baccharis sarothroides*). Less common species include black sage (*Salvia mellifera*) and laurel sumac (*Malosma laurina*). Interspersed among these native shrubs is a mix of native and non-native species including black mustard (*Brassica nigra*), lotus (*Lotus heermanni*), deerweed (*Acmispon glaber*), hottentot-fig (*Carpobrotus edulis*), and brome grasses (*Bromus* spp.) While the species that dominate the shrub component of this vegetation type are typical of the coastal sage scrub community, neither the shrub cover nor the site's history support the designation of this vegetation type as Diegan coastal sage scrub. However, within this community, native shrub diversity is relatively high and shrub cover is mature.

Disturbed Land

Vegetated disturbed land has been colonized by primarily non-native, annual grasses and herbaceous species and is dispersed throughout Fiesta Island. Characteristic plant species on site include black mustard, crown daisy (*Chrysanthemum coronarium*), horseweed (*Conyza canadensis*), filaree (*Erodium* spp.), telegraph weed (*Heterotheca grandiflora*), short-pod mustard (*Hirschfeldia incana*), cheeseweed (*Malva parviflora*), Russian thistle (*Salsola tragus*), and cockle-bur (*Xanthium strumarium*). The dog park on the southern portion of the island is dominated by black mustard, crown daisy, and grasses. Eucalyptus (*Eucalyptus* spp.) trees are also interspersed throughout this area. Woolly seablite and cockle-bur are the dominant species along the berms that are present throughout the island.

Disturbed land that is bare ground consists of dirt access roads, the sand disposal area, and recently graded areas.

2. Environmental Setting

Urban/Developed/Ornamental

Urban/developed/ornamental areas on Fiesta Island are characterized by parking lots, paved roads, man-made structures, and associated ornamental vegetation. Ornamental includes landscaped areas, consisting of both non-native and planted native species.

2.5.3 Plant Species

Ninety-five species of plants have been observed on Fiesta Island. Of those, six species that were observed are considered sensitive. Sensitive plant species are those that are considered federal, state, or CNPS rare, threatened, or endangered; MSCP Covered Species; or MSCP Narrow Endemic species. Sensitive plant status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size. Other sensitive plant species may have the potential to occur on the site, even if not observed or based on, for example, habitat types, soils present, or nearby CNDDDB records. Areas of the project site where sensitive plant species were observed are shown on Figure 2-8.

The six sensitive plant species that were observed in the project area, include:

- Nuttall's lotus (*Acmispon prostratus*)
- Coast woolly-heads (*Nemacaulis denudata* var. *denudata*)
- Estuary seablite (*Suaeda esteroa*)
- Lewis' evening primrose (*Camissoniopsis lewisii*)
- Red sand-verbena (*Abronia maritima*)
- Woolly seablite (*Suaeda taxifolia*)

Potential for Other Sensitive Plant Species to Occur Onsite

Twelve other sensitive plant species that could occur onsite based on habitat preference or on observations of that species in the project region listed on the California Natural Diversity Database maintained by the California Department of Fish and Wildlife, were evaluated for potential to occur onsite. Ten of these species were determined to have low potential to occur onsite, as, if they were present, they would have been observed during surveys conducted in 2006 and 2017. The remaining two species are not expected to occur onsite due to lack of suitable soils (see Table 3 in the Biological Technical Report).

Fifteen sensitive plant species listed as Narrow Endemic species under the MSCP were evaluated for potential to occur onsite. Narrow Endemic species are a subset of MSCP Covered Species. The City specifies additional conservation measures in its MSCP Subarea Plan to ensure impacts to Narrow Endemic species are avoided to the maximum extent practicable. Seven of these species were determined to have low to very low potential to occur onsite, since if they were present they would have been observed during surveys in 2006 and 2017; and the remaining eight species are not expected onsite due to lack of suitable soils (see Table 4 in the Biological Technical Report).

2. Environmental Setting

2.5.4 Animal Species

Ten sensitive animal species were observed or are known to be present on Fiesta Island, including:

- California least tern (*Sternula antillarum browni*)
- White-tailed kite (*Elanus leucurus*)
- California brown pelican (*Pelicanus occidentalis californicus*)
- Loggerhead shrike (*Lanius ludovicianus*)
- Caspian tern (*Hydroprogne caspia*)
- Northern harrier (*Circus cyaneus*)
- Common loon (*Gavia immer*)
- San Diego black-tailed jackrabbit (*Lepus californicus benettii*)
- California horned lark (*Eremophila alpestris actia*)
- Double-crested cormorant (*Phalacrocorax auritus*)

Potential for Other Sensitive Animal Species to Occur Onsite

Sensitive animal species that have some potential to occur onsite – due to habitat preference, for instance – were evaluated. Ten species were found to have moderate to high potential to occur onsite are described below in Table 2-5, *Sensitive Animal Species Not Observed Onsite but with Moderate to High Potential to Occur*. Sensitive animal species determined to have low potential to occur, or not expected onsite, due to lack of suitable habitat, are described in Table 6 of Appendix 5.2-1.

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Table 2-5 Sensitive Animal Species Not Observed Onsite but with Moderate to High Potential to Occur

Common Name Scientific Name	Status	Habitat	Potential To Occur
Invertebrates			
Wandering skipper <i>Panoquina errans</i>	MSCP	Salt marshes. Larval host plant is <i>Distichlis spicata</i> .	Moderate to high potential to occur as habitat and host plant are present.
Birds			
Cooper's hawk <i>Accipiter cooperii</i>	WL MSCP	Oak groves, mature riparian woodlands, and eucalyptus stands or other mature forests.	Moderate potential to occur due to presence of ornamental trees.
Burrowing owl <i>Athene cunicularia</i>	BCC SSC MSCP	Burrowing owls utilize open areas such as grasslands, pastures, coastal dunes, desert scrub, and edges of agriculture fields, with underground burrows often excavated by California ground squirrels (<i>Otospermophilus beecheyi</i>), for breeding and foraging.	Moderate to high potential to occur. A nesting colony was reported to the CNDDDB on Fiesta Island, but the date of observation is unknown.
Canada goose <i>Branta canadensis</i>	MSCP	Mixed fresh and brackish water habitats with low grass or succulent leaves.	Moderate potential to forage in winter. Low potential to nest as nesting in San Diego County is rare.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>	BCC SSC MSCP	Beaches, dunes, and salt flats.	High potential to winter on site. Not expected to breed on island beaches. Last known breeding attempt in Mission Bay was in 1995.
Reddish egret <i>Egretta rufescens</i>	MSCP	Coastal wetlands.	Moderate in winter. A non-breeding, winter visitor to San Diego County.
American peregrine falcon <i>Falco peregrinus anatum</i>	BCC FP MSCP	Generally, areas with cliffs near water where prey (shorebirds and ducks) is concentrated. Preferred hunting areas are agricultural fields, meadows, marshes, and lakes. Nesting usually occurs on cliff ledges or in a scrape in debris and occasionally in the old nests of other birds.	Moderate potential to forage. Low potential to nest.
Long-billed curlew <i>Numenius americanus</i>	BCC WL MSCP	Tidal mudflats and open grassland.	Moderate potential to forage in marsh habitat and on open beaches during migration.
Osprey <i>Pandion haliaetus</i>	WL	Coasts and inland lakes.	High potential to forage in waters surrounding the island.
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	SE MSCP	Coastal marshes dominated by pickleweed (<i>Salicornia spp.</i>).	Moderate potential to occur. <i>Salicornia</i> species are present. Known to occur in vicinity of site at Kendall Frost marsh and reported to the CNDDDB (4 pairs) in 2001 on Beacon Island, San Diego Bay.
White-faced ibis <i>Plegadis chihi</i>	WL MSCP	Nests in freshwater marshes and forages in shallow waters and wet, grassy habitats.	Low potential to occur. No breeding reported in San Diego County, and not reported in Mission Bay in winter.
Light-footed clapper rail	FE	Coastal salt marshes, especially those dominated by cordgrass (<i>Spartina sp.</i>), but has been known	Low to moderate potential to

2. Environmental Setting

Table 2-5 Sensitive Animal Species Not Observed Onsite but with Moderate to High Potential to Occur

Common Name Scientific Name	Status	Habitat	Potential To Occur
<i>Rallus longirostris levipes</i>	SE FP MSCP	to use brackish and freshwater sites.	occur in salt marsh habitat. <i>Spartina foliosa</i> noted on site in 2006.
Black skimmer <i>Rynchops niger</i>	BCC SSC	Coastal areas adjacent to the ocean. Feeds in shallow bays, estuaries, and salt marsh pools.	High potential to forage in waters surrounding the island. Known to breed only in southern San Diego Bay.
Elegant tern <i>Thalasseus elegans</i>	WL MSCP	Mud flats, sandbars, dunes, bays, lagoons.	High potential to forage in waters surrounding the island. Known to breed only in southern San Diego Bay.

Source: Alden 2017

Status Abbreviations:

FE Federal Endangered
SE State Endangered
BCC Bird of Conservation Concern (USFWS)
FP State Fully Protected Species
SSC State Species of Special Concern
WL State Watch List
MSCP MSCP-covered species

2.5.5 Jurisdictional Waters and Wetlands

Mission Bay is defined as jurisdictional, traditionally navigable Waters of the United States. As a result, waters of the bay are regulated as navigable waters under Section 10 of the Rivers & Harbors Act to the mean high-water line, which is located at an elevation of +4.74 feet mean low low water (MLLW). In addition, for tidal traditionally navigable Waters of the U.S., the regulatory limits, in absence of the presence of wetlands, extend to the high tide line. In tidal waters such as Mission Bay, this boundary is defined as the annual highest high tide omitting storm surge; within Mission Bay this boundary is defined as +7.37 feet MLLW. This area (i.e., annual highest high tide) is regulated by the Corps under Section 404 of the Clean Water Act (CWA) and the Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA. Jurisdictional waters and wetlands regulated by the Corps, RWQCB, California Coastal Commission (CCC), and City are quantified in Table 2-6. Figure 2-9 shows the location of jurisdictional waters and wetlands on Fiesta Island.

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Table 2-6 Jurisdictional Waters and Wetlands Onsite

Vegetation Community	Acreage			
	Corps and City Wetland	Corps Waters and City Wetlands	CCC and City only	Total
Open water	0.00	11.83	0.00	11.83
Beach	0.00	68.94	0.00	68.94
Eelgrass beds	0.00	11.83	0.00	11.83
Saltpan/mudflats	0.00	4.69	0.00	4.69
Southern coastal salt marsh	1.84	0.00	0.00	1.84
Southern coastal salt marsh (disturbed)	0.00	0.00	0.002	<0.01
Diegan coastal sage scrub	0.00	0.01	0.00	0.01
Disturbed land	0.00	3.40	0.00	3.40
Urban/Developed/Ornamental	0.00	0.98	0.00	0.98
Total	1.84	101.68	<0.01	103.52

Source: Alden 2017

Within the island's interior, there are no waterways that directly connect to Mission Bay (i.e., surface drainage connection). Rather, there are shallow depressions that support a combination of hydrophytic vegetation satisfying the Dominance Test, hydric soils, and/or wetland hydrology. However, because Fiesta Island is a man-made feature with soils derived from dredged material from the bay, and mostly dominated by iceplant, the island has been classified as a difficult wetland situation/problematic. Areas that met the Dominance Test for vegetation and exhibited wetland hydrology were identified as southern coastal salt marsh and classified as jurisdictional wetlands, regulated by Corps under Section 404 of the CWA. These wetlands would also be regulated by RWQCB under Section 401 of the CWA, CCC, and City. Areas that failed to meet the Dominance Test for vegetation but exhibited wetland hydrology within a closed system were identified as saltpan/mudflat. These areas were classified as jurisdictional, non-navigable WUS/WS, regulated by Corps under Section 404 of the CWA, the RWQCB under Section 401 of the CWA, and the CCC. These areas are also considered City wetland.

As part of the delineation, lands along East Mission Bay Drive and the causeway connecting Fiesta Island Road to East Mission Bay Drive were evaluated. Here, Tecolote Creek drains into the bay. Southern coastal salt marsh is present along the shoreline and determined to be a jurisdictional wetland, regulated by the Corps under Section 404 of the CWA (above the mean high-water line) and as City wetland. Saltpan/mudflats are also present along the shoreline and have been classified as a jurisdictional, non-navigable Waters of the U.S./State, regulated by the Corps under Section 404 of the CWA (above the mean high-water line) and as City wetland. Below the mean high-water line, both habitats would be regulated by the Corps under Section 10 of the Rivers and Harbors Act and as City wetland. The jurisdictional wetlands (i.e., southern coastal salt marsh) would also be regulated by the RWQCB under Section 401 of the CWA, the CCC, and the City. The jurisdictional waters of the U.S./State (i.e., saltpan/mudflats) are also regulated by the RWQCB under Section 401 of the CWA, the CCC, and the City. Lastly, eelgrass beds, which occur within the bay waters, are also City wetland.

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Figure 2-9 Jurisdictional Waters and Wetlands



Source: ESRI, SanGIS, Placeworks, Alden Environmental

2. Environmental Setting

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2. Environmental Setting

2.5.6 Wildlife Corridors

Wildlife corridors represent areas where wildlife movement is concentrated due to natural or anthropogenic constraints. Local corridors provide access to resources such as food, water, and shelter, and animals use these corridors to move between different habitats. Regional corridors provide these functions, as well as linking two or more, large habitat areas. Regional corridors provide avenues for wildlife dispersal, migration, and contact between otherwise distinct populations.

Fiesta Island may be used as a stopover point for bird species that migrate along the coast. However, wildlife movement in this case (i.e., avian migration) is not concentrated such as it might be in a large coastal lagoon with connectivity to large blocks of inland wetland/riparian and upland habitats. Furthermore, the land bridge at the southeast end of the island provides the only terrestrial connectivity to mainland California. The land bridge is narrow, contains Fiesta Island Road, and is otherwise mostly unvegetated, which is not conducive to wildlife use. Therefore, Fiesta Island is not a wildlife corridor or part of a wildlife corridor.

2.6 GEOLOGIC CONDITIONS

2.6.1 Geologic and Recent History

Topography within Mission Bay consists of low-lying dredged islands and channels bounded on the south by the Ocean Beach/Sunset Cliffs rise; on the east by the very steep westerly slopes of the Lindavista Terrace; and on the north by Pacific Beach and the La Jolla Terrace. Crown Point, an extension of the La Jolla Terrace, protrudes into the north-central third of Mission Bay. To the west, Mission Bay is bounded by the Mission Beach sand bar, a narrow sand strip extending south from Pacific Beach to the Mission Bay entrance channel.

Surface exposures in the Mission Bay area include late Quaternary-age (geologically recent) fluvial, beach, and embayment deposits, most of which were transported and placed at least once during the several phases of hydraulic dredging. These unconsolidated silts, sands, and clays are technically classified and mapped as artificial fill material. However, fluvial tidal storm wave and wind erosion (natural processes) are constantly re-depositing the dredged soils as “natural” sediments.

Figure 2-10 presents a generalized geologic map and Figure 2-11 shows a cross section to illustrate the structural and stratigraphic setting of the Mission Bay area west of the Rose Canyon fault zone, currently classified as “active” by the California Geologic Survey.

2.6.2 Island Construction

Between 1959 and 1961, Mission Bay was dredged to its current configuration, with virtually all the silts and clays being pumped into the interior of Fiesta Island. Improvements to De Anza Point from 1963 to 1964 resulted in some additional dredging along the western shores of Fiesta Island, encroaching into the original 200-foot-wide sand dike to provide additional granular fill for De Anza Point (San Diego Historical Society, 2002).

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In the southerly part of the island, dredge spoils were pumped into numerous relatively small compartmentalized dike-walled containment or settlement ponds in order to facilitate the dredge disposal. As a result, Fiesta Island's geological composition is highly variable with relatively dense clean sands (a containment dike) immediately adjacent to highly compressible silty clays. Figure 2-12 shows higher elevation topographic contours, which illustrate the remaining erosional remnants of these dike-walled dredge spoil settlement ponds.

2.6.3 Soil and Geologic Units

Fiesta Island is underlain by 10 to 30 feet of hydraulic fill soils, in turn underlain by an estimated 70 to 80 feet of Holocene-age deltaic fluvial and estuarine deposits, and, at approximately 80 to 110 feet of depth, underlain by Quaternary- and Tertiary-age formational units. A general discussion of the soil and geologic units present within Fiesta Island is presented below.

Hydraulic Fill: Fiesta Island was created entirely by the placement of hydraulically dredged bay deposits, which were then pumped into a series of containment dikes, decanted, and then capped with a minimum of 3 feet of sand. These near-surface, hydraulically placed fills are estimated to be 10 to 30 feet in total thickness and consist of materials ranging from gray to brown, silty fine to coarse sands and fine sandy silts to soft silty clays. Most of the hydraulic fill soils also contain abundant shell fragments. The consistency of these materials, as characterized by blow count, ranges from very loose/soft to medium dense.

Holocene Alluvium: Holocene fluvial and estuarine alluvial deposits are characterized loose to medium dense, saturated, gray interbeds of silty fine sands and firm to stiff clays (micaceous with shell fragments). These deposits underlie the hydraulic fill and range in thickness from an estimated 70 to 80 feet.

Quaternary and Tertiary Formational Soils: At depths on the order of 70 to 110± feet, the above-described alluvial sediments are underlain by very dense, saturated, brown, medium to coarse silty to clayey sands, with gravels and cobbles. These very competent formational soils are characteristic of San Diego-area, Quaternary- Tertiary-age sediments.

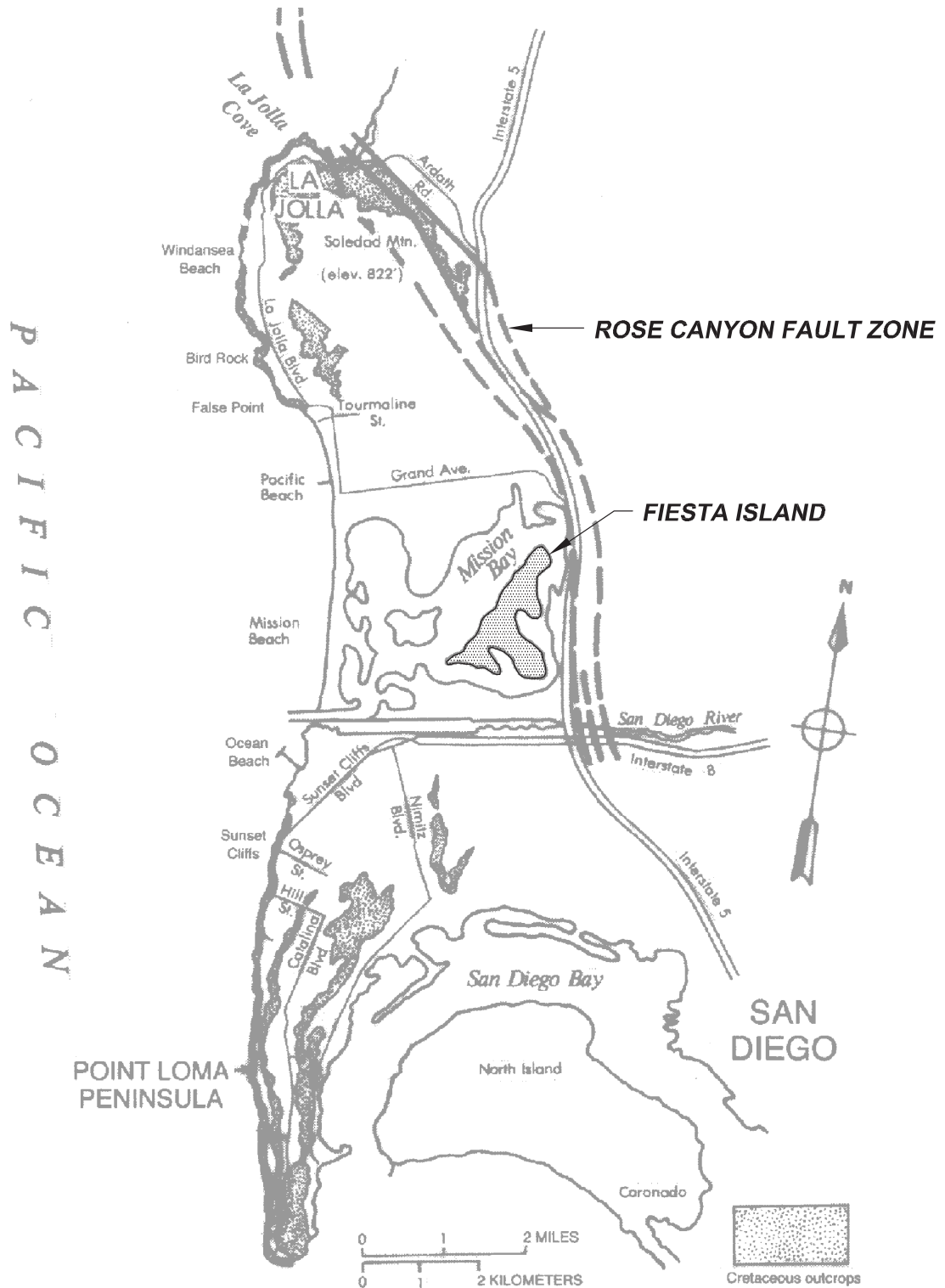
2.6.4 Faulting and Seismicity/Liquefaction Potential

The project site is located within the Rose Canyon fault zone, which is considered part of the Newport-Inglewood-Rose Canyon fault system. Other significant faults within approximately 60 miles of the site include the Coronado Bank Fault, the Palos Verdes Connected Fault, the San Diego Trough, the Elsinore Fault, the Earthquake Valley Fault, the San Clemente North and South Faults, the Palos Verdes Fault, the San Jacinto Fault, and the San Joaquin Fault.

Historically, the project area has been subjected to ground shaking. According to our search of the California historical earthquake database used in the computer program EQSEARCH (Blake, 2001), the site has been subjected to 1,070 earthquakes of magnitude 4 or greater, 122 earthquakes of magnitude 5 or greater, 23 earthquakes of magnitude 6 or greater, and one earthquake of magnitude 7 or greater.

2. Environmental Setting

Figure 2-10 Generalized Geologic Map



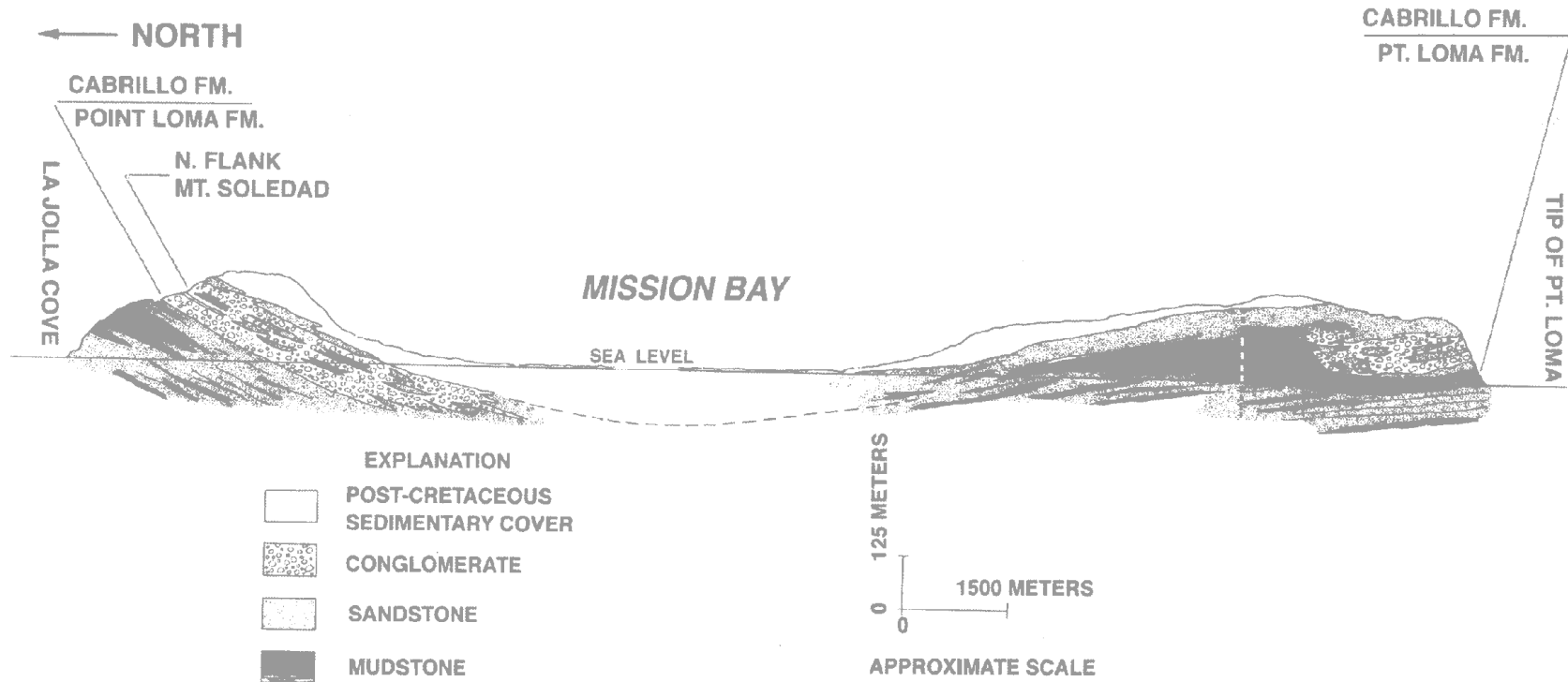
Source: ESRI, SanGIS, Placeworks, Terra Costa, Abbott (1999)

2. Environmental Setting

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2. Environmental Setting

Figure 2-11 Generalized Cross Section of Mission Bay



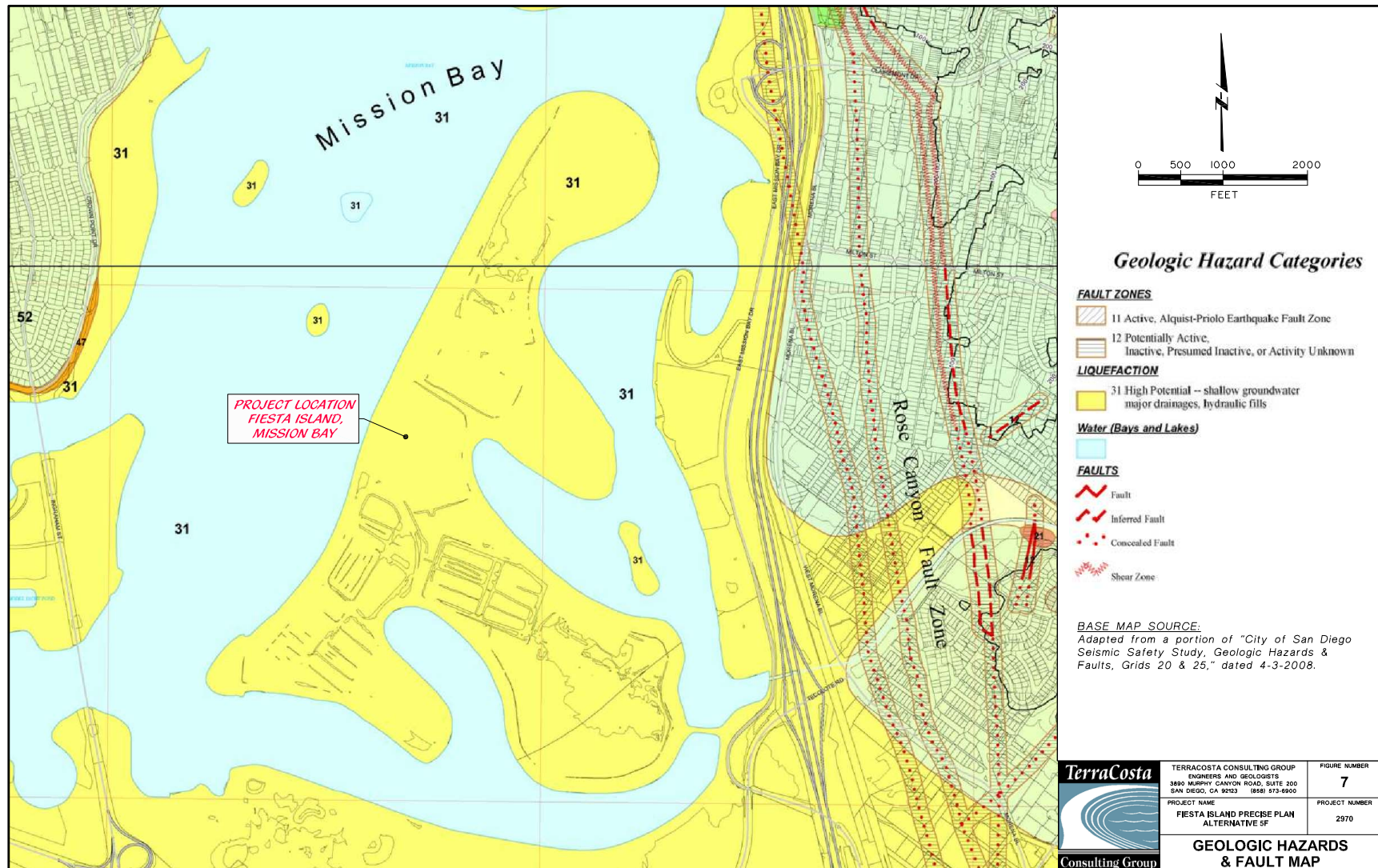
Source: ESRI, SanGIS, Placeworks, Terra Costa, Abbott (1999)

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2. Environmental Setting

Figure 2-12 Geologic Hazards



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2. Environmental Setting

There are five Alquist-Priolo Earthquake Fault Zones (APEFZ) delineated along the Rose Canyon fault zone located within San Diego. The closest APEFZ is located approximately one-quarter of a mile north-northwest of the project limits, as measured from Clairemont Drive. The next closest APEFZ is located approximately 2.4 miles southeast from the southern limits of the project site. While not located within a delineated APEFZ, numerous fault features (SANDAG, 2013 and City of San Diego, 2008) have been identified near the project site. For example, fault traces of the Rose Canyon Fault are located approximately 1,500 feet to the east of the project site.

There are no known traces crossing the site, and therefore fault rupture is not a significant hazard to the site. However, ground shaking may be a significant hazard because the loose, and loose to medium dense cohesionless soils (sands and silts), which make up a significant part of the Holocene sediments that form Fiesta Island and sit below the water table, are susceptible to a temporary, but essentially total loss of shear strength due to reversing cyclic shear stresses caused by moderately strong seismic ground shaking. Analyses based on the results of penetration resistance tests in these deposits indicate that they could lose their strength if peak ground surface accelerations were to exceed about 0.15 to 0.2g. In their geotechnical report dated September 27, 1983, Woodward-Clyde Consultants estimated an average recurrence interval of about 100 years peak ground acceleration of 0.15g at the then- proposed Ramada Renaissance Hotel site on the southeast side of Sea World Drive (at Friars Road), approximately 1/2 mile west of the active Rose Canyon fault zone, and immediately southeast of Fiesta Island (Figure 2-12). Geotechnical characteristics and consistencies reported on the logs recorded by Woodward-Clyde (1983) are likely to be generally representative of the subsurface soils below the containment dikes and compressible bay muds on Fiesta Island. The Woodward-Clyde report also describes the likely manifestations of seismically induced liquefaction at the site, such as the expulsion of sand and water from sand boils, ground cracking, vertical settlement, and lateral displacement, generally toward the shoreline.

2.7 GREENHOUSE GAS EMISSIONS

Fiesta Island currently generates direct and indirect GHG emissions from vehicle trips, energy use (indirectly from purchased electricity use), area sources (e.g., equipment used on-site), water/wastewater generation, and waste disposal. Additionally, GHG emissions are also currently generated from use of the existing fire rings available in the open beach areas and youth campsite. GHG emissions generated within Fiesta Island are shown in Table 2-7, *Existing Fiesta Island GHG Emissions*.

Table 2-7 Existing Fiesta Island GHG Emissions

Source	GHG Emissions MTCO ₂ e/Year	
	Existing	Percent of Total
Area	<1	<1%
Energy	16	<1%
Transportation	6,500	93%
Waste	16	<1%
Water	50	1%
Campfires	384	6%
Total All Sectors	6,966	100%

Source: CalEEMod Version 2016.3.1. Based on 2017 emission rates and IPCC's AR4 GWPs. Totals may not equal 100 percent due to rounding.

2. Environmental Setting

2.8 HYDROLOGY AND WATER QUALITY

2.8.1 Regional Drainage

The project area is in the Mission Bay Watershed Management Area (WMA), which spans about 64 square miles in the City of San Diego. The WMA extends along the coast from Mission Bay in the south to Torrey Pines State Reserve in the north, and inland about 15 miles. The three main streams in the watershed are Tecolote Creek, San Clemente Creek, and Rose Creek. Tecolote Creek and Rose Creek flow into Mission Bay, and San Clemente Creek is tributary to Rose Creek (see Figure 2-13, *Mission Bay Watershed Management Area*). Most of the WMA is urbanized.

2.8.2 Local Surface Waters and Drainage

Drainage on most of Fiesta Island is by sheet flow to a containment berm on the inland side of Fiesta Island Road, which extends along the perimeter of most of the island. Drainage sheet flows to informal basins where it percolates into the soil or evaporates. On the exterior side of the berm runoff sheet flows across Fiesta Island Road and into Mission Bay. On the southwest part of the island several culverts convey runoff from the dog park to Mission Bay.

2.8.2.1 SURFACE WATER QUALITY

Regional Water Quality Conditions

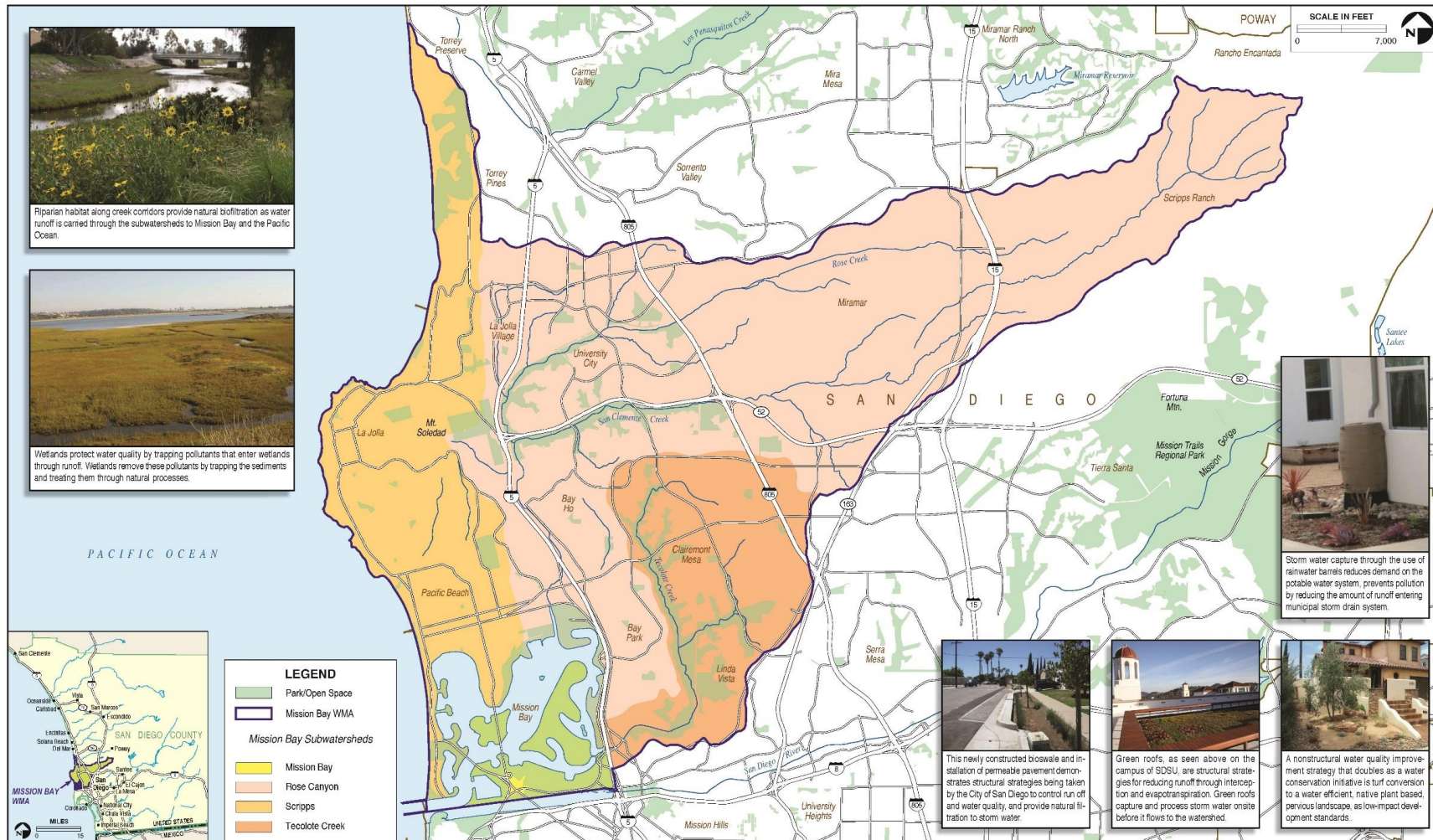
The highest priority water quality conditions in the Mission Bay WMA are:

- Indicator bacteria in Tecolote Creek affecting recreational uses¹
- Indicator bacteria and sediment affecting habitat and recreational uses on the Pacific Ocean Shoreline in La Jolla and La Jolla Shores (just north of La Jolla). Those conditions do not affect Mission Bay or the project area.

¹ Indicator bacteria are used to estimate the amount of fecal contamination of water. Indicator bacteria are not pathogens but are used to indicate the presence of a health risk.

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Figure 2-13 Mission Bay Watershed Management Area



2. Environmental Setting

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2. Environmental Setting

Water Bodies Listed on the Clean Water Act Section 303(d) Water Quality Limited Segments List

Mission Bay is listed on the CWA Section 303(d) List of Water Quality Limited Segments for eutrophic conditions and lead.² The affected area is 3.1 acres at the mouth of Tecolote Creek east of the south part of the project area. Mission Bay is classified as a sensitive water body by the City due to its Section 303(d) listing and because it is designated with the RARE beneficial use (that is, it supports threatened or endangered species) by the San Diego RWQCB.³

2.8.2.2 GROUNDWATER

Groundwater was encountered in 1983 borings just southeast of Fiesta Island at approximately mean sea level. The groundwater level under the island is expected to fluctuate with the tide, with the fluctuation larger near the edge of the island and less in the interior of the island. The project site is not over a groundwater basin mapped by the California Department of Water Resources; the nearest such basin to the site is the Mission Valley Groundwater Basin underlying the mainland just south and southeast of Fiesta Island.

Groundwater Quality

No hazardous materials releases affecting groundwater under Fiesta Island are listed on the GeoTracker website maintained by the State Water Resources Control Board. One cleanup program site is listed on GeoTracker on the southeast shore of the island. Fiesta Island was historically used for drying domestic sludge transferred from the Point Loma Wastewater Treatment Facility via an underground pipeline. Wastewater generated from the drying process was transported back to the Point Loma Facility for disposal to the sanitary sewer system. The soil was investigated to determine if metals and pesticide contamination was present from the drying operation. Metal and pesticide concentrations were below regulatory thresholds and close to the concentrations in Mission Bay waters. The case was closed in 2000.

2.8.3 Flood Hazards

2.8.3.1 DESIGNATED FLOOD ZONES

The shores of Fiesta Island are in a 100-year flood zone (Zone AE) applicable to coastal environments with wave height less than three feet, which is expected in Mission Bay (see Figure 2-14, *Flood Zones*). The boundary between the AE Zone and the X Zone (outside of 100-year flood zones) is about 3.8 feet above mean sea level (AMSL). The project site is not in an area mapped as protected from 100-year floods by levees.

² Eutrophic condition is excessive discharge of nutrients to water bodies and streams, causing overgrowth of aquatic plants and algae, which can lead to excessive decay of organic matter in the water, loss of oxygen in the water, and eventual death of aquatic organisms.

³ The RARE beneficial use is identified in the San Diego Regional Water Quality Control Board Water Quality Control Plan for the San Diego Basin (RWQCB 2016).

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2.8.3.2 SEISMICALLY INDUCED DAM INUNDATION

The southeastern margin of Fiesta Island is in the dam inundation area of El Capitan Dam on the San Diego River about 24 miles east of the project site. The inundation area extends north about 875 feet from the southeast shore of the island.

2.8.3.3 INUNDATION FROM ABOVEGROUND WATER STORAGE RESERVOIRS

Fiesta Island is surrounded by Mission Bay. There is no aboveground water storage reservoir upstream from the site in the Mission Bay Watershed so large that floodwaters from failure of the reservoir would cause flooding on Fiesta Island.

2.8.3.4 SEICHES

A seiche is a surface wave created when an enclosed or partially enclosed water body—such as a reservoir, lake, or bay—is shaken, usually by an earthquake. There are no inland water bodies upstream from the project area in the Mission Bay Watershed that could cause flooding on Fiesta Island due to a seiche.

2.8.3.5 TSUNAMI AND WIND-DRIVEN WAVES

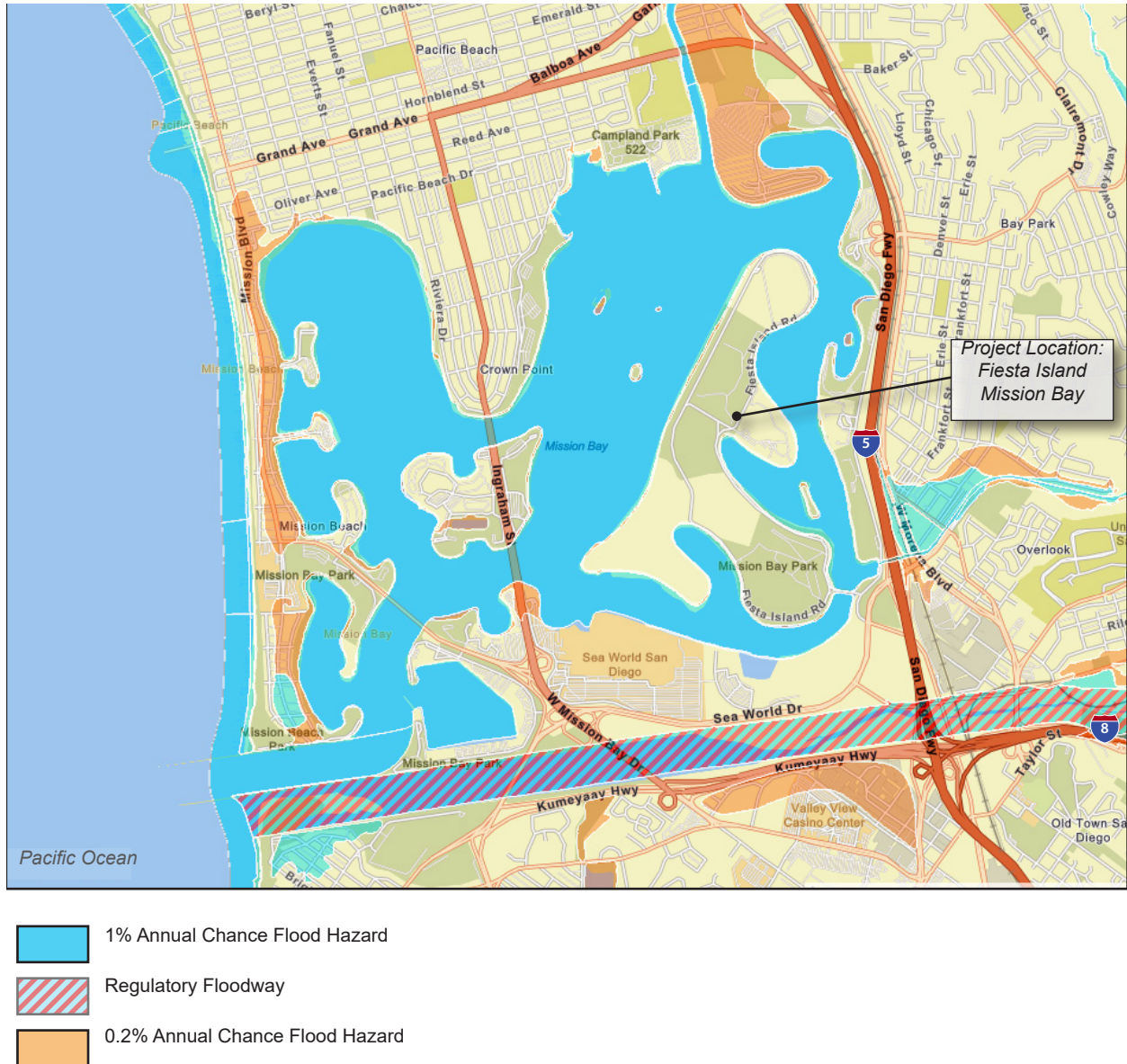
Tsunamis and wind-driven waves are considered likely hazards at the project area. A review of the State of California Tsunami Inundation Map for Emergency Planning (2009) indicates that the project area would likely be adversely affected by tsunamis caused by both local and distant sources (Figure 2-15).

Fiesta Island is exposed to wind-driven waves from the southwestern through northern quadrants, with fetches typically limited to about 0.5 miles, except from the southwest through the Mission Bay Channel, and from the north over Kendall Marsh, with both of these quadrants providing maximum fetch lengths approaching 7,500 feet. The presence of shallow water within the bay further limits the height of these fetch-limited wind waves, with wave heights on the order of 2 to 2.5 feet, with corresponding wave periods on the order of 2 to 3 seconds from 50-knot sustained winds.

Offshore storm waves propagating into Mission Bay are also major contributors to shoreline erosion within the bay. As a result, the entire entrance channel extending to Vacation Isle and on to Stony Point is lined with rock revetments to prevent erosion. When coupled with westerly winds, offshore storm waves, propagated through Mission Bay Channel and on to Stony Point, can sustain 3-foot waves with significant transport capacity northerly along the western face of Fiesta Island and easterly along Pacific Passage.

2. Environmental Setting

Figure 2-14 Flood Zones



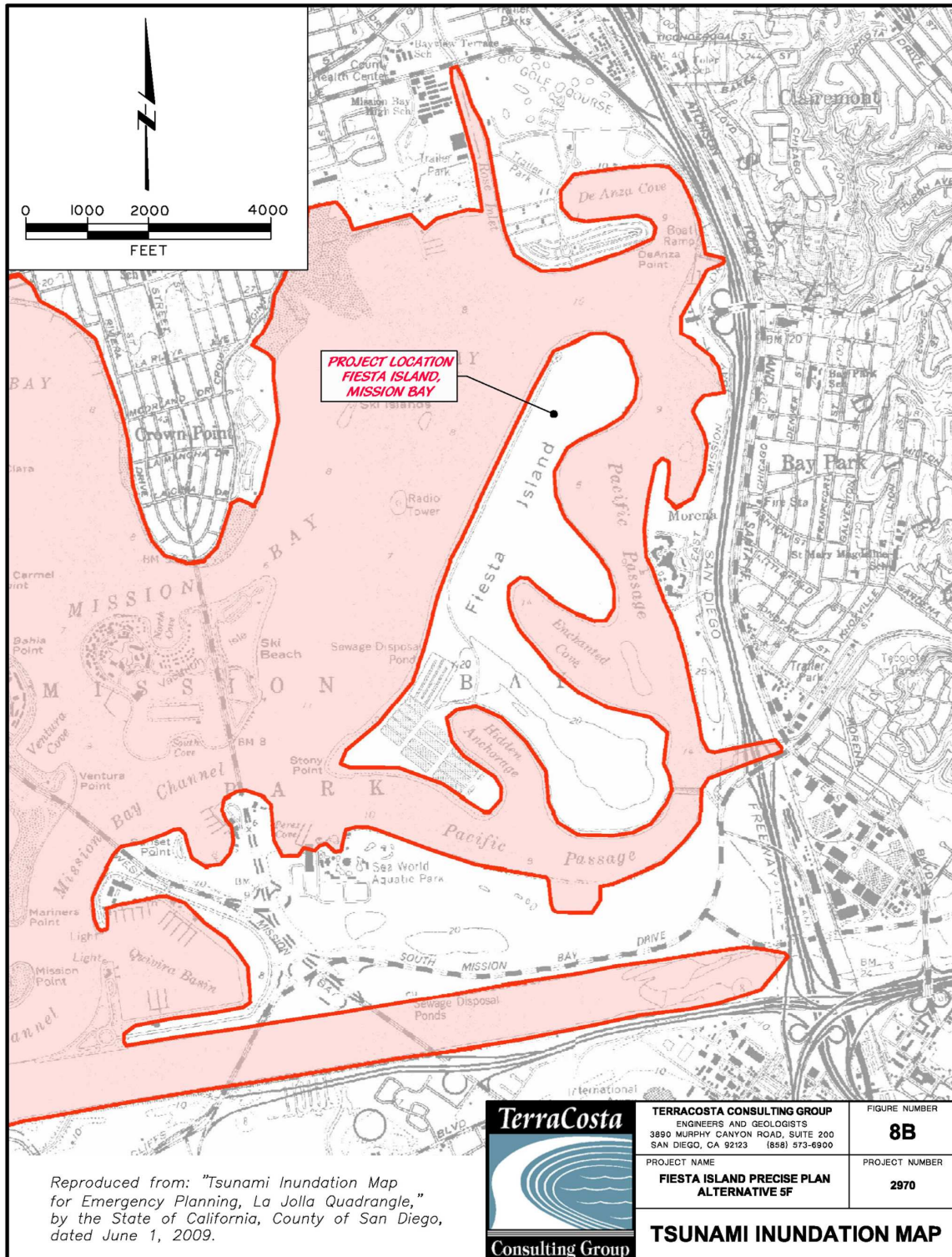
Source: ESRI, SanGIS, Placeworks

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2. Environmental Setting

Figure 2-15 Tsunami Inundation Map



Source: ESRI, SanGIS, Placeworks

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2. Environmental Setting

2.9 NOISE

The primary existing noise sources within the project area are transportation and stationary sources. Noise-sensitive uses near Fiesta Island include numerous parks, residences, and hotels on the shores around Mission Bay and on Vacation Isle. The nearest residential and/or commercial receptors are located more than 1,000 feet off the shores of Fiesta Island. Commercial uses include SeaWorld San Diego, marinas, and other commercial uses near Fiesta Island and they are not considered sensitive uses.

The most common sources of transportation noise on Fiesta Island are I-5 and adjacent roadways including Sea World Drive, Friars Road, and East Mission Bay Drive. In addition, the railroad tracks are parallel to I-5 and noise events occur from the frequent Amtrak, Coaster, and freight trains.

2.9.1 Technical Terminology

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as “noisiness” or “loudness.” The following are brief definitions of terminology used in this chapter:

- **Sound.** A vibratory disturbance that, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.
- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
- **Hertz (Hz).** A unit of frequency of change in a state or cycle in a sound wave. The nearly universal usage is one (complete) cycle in one second.
- **Decibel (dB).** A unitless measure of sound on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μ Pa).
- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the United States, the standard reference velocity is 1 micro-inch per second (1×10^{-6} in/sec).
- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.
- **Equivalent Continuous Noise Level (L_{eq}), or Energy-Equivalent Noise Level.** The L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.
- **Statistical Sound Level (L_n).** The sound level that is exceeded “n” percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is

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exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the “median sound level.” The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum), and this is often known as the “intrusive sound level.” The L_{90} is the sound level exceeded 90 percent of the time and is often considered the “effective background level” or “residual noise level.”

- **Day-Night Level (L_{dn} or DNL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring during the period from 10 PM to 7 AM.
- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring during the period from 7 PM to 10 PM and 10 dB added to the A-weighted sound levels occurring during the period from 10 PM to 7 AM. For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.
- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, and hospitals are examples.

2.9.2 Sound Fundamentals

Sound is that pressure wave transmitted through the air. Sound is described in terms of loudness or amplitude (measured in dB), frequency or pitch (measured in Hz), and duration (measured in seconds or minutes).

Amplitude

Noise is measured on a logarithmic scale, and the decibel (dB) is the standard unit for measuring sound pressure amplitude.⁴ All noise levels in this study—reported in terms of dB—are relative to the industry-standard reference sound pressure of 20 micropascals.

The decibel system of measuring sound gives a rough connection between the physical intensity of sound and its perceived loudness to the human ear. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Table 2-8 gives a summary of the relationship between the changes in noise level and its perceived loudness to the human ear.

⁴ The commonly held threshold of audibility is 20 micropascals, and the threshold of pain is around 200 million micropascals, a ratio of one to 10 million. By converting these pressures to a logarithmic scale (i.e., decibels), the range becomes a more convenient 0 dB to 140 dB.

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Table 2-8 Noise Perceptibility

± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: Bies and Hansen 2009.

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but “felt” more as a vibration. Similarly, though people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people’s judgments of the “noisiness” of different sounds and has been used for many years as a measure of community and industrial noise. To help relate noise level values to common experience, Table 2-9 shows typical noise levels from noise sources.

Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including the:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

Temporal Effects

Time variation in noise exposure is typically expressed in terms of L_{eq} , or alternately, as L_n . The “n” values are typically used to demonstrate compliance of stationary noise sources with many cities’ noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max} . These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

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Table 2-9 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Onset of physical discomfort	120+	
	110	Rock Band (near amplification system)
Jet Flyover at 1,000 feet	100	
Gas Lawn Mower at three feet	90	
Diesel Truck at 50 feet, at 50 mph	80	Food Blender at 3 feet Garbage Disposal at 3 feet
Noisy Urban Area, Daytime	70	Vacuum Cleaner at 10 feet
Commercial Area Heavy Traffic at 300 feet	60	Normal speech at 3 feet
Quiet Urban Daytime	50	Large Business Office Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (background)
	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: Caltrans 2009.

Propagation

Sound dissipates exponentially with distance from the noise source in a phenomenon known as “spreading loss.” For a single-point source, such as onsite construction equipment noise, sound levels decrease by approximately 6 dB for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). If ground-level absorptive vegetation or other “soft site” conditions are present, the drop-off rate would be increased by an additional 1.5 dB per each doubling of distance for a total of 7.5 dB decrease.

If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dB for each doubling of distance over a reflective (“hard site”) surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by 4.5 dB for each doubling of distance.

2.9.3 Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage. When the noise level reaches 120 dBA (also known as the “threshold of feeling”), an unpleasant “tickling” sensation occurs in the human ear even with short-term exposure. As the sound reaches 140 dBA (also known as the “threshold of pain”), the tickling sensation becomes painful. In community environments, the ambient or background noise problem is widespread,

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though generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference and can cause annoyance.

Loud noise can be annoying and it can have negative health effects (USEPA 1978). The effects of noise on people fall into three general categories:

- Subjective effects, i.e., annoyance, nuisance, dissatisfaction.
- Interference with activities such as speech, sleep, and learning.
- Physiological effects such as startling and hearing loss.

In most cases, environmental noise produces effects in the first two categories only. However, unprotected workers in some industrial work settings may experience noise effects in the last category.

2.9.4 Vibration Fundamentals

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment.

Vibration is transmitted in waves through the earth or solid objects. Unlike noise, vibration is typically of a frequency that is felt rather than heard. Vibration can be either natural as in the form of earthquakes, or man-made as from explosions. Both natural and man-made vibration may be continuous or transient. As with noise, vibration can be described by both its amplitude and frequency.

Vibration displacement is the distance that a point on a surface moves away from its original static position. The instantaneous speed that a point on a surface moves is the velocity, and the rate of change of the speed is the acceleration. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from the vibration of a structure or items within a structure.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is more appropriate for evaluating potential building damage, and RMS is typically more suitable for evaluating human response.

The units for PPV and RMS velocity are normally inches per second (in/sec). However, vibration is often presented and discussed in dB units in order to compress the range of numbers. In this study, PPV and RMS velocities are in in/sec, and vibration levels are in VdB. Typically, groundborne vibration generated by human activities attenuates rapidly with distance from the source of the vibration. Man-made vibration problems are therefore usually confined to relatively short distances from the source (500 to 600 feet or less).

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Vibrations also vary in frequency, and this affects perception. Typical construction vibrations fall in the 10 to 30 Hz range and usually occur around 15 Hz, and traffic vibrations exhibit a similar range of frequencies. It is less common, but possible, to measure traffic frequencies above 30 Hz.

The way in which vibration is transmitted through the earth is called propagation. Propagation of groundborne vibrations is complicated and difficult to predict because of the endless variations in the soil and rock through which waves travel. As vibration waves propagate from a source, the energy is spread over an ever-increasing area so that the energy level striking a given point decreases with distance from the energy source. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 2-10 displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 2-10 Human Reaction to Typical Vibration Levels

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of “architectural” (i.e. not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to “architectural” damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause “architectural” damage and possibly minor structural damage

Source: Caltrans 2004.

Human response to ground vibration has been correlated best with the velocity of the ground displacement, typically expressed in terms of VdB.⁵ The FTA has developed rational vibration limits that can be used to evaluate human annoyance to groundborne vibration and are primarily based on experience with rapid transit and commuter rail systems (FTA 2008).

Similarly, construction operations generally include a wide range of activities that can generate groundborne vibration, which varies in intensity. In general, blasting and demolition as well as pile driving and vibratory compaction equipment generate the highest vibrations. Vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible amounts of vibration at up to 200 feet. Heavy trucks can also

⁵ The reference velocity is 1×10^{-6} in/sec RMS, which equals 0 VdB, and 1 in/sec equals 120 VdB.

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generate groundborne vibrations, which can vary, depending on vehicle type, weight, and pavement conditions. Potholes, pavement joints, discontinuities, differential settlement of pavement, all increase the vibration levels from vehicles passing over a road surface. Construction vibration is normally of greater concern than vibration from normal traffic flows on streets and freeways with smooth pavement conditions (Caltrans 2004).

2.10 TRANSPORTATION/CIRCULATION

2.10.1 Roadways and Access

Access to Mission Bay Park, and more specifically Fiesta Island, is provided along E. Mission Bay Drive with the closest major intersection located at Sea World Drive and East Mission Bay Drive / Pacific Highway. Major roadways in the Fiesta Island study area include Fiesta Island Road, East Mission Bay Drive, Sea World Drive, Pacific Highway, and Friars Road (see Figure 2-16, *Existing Intersection Geometry and Functional Classifications*).

East Mission Bay Drive: Sea World Drive to Fiesta Island Drive (Entrance to Fiesta Island)

The segment of E. Mission Bay Drive from Fiesta Island Road to Sea World Drive has two lanes of travel, one northbound and one southbound. The two directions of travel are separated by a striped center turn lane, with a left turn lane to access to Fiesta Island Road. This segment functions as a 2-lane Collector and has a posted speed limit of 30 mph. On-street parking is not permitted.

Sea World Drive: E. Mission Bay Drive to I-5 Interchange

Sea World Drive is the primary connection from the I-5 freeway to Fiesta Island and Mission Bay Park. Connecting with Sea World Drive, it is the most direct connection for pedestrians and bicycles from the surrounding residential community to the east and businesses along the Morena Boulevard corridor.

The roadway segment has a total of four lanes of travel, two northbound and two southbound, separated by a striped center median. This roadway segment functions as a 4-Lane Major since no access points are provided on either side of the roadway. On-street parking is not permitted.

Sea World Drive: East Mission Bay Drive/Pacific Highway to Friars Road

The segment of Sea World Drive between E. Mission Bay Drive and Friars Road has a total of four lanes of travel, with two lanes eastbound and two lanes westbound, divided by a center striped median. This roadway segment functions as a 4-Lane Major since no access points are provided on either side of the roadway. The posted speed limit is 40 mph and on-street parking is not permitted on either side of the street.

Sea World Drive: Friars Road and South Shores Parkway

The segment of Sea World Drive from Friars Road to South Shores Parkway has four lanes of travel, with two eastbound and two westbound lanes, separated by a landscaped median. This roadway segment functions as a 4-Lane Major since no access points are provided on either side of the roadway. The road has a posted

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speed limit of 50 mph. On-street parking is not permitted and turn lanes are provided at most major intersections.

Friars Road: East of Sea World Drive

Friars Road east of Sea World Drive has a total of four lanes of travel with two eastbound and two westbound lanes. This roadway segment functions as a 4-Lane Major since there are no access points on either side of the roadway, the road is separated by a wide striped center median, and the posted speed limit is 45 mph.

Fiesta Island Road

Fiesta Island Road is a one-way, single lane loop road that circles around Fiesta Island. Along the causeway that connects Fiesta Island to East Mission Bay Drive, Fiesta Island Road is two-way and classified as a 2-Lane Collector. The posted speed limit is 30 mph for the length of the loop. While there is no defined parking, vehicles may park off pavement on the shoulder and sand that flanks both sides of the roadway.

Traffic Volumes

Existing peak hour intersection volumes and daily traffic volumes were collected within the project study area in April 2017 during weeks that coincided with spring break. The weather conditions when the data were collected were typical for spring in San Diego.

Specifically, intersection traffic data collection was performed for morning and evening peak periods on a weekday, as well as mid-day during a Saturday, while daily traffic volume data were collected over a four-day period (Thursday through Sunday) to determine the variations in traffic conditions on a weekday versus weekend condition. Table 2-11, *Comparison of Daily Traffic Volumes at Key Study Locations*, shows the total traffic volume by day at key roadway segments.

Volumes used in intersection and roadway segment operations analyses for Existing Conditions are provided in the Mobility Assessment (Appendix 5.9-1 to this PEIR).

Table 2-11 Existing Daily Traffic Volumes at Study Locations

Roadway Segment	Existing Daily Traffic Volume by Day			
	Thursday	Friday	Saturday	Sunday
Sea World Drive				
South Shores Parkway to Friars Road	37,428	37,846	36,178	32,284
Friars Road to Pacific Highway / East Mission Bay Drive	32,163	32,187	32,573	28,720
Pacific Highway / East Mission Bay Drive to I-5 SB Off Ramps	34,270	35,202	37,188	33,734
East Mission Bay Drive				
Sea World Drive to Fiesta Island Road	9,227	9,847	11,521	11,969
Friars Road				
East of Sea World Drive	14,472	14,163	10,985	10,160
Fiesta Island Road				
East Mission Bay Drive to Fiesta Island Loop	4,705	5,227	7,439	7,662

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment (Appendix 5.9-1).

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Figure 2-16 Existing Intersection Geometry and Functional Classifications



Source: ESRI, SanGIS, Placeworks, STC Traffic, Inc.

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Existing Intersection LOS and Delay

Traffic operating conditions for intersections and roadway segments were evaluated based on the City's adopted Level of Service (LOS) standards. (see Appendix 5.9-1). The intersection operations analysis evaluates five (5) study intersections during the weekday AM, weekday PM, and weekend midday peak hour conditions. Table 2-12 shows the existing LOS for the four signalized and one unsignalized intersections in the study area. Under Existing Conditions, all study intersections operate acceptably at LOS D or better during the analyzed peak hours, except for intersection #1, East Mission Bay Drive and Fiesta Island Road, which operates at an unacceptable LOS E during the weekend midday peak hour.

Table 2-12 Existing Weekday and Weekend Intersection Levels of Service

#	Intersection	Traffic Control	Peak Hour	Existing Conditions	
				Average Delay (sec)	LOS
Unsignalized Intersections					
1.	E. Mission Bay Drive and Fiesta Island Road	OWSC ¹	AM	12.4	B
			PM	24.7	C
			Weekend MID	39.9	E
Signalized Intersections					
2.	Sea World Dr and E. Mission Bay Dr - Pacific Hwy	Signal	AM	36.5	D
			PM	37.2	D
			Weekend MID	23.2	C
3.	Sea World Dr and I-5 SB On/Off Ramps	Signal	AM	19.5	B
			PM	12.3	B
			Weekend MID	13.0	B
4.	Sea World Dr and I-5 NB On/Off Ramps	Signal	AM	27.9	C
			PM	37.9	D
			Weekend MID	48.7	D
5.	Sea World Dr and Friars Rd	Signal	AM	17.6	B
			PM	23.9	C
			Weekend MID	14.8	B

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment (Appendix 5.9-1).

BOLD = LOS Above Threshold, **MID** = Midday Peak

¹ One-Way Stop-Controlled (OWSC) from eastbound approach. The delay and LOS reported for this intersection is for the stop-controlled eastbound approach.

Existing Roadway Segment LOS

The daily roadway segment operations analysis evaluates six (6) study roadway segments during the weekday and weekend conditions. The roadway segment analysis summarized in Table 2-13, shows that Sea World Drive from South Shores Parkway to Friars Road operates deficiently at LOS E based on the functional classification both on weekdays and on the weekend. On weekends, Sea World Drive also operates at LOS E from the I-5 Southbound (SB) ramps to East Mission Bay Drive-Pacific Highway.

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Table 2-13 Existing Weekday and Weekend Roadway Segment Levels of Service

Roadway Segment	Classification ¹	Maximum Capacity at LOS E ¹	Existing Weekday			Existing Weekend		
			ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS
Sea World Drive								
S. Shores Park to Friars Rd	4-Lane Major Arterial	40,000	37,428	0.94	E	36,178	0.90	E
Friars Rd to E. Mission Bay Dr	4-Lane Major Arterial	40,000	32,163	0.80	D	32,573	0.81	D
E. Mission Bay Dr to I-5 SB Ramps	4-Lane Major Arterial	40,000	34,270	0.86	D	37,188	0.93	E
E. Mission Bay Drive								
Sea World Dr to Fiesta Island Rd	2-Lane Collector (continuous left-turn lane)	15,000	9,227	0.62	C	11,521	0.77	D
Friars Road								
East of Sea World Dr	4-Lane Major Arterial	40,000	14,472	0.36	A	10,985	0.27	A
Fiesta Island Road								
E. Mission Bay Dr to Fiesta Island Loop	2-Lane Collector (no fronting property)	10,000	4,705	0.47	B	7,439	0.74	C

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment (Appendix 5.9-1).

BOLD = LOS Above Threshold

¹ Based on the City's General Plan Mobility Element and Traffic Impact Study Manual.

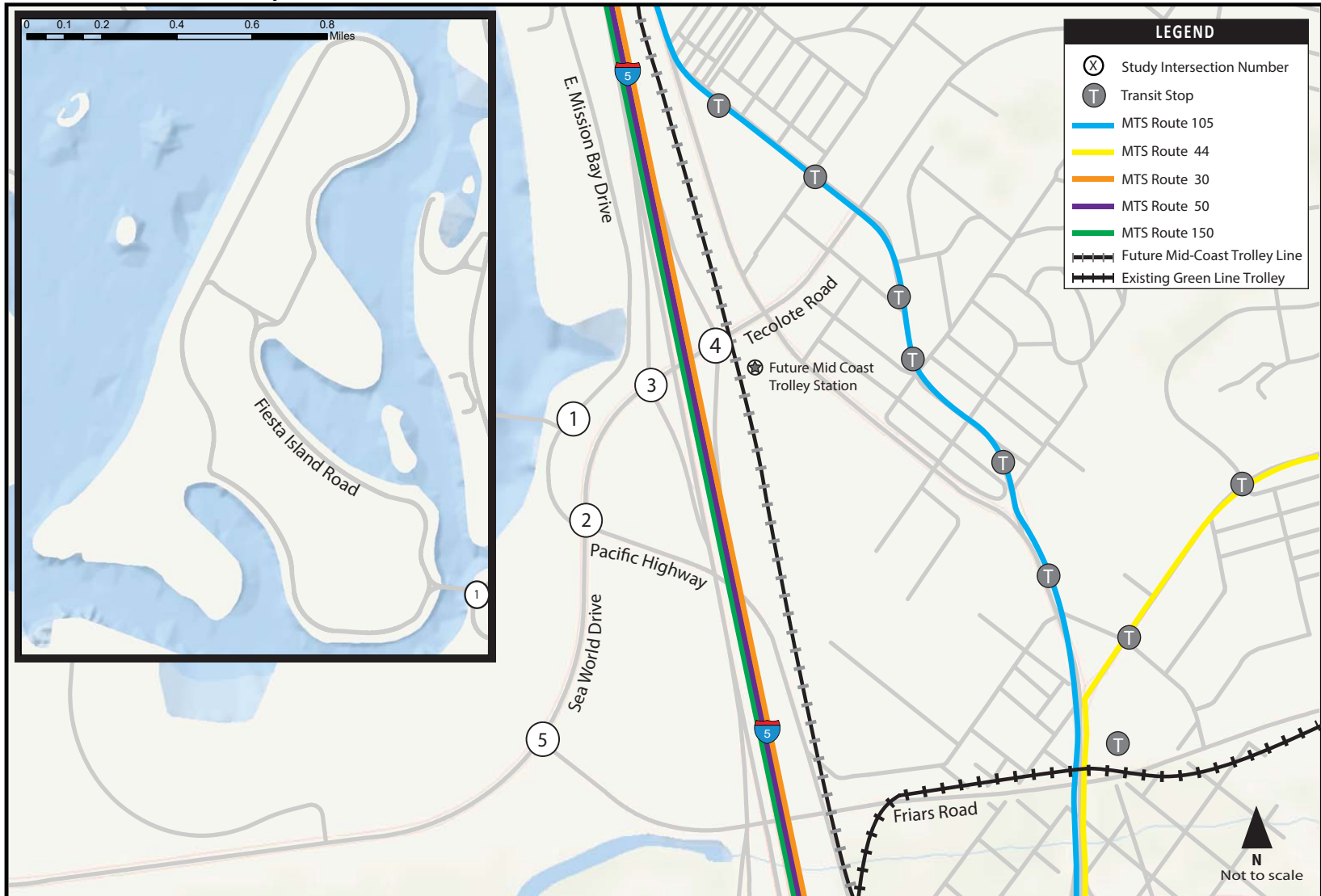
2.10.2 Alternative Transportation

The Metropolitan Transit System (MTS) provides local transit within the San Diego region. Based on bus and trolley information available from MTS, public transit within the project area does not currently extend to Fiesta Island (see Figure 2-17). The closest bus route is Route 105 which has stops located on Morena Boulevard, approximately 0.5 miles from Fiesta Island. Commuter and light rail lines connect at the Old Town Transit Center, which is located approximately one mile from Fiesta Island.

The Mid-Coast Trolley, which consists of the MTS Blue Line Trolley line extension from Downtown San Diego to the University community, will traverse east of the project area along the east side of the existing tracks within the LOSSAN rail corridor. This light rail transit corridor is currently under construction and service, including a new trolley station (Tecolote Road Station), is anticipated to begin in 2021. When constructed, this station will be located within 0.5 miles of the Fiesta Island entrance road.

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Figure 2-17 Existing and Future Transit Lines



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Although there is no transit facilities within the immediate vicinity of Fiesta Island, bicycle and pedestrian facilities exist within the project area. The Class I San Diego River Trail and Mission Bay Park multiuse trails are located on either side of the Fiesta Island entrance road on the bay side of East Mission Bay Drive, and along the north and south sides of Sea World Drive. Class II bicycle lanes generally extend along Sea World Drive and Tecolote Road, with gaps between East Mission Bay Drive and the northbound I-5 ramps, and along Pacific Highway and Friars Road. Class III facilities extend in the north-south direction along East Mission Bay Drive and portions of Pacific Highway, Fiesta Island Road, and the roadways within Fiesta Island. A Class IV Cycle Track is located along Friars Road, adjacent to the Class II facility on the south side of the roadway (see Figure 2-18, *Existing Pedestrian and Bicycle Facilities*).

Sidewalks are intermittently present along portions of East Mission Bay Drive, Sea World Drive north of Pacific Highway, and along segments of Friars Road starting at a location approximately 400 feet east of its intersection with Sea World Drive.

2.11 PUBLIC UTILITIES

Existing public utilities include wastewater treatment and collection, water supply and distributions systems, and solid waste. The existing storm water drainage infrastructure is also included. However, the environmental setting for storm water management is discussed above. A brief description of the existing public utilities follows.

2.11.1 Wastewater Treatment and Collection

The City's Public Utilities Department provides wastewater collection, treatment, and disposal services to San Diego through its Metropolitan Sewerage System, serving a population of approximately 2.2 million residents in a 450 square-mile service area. An average of 180 million gallons of wastewater is treated every day. The City also operates and maintains the approximately 3,000-mile municipal sewerage collection system that conveys wastewater from residences and businesses to the City's treatment facilities—the North City Reclamation Plant, the Point Loma Wastewater Treatment Plant, and the South Bay Water Reclamation Plant. The Point Loma facility processes approximately 175 million gallons per day of wastewater and has a treatment capacity of 240 million gallons per day. Treated effluent is discharged into the Pacific Ocean through two ocean outfalls, one at Point Loma and the other north of the Mexican border. The two reclamation plants produce reclaimed water for uses such as plant operation and irrigation and support the City's water service strategy of diversifying water supply sources to reduce future reliance on imported water. Reclaimed water is sold and distributed by the City. Solids from the wastewater treatment plants are processed at the Metro Biosolids Center at Marine Corps Air Station Miramar.

There are 9 major pump stations and 75 smaller pump stations throughout the Metropolitan Sewerage System. The largest are Pump Stations #1 and #2. Pump Station #1, on East Harbor Drive, collects all of South San Diego's wastewater and has an average daily flow of 75 million gallons. It sends the wastewater flow north via the 8-mile South Metro Interceptor to Pump Station #2, which is on North Harbor Drive. The average daily flow into Pump Station #2 is approximately 180 million gallons. This station pumps the wastewater to the Point Loma Wastewater Treatment Plant through two 87-inch force mains.

2. Environmental Setting

The only existing sewer line on the island is a 10-inch line that connects the existing San Diego Youth Aquatic Center to a 60-inch trunk sewer in East Mission Bay Drive.

2.11.2 Water Supply and Distribution Systems

The City’s water supplies come primarily from the Metropolitan Water District of Southern California, which receives its water from the State Water Project in Northern California and the Colorado River via the Colorado River Aqueduct. From 2011 to 2015, imported water made up 87 percent of the City’s overall water supply.⁶ However, during a significant drought year in 2015, purchased and imported water made up approximately 93 percent of the City’s total water supply.

The City determines its water supply needs by subtracting its local water supplies from its total water demands. The total City water supplies and forecast supplies are shown in Table 2-14. The City has nine surface reservoirs with a combined capacity of 569,021 acre-feet. The native water captured in these reservoirs provides approximately 19 percent of the City water supply.

Table 2-14 City’s Water Supply and Future Water Purchase Needs

Water Source	Projected Water Demands and Supplies (afy)				
	2020	2025	2030	2035	2040
City Water Demands Retail and Wholesale	200,984	242,038	264,840	273,748	273,408
Less City Verifiable Local Water supplies	39,650	39,550	39,450	39,350	39,250
Purchased Water from SDCWA	161,334	202,488	225,390	234,398	234,158

Source: City of San Diego 2015 Urban Water Management Plan.

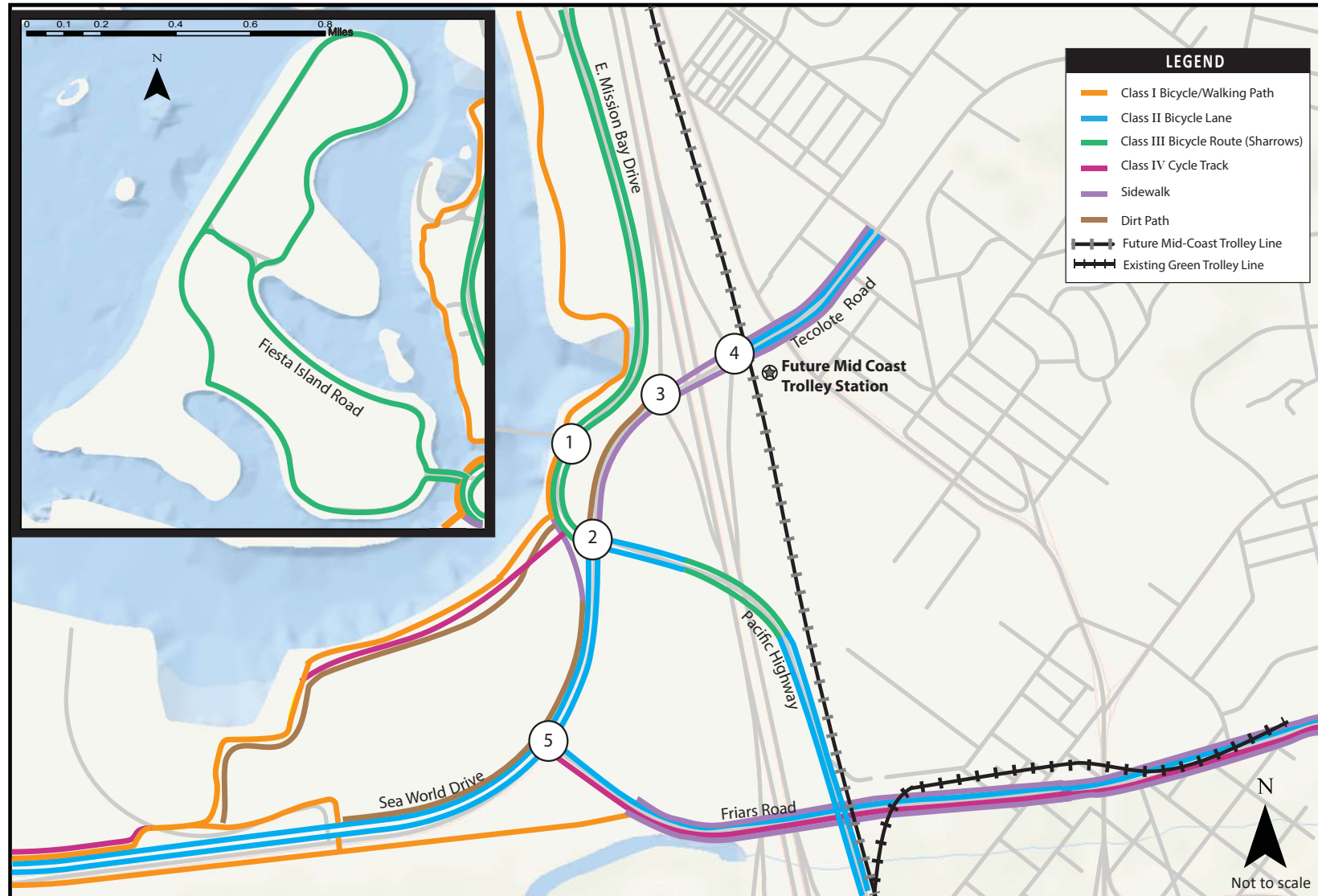
The water system is administered by the City’s Public Utilities Department. Water lines on the project site extend underneath Fiesta Island Road at the southern portion of the site and consists of a 10 inch “purple” (reclaimed) water pipeline that connects to a 12-inch potable water main near Sea World Drive.

The Public Utilities Department has planned maintenance that will upgrade/replace some of the older and undersized water lines in the City. This work is scheduled to be completed from 2018 to 2023. The City currently requires an 8-inch minimum diameter for public water mains to meet fire flow requirements.

⁶ Including recycled water but excluding water savings due to conservation efforts.

2. Environmental Setting

Figure 2-18 Existing Pedestrian and Bicycle Facilities



Source: ESRI, SanGIS, Placeworks, STC Traffic, Inc.

2. Environmental Setting

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2. Environmental Setting

Water Treatment, City of San Diego

Water for the City of San Diego is treated at three water treatment plants, Alvarado, Miramar, and Otay, which have a total capacity to treat up to 378 million gallons per day (mgd). A breakdown of each water treatment plant and their planned future capacities are provided in Table 2-15. Water for the project site would be treated at the Alvarado Water Treatment Plant. Although this plant is not planned for expansion, the water system is looped throughout the City, enabling the City to make adjustments for water in other areas to be treated at the Miramar and Otay facilities if needed. The Engineering Division anticipates capital improvements for water infrastructure several years in advance and has indicated that the City's existing water system will overall be able to accommodate future growth.

Table 2-15 Water Treatment Plants for the City of San Diego

Water Treatment Plant	Existing Capacity (mgd)	Planned Future Capacity
Miramar Water Treatment Plant	144	215
Alvarado Water Treatment Plant	200	200*
Otay Water Treatment Plant	34.4	40

Source: City of San Diego, Urban Water Management Plan 2015.
*No expansion is planned for the Alvarado Water Treatment Plant.

2.11.3 Solid Waste

There are numerous trash cans on the island, arranged at regular intervals along the beach. The cans are emptied daily, and more frequently during special events or peak usage. None of the cans are labeled as recycled materials only, however during special events additional trash cans and recycled material cans are brought to the island.

Solid waste generated in the City is primarily taken to three landfills. The majority of waste (that is not diverted) is disposed of at the Miramar Landfill, which is expected to be in operation through 2030 at current waste disposal rates. The Miramar Landfill is at 5180 Convoy Street and is operated by the City's Environmental Services Department's Refuse Disposal Division. The remaining waste goes to other landfills, including the Otay Landfill or Sycamore Landfill. These two landfills are currently owned and operated by Allied Waste Industries, a private waste management company that purchased the County of San Diego's solid waste system in 1997. Depending on how much waste is accepted, the Otay Landfill is projected to accept refuse through 2025, and the Sycamore Landfill through 2033 (City of San Diego General Plan, 2008).

2.11.4 Storm Drainage

The existing drainage conveyance is considered to be natural. No offsite runoff is conveyed through the project site. The proposed project is located on an island within Mission Bay and does not receive additional storm water. For the majority of the island, storm water is separated by a containment berm around the perimeter; on the interior side of the berm, runoff sheet flows and infiltrates into existing informal basins, while on the exterior side of the berm, runoff sheet flows across Fiesta Island Road and discharges directly

2. Environmental Setting

towards Mission Bay. There are nine known storm drain outlets in the Southwest Subarea which convey runoff from the dog park to Mission Bay.

2.12 ENERGY

2.12.1 Electricity

San Diego receives electricity from the San Diego Gas & Electric Company (SDG&E), which serves all of San Diego County except for part of the far east end of the County, as well as southern Orange County. SDG&E is a privately owned utility company (also known as an investor-owned utility, or IOU), and is the fourth-largest electrical provider in California. SDG&E, like other California IOUs, only owns a handful of power plants and buys a majority of its electricity from independent power plant operators. Electricity is delivered to individual buildings and facilities from power plants through a network known as the electrical grid. Power plants send electricity along high-voltage power lines known as transmission lines to facilities called substations, which redirect the energy out to individual users through lower-voltage power lines known as distribution lines. In some instances, a large primary substation may send electricity to numerous smaller secondary substations, which distribute the electricity to individual users. SDG&E owns and operates the electricity grid in and around the proposed project area.

Table 2-16 shows the sources of electricity for SDG&E compared to all of California as of 2016, the most recent year for which data are available. The existing buildings and facilities in the proposed project area currently use approximately 48,174 kWh of electricity each year, not including any electricity used by vehicles traveling to or from the site (current electrical vehicle usage is given in Table 2-17).

2.12.2 Natural Gas

The natural gas supplier in the project area is SDG&E, whose service area covers all of San Diego County. Natural gas providers such as SDG&E typically buy natural gas from various wholesale suppliers and send it to customers through an underground pipe network. Transmission pipes carry large volumes of natural gas between neighborhoods and communities, while smaller distribution pipes carry natural gas to individual buildings. The network is supported by various facilities that help maintain a consistent and reliable flow of natural gas. The existing buildings and facilities in the project area do not currently use any natural gas.

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Table 2-16 San Diego Gas & Electric Company Sources of Electricity (2016)

Electrical source	Percent of SDG&E Electricity	Percent of California Electricity
Renewable	43%	25.5%
Biomass	1%	2.3%
Geothermal	0%	4.4%
Small-scale hydroelectric	0%	1.7%
Solar	21%	8.1%
Wind	21%	9.1%
Non-Renewable	57%	74.6%
Coal	0%	4.1%
Large-scale hydroelectric	0%	10.2%
Natural gas	42%	36.5%
Nuclear	0%	9.2%
Unspecified *	15%	14.4%

Sources: California Energy Commission, California Total System Power for 2016; San Diego Gas & Electric Company, 2016 Power Content Label.

Due to rounding, the sum of the values may not add up to the reported totals.

* Note: Electricity from an unspecified source most likely was generated at a natural gas power plant with a comparatively lower efficiency relative to other natural gas facilities.

2.12.3 Gasoline and Diesel

Gasoline and diesel are fossil fuels that are widely used for mobile vehicles and equipment. In the United States, gasoline is primarily used for light-duty vehicles such as passenger cars, pickup trucks, and sport utility vehicles (SUVs). Diesel is more commonly used for large trucks, mobile construction vehicles and equipment, and buses, along with backup or portable generators. Both types of fuel can also be used for small pieces of equipment such as lawnmowers. Gasoline and diesel use is measured in gallons.

Table 2-17 shows the existing vehicle miles traveled (VMT) and gasoline and diesel use for on-road vehicle trips generated by the current land uses at the project area. This table also shows VMT and electricity used by associated electric vehicle trips, as electricity is increasingly used as a vehicle fuel. Current fuel use for off-road equipment, such as landscaping machinery, is not available.

Table 2-17 Annual Vehicle Fuel Use from Trips Generated by the Proposed Project (2017)

Fuel Type	VMT	Fuel Use
Gasoline	13,178,771	623,109 gallons
Diesel	838,103	101,277 gallons
Electricity	81,462	24,010 kWh
Total	14,098,336	724,386 gallons 24,010 kWh

Sources: CalEEMod, EMFAC

* CalEEMod and EMFAC do not provide estimates for energy used by electric vehicles. This data was estimated using existing kWh/mile data and estimates of future electric vehicle efficiencies provided by the Federal Highway Administration.

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2.13 PUBLIC SERVICES AND FACILITIES

This section addresses public services and facilities including: fire protection and emergency services, police protection, and roadway maintenance. As there will be no population growth associated with the proposed project, there are no impacts to schools and libraries.

2.13.1 Fire Protection and Emergency Services

2.13.1.1 SAN DIEGO FIRE-RESCUE DEPARTMENT

The San Diego Fire-Rescue Department (SDFD) serves the project site. SDFD operates 48 fire stations. SDFD staff includes 801 uniformed firefighters and 161 civilian personnel. In 2016 SDFD responded to 154,263 incidents, of which 135,399, or about 88 percent, were medical response incidents, and 5,639, or about 3.7 percent, were fires.

The San Diego Lifeguards are a division of SDFD. The lifeguards are a 24-hour rescue agency whose service area covers approximately 24 miles of coastline from the tip of Point Loma to Torrey Pines and Mission Bay. Lifeguard responsibilities include water rescue, boat rescue, marine fire suppression up to three miles offshore, coastal cliff rescue, underwater search and recovery, swift water and flood search and rescue, and emergency medical response on and around beach, bay and ocean areas. San Diego Lifeguards also handle enforcement of city, state and federal laws and regulations, through prevention, citation and arrest. All full-time lifeguards are classified as peace officers and seasonal lifeguards are classified as public officers, both with the power of arrest. Most enforcement activity however, is related to local ordinances concerning beach and water use.

Mutual Aid

The Fire and Rescue Mutual Aid Operations System for San Diego County—set forth in the 2014 County of San Diego Operational Area Emergency Operations Plan (EOP)—is organized into four zones. The City of San Diego is in the Metropolitan Zone, which consists of six City fire departments, fire departments on two military bases (Miramar US Marine Corps Air Station and Naval Base San Diego), and one volunteer fire department.

Funding

SDFD is funded mainly through the City's General Fund, which in turn is funded mostly through property and sales taxes, charges for services, and transient occupancy tax. New developments in the City are charged development impact fees or facilities benefit assessments. A portion of facilities benefit assessments is allocated for construction of new and/or expanded fire stations. A portion of development impact fees is allocated for maintaining existing SDFD service levels.

2.13.1.2 FIRE STATION 25

Fire Station 25 at 1972 Chicago Street, would serve the project site. Station 25's district is 5.40 square miles. Station 25 is equipped with one fire engine and one battalion chief's vehicle. The primary tasks for a fire

2. Environmental Setting

engine crew include search and rescue, locate, confine and extinguish fire, and respond to 911 medical incidents. In fiscal year 2016, Engine 25 responded to 2,688 incidents (see Table 2-18), that is, an average of about 7.4 incidents per day.

Table 2-18 SDFD Engine 25 and Battalion 3 Responses in Fiscal Year 2016

Type of Response	Engine 25	Battalion 3 Chief's Vehicle
Fire	240	264
Rescue	22	81
Emergency Medical	1,864	20
Urgent Medical	208	1
Non-Emergency Medical	154	0
Hazard	187	36
Events	0	0
Service	11	3
Other	2	10
Total	2,688	415

Source: San Diego Fire-Rescue Department. 2017, October 9. Fire Station 25. <https://www.sandiego.gov/fire/about/firestations/sta25>.

Station 25 is one of six fire stations in Battalion 3 serving communities in Ocean Beach, Midway District, Pacific Beach, Point Loma, and North Clairemont as well as the proposed project site. Lifeguard services would be provided from 2581 Quivira Court, San Diego.

2.13.2 Emergency Medical Services

San Diego Fire-Rescue's medical emergency service capacity consists of a daily on-duty response force of 256 personnel staffing 70 response apparatus from 47 fire stations. All Fire-Rescue response personnel are trained to either the Emergency Medical Technician (EMT) level, able to provide Basic Life Support (BLS) pre-hospital emergency care; or Paramedic (EMT-P) level, able to provide Advanced Life Support (ALS) pre-hospital emergency medical care. Minimum daily staffing includes at least one paramedic on all staffed emergency response apparatus except command vehicles.

Fire-Rescue apparatus are dispatched to all medical emergencies. Fire-Rescue also has specialized two-person ALS Mobile Operations Detail (MOD) teams on bicycles or two-wheeled self-balancing electric personal transporters for special events, as well as Special Trauma and Rescue (STAR) units and STAR Medics to support Police Department Special Weapons and Tactics (SWAT) teams. Fire-Rescue also operates at least one Type-II ALS rescue helicopter from Montgomery-Gibbs Executive Airport that is staffed with at least one Helicopter Rescue Medic.

AMR (formally known as Rural Metro) provides emergency ground paramedic ambulance transportation services in San Diego under an exclusive operating area contract with the City. This is a performance-based contract with a 90% maximum response time performance standards for each of eight medical response zones.

2. Environmental Setting

There are 13 hospitals within the City of San Diego, some of which provide medical control for paramedics, and provide emergency medical care services. An additional five hospitals in the region are designated Trauma Centers.

This service capacity is adequate to minimize the City's medical emergency impact severity exclusive of a catastrophic disaster event. Medical emergency service demand over the previous three years (2013-14, 2014-15, 2015-16) involved 199,630 calls for service comprising 82.64% of total service demand over the same period.

2.13.3 Police Protection

The San Diego Police Department (SDPD) serves the project site. SDPD provides patrol, traffic, investigative, records, permits and licensing, laboratory, and support services. Total staff was 2,577 (full-time and part-time, and sworn and civilian positions) in fiscal year 2016. The City is divided into nine police divisions. The project site is served by the Northern Division. The Northern Division serves a population of 225,234 people and encompasses 41.3 square miles. It serves the neighborhoods of Bay Ho, Bay Park, Clairemont Mesa East, Clairemont Mesa West, La Jolla, Mission Bay Park, Mission Beach, North Clairemont, Pacific Beach, Torrey Pines, and University City. The Northern Division Station is located at 4275 Eastgate Mall in the University Community.

The Northern Division's average response time are as follows:

- Priority E Calls (imminent threat to life) within 8.8 minutes.
- Priority 1 Calls (serious crimes in progress) within 19.6 minutes.
- Priority 2 Calls (less serious crimes with no threat to life) within 44.1 minutes.
- Priority 3 Calls (minor crimes/requests that are not urgent) within 116.4 minutes.
- Priority 4 Calls (minor requests for police service) within 147.4 minutes.

Mutual Aid

In San Diego County, 16 law enforcement agencies participate in a mutual aid agreement as part of the 2014 County of San Diego Operational Area Emergency Operations Plan (EOP)— nine City police departments; four San Diego County agencies, including the Sheriff's Department; two university police departments; and the Unified Port of San Diego Harbor Police Department.

San Diego Park Rangers

The Mission Bay Park Rangers are responsible for resource protection and management in Mission Bay Park, including the Southern and Northern Wildlife Preserves, Famosa Slough, and along the mouth of the San Diego River. Park Rangers are also very active in preparing and protecting the annual least tern nesting areas.

2. Environmental Setting

2.14 VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

Fiesta Island is located at the center of Mission Bay Park and all of its aquatic recreational opportunities. Mission Bay Park is a regional/local landmark, visible from surrounding communities and I-5. The project site comprises approximately 470 acres which includes all of Fiesta Island, the access causeway to the mainland at Sea World Drive, and the Tecolote Creek outfall area at the terminus of Pacific Passage immediately north of the causeway. Immediately to the east, is Pacific Passage, with East Mission Bay Drive and I-5 beyond. The project area lies north of South Shores in Mission Bay Park and I-8 beyond. There is no immediately adjacent community to Fiesta Island which is separated from the Clairemont Mesa and Linda Vista communities by the Pacific Passage and I-5.

The project area is generally flat, with only its shoreline exposed to public view and a berm separating the shoreline and loop roadway from the inward of the Island. It is almost entirely undeveloped with either structures or formal recreation space and has a naturalized open space character. There are approximately 6 miles of shoreline that can be directly accessed by existing road infrastructure which provides opportunities for active and passive recreation in close proximity to the road. There is very slight mounding across the Island with most of the interior of the Island segregated from the rest by berms that line the roadway. Vegetation consists primarily of ruderal vegetation and developed/ornamental vegetation as well as beach, Diegan Coastal Sage Scrub, coastal salt marsh, mudflat, dunes, and ornamental Torrey Pines. Existing uses are limited to various recreational activities and sensitive habitat areas with very limited built structures within the San Diego Youth Aquatic Center and youth camping leasehold areas. There is no established built form or neighborhood character on Fiesta Island. Representative photos of the existing visual character of Fiesta Island is shown in Figure 2-19.

Landform

Fiesta Island is comprised entirely of man-made dredged fill material that was placed there from dredging that occurred throughout Mission Bay between 1946 and 1956. Published topographic maps indicate that surface elevations across Fiesta Island generally range from 10 to 25 feet Mean Sea Level Datus (MSLD) with higher elevations generally concentrated along the northwest-southwest “leg” of Fiesta Island which is connected by the access causeway to the mainland. Ten to fifteen-foot high impoundment berms, originally constructed to contain discharge from the hydraulic dredges, are still a prominent feature around the perimeter of the island, and also across the Island in areas where smaller settlement basins were placed. Most of Fiesta Island consists of 2-3% slopes, with the sand berms at a higher than normal angle of repose (due to invasive plant species) of 25-50%. Some of the beach areas have slopes in excess of 10%, while most are generally sloping less than 5%.

Visual Resources and Scenic Vistas/Corridors

Visual assets on Fiesta Island include its location and prominence in Mission Bay with sweeping, unobstructed public views of Mission Bay and the surrounding Pacific Beach, Clairemont Mesa, and Linda Vista communities from all points around the Island’s shoreline. However, the project area does not include any officially designated scenic viewpoints, landmarks or corridors. Public views towards scenic resources

2. Environmental Setting

from the shoreline are almost entirely unobstructed. Views from the interior of Fiesta Island are obstructed by the berms that surround the Island. Only the shoreline of Fiesta Island is readily visible from the mainland. Most of Fiesta Island is hidden by the containment sand berms that were used to help create it more than five decades ago.

Fiesta Island is characterized by its undeveloped and mostly un-landscaped interior and the sandy beaches on the perimeter. Although there are no scenic views from Fiesta Island that are designated or protected, the views from any point on Fiesta Island provide a unique vantage point and unobstructed views because it is surrounded by water and separated from developed areas. On the interior side of Fiesta Island Road, and in many locations on Fiesta Island, there is a small berm that screens the interior of Fiesta Island from the road and the beach. From the interior, much of the views from off the island are obscured.

2.15 ASSUMPTIONS REGARDING CUMULATIVE IMPACTS

2.15.1 The De Anza Amendment to the Mission Bay Park Master Plan

The De Anza Amendment to the Mission Bay Park Master Plan (De Anza Amendment) is a comprehensive outreach and planning program to reimagine, repurpose and revitalize the project area. This planning effort will involve work with the community and stakeholders to develop conceptual revitalization plan alternatives that will result in a preferred plan, an amendment to the Mission Bay Park Master Plan, and an EIR. The project area includes the De Anza Special Study Area (identified in the Mission Bay Park Master Plan), the De Anza Cove Park, and all land along North Mission Bay Drive - north to Grand Avenue and east along Mission Bay Boulevard.

The Mission Bay Park Master Plan does not provide specific land use concepts for the De Anza area. In anticipation of the closure of the De Anza Mobile Home Park the City initiated the planning process for the special study that will result in a development plan. The De Anza Amendment is needed to implement the Mission Bay Park Master Plan and to lay out a design and use program for the reuse and redevelopment of the site. The De Anza Amendment is subject to the goals and objectives established for Mission Bay Park and the final plan shall be incorporated into the Mission Bay Park Master Plan as an amendment to the City of San Diego's LCP.

2. Environmental Setting

Figure 2-19 Existing Visual Character



2. Environmental Setting

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2. Environmental Setting

Other Cumulative Projects

West Mission Bay Drive Bridge Replacement Project

The West Mission Bay Drive bridge was constructed in the early 1950s to meet the demands and standards of its time. Because the daily traffic volume on the bridge exceeds its current capacity, the California Department of Transportation (Caltrans) evaluated and classified the bridge as functionally obsolete. The existing bridge will be replaced with two three-lane parallel structures for both northbound and southbound traffic. This project is federally funded through the Federal Highway Administration (FHWA) Highway Bridge Program (HBP).

This project is located on West Mission Bay Drive between I-8 and Sea World Drive, approximately 1.25 miles west of the I-5/I-8 interchange. Once complete, the project will replace the existing four-lane bridge with two separate three-lane structures, providing an improved transportation link across the San Diego River. The improvements include: two new parallel bridge structures with three travel lanes in each direction; a Class 1 bike path on both bridges; roadway widening and improvements along Sports Arena Boulevard, West Mission Bay Drive and the westbound I-8 off-ramp; additional architectural features; and environmental mitigation.

Mission Bay Park Navigational Safety Dredging Mitigated Negative Declaration No. 520687

Over the years, recreational boating, storms and water currents have caused the floor of Mission Bay to become uneven. In order to maintain navigational safety for boats in the bay, the Mission Bay Navigational Safety Dredging Project will dredge the bottom of the bay to restore it to its original survey elevation and then utilize the dredged material to fill other areas within the bay. When the project is finished, the floor of Mission Bay will be more level, thus allowing for safer boat navigation.

This project will dredge approximately 64 acres within Mission Bay, resulting in an estimated 122,000 cubic yards (CY) to 220,850 CY of dredged material. All of the dredged material will be reused in other areas of the bay, including portions of some beaches, so none of the material will be exported from the bay.

In addition to the dredge work, the scope of this project also includes replanting eelgrass that is impacted by the work. During construction, construction equipment will be visible on the water and staged on beaches where dredged materials will be reused.

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3. Project Description

3.1 INTRODUCTION

The proposed project analyzed in this draft Program Environmental Impact Report (PEIR) is an amendment to the Mission Bay Park Master Plan (Master Plan) to update the land uses and vision for Fiesta Island (“proposed project”). The proposed project includes maps, diagrams, and supporting policy recommendations in the Master Plan that will guide future improvements to the approximately 470-acre planning area. Unless otherwise specified, the term project area or plan area refers only to the area affected by the proposed project.

The proposed project includes island-wide improvements to recreation facilities, access and circulation, changes to parking, construction of soft-surface trails and paved multi-use paths linking different areas together, grading and landscaping, habitat improvements, water quality improvements, eelgrass bed plantings, enhancements to signage, and upgrading utilities. In addition, the proposed project includes elements that are specific to each of the four subareas of Fiesta Island, including two options, Option A and Option B, each with different elements in the Southwest Subarea. The proposed project elements in the North, Central, and Southeast Subareas are the same in Option A and Option B. Figure 3-1, Fiesta Island Concept Plan – Option A and Figure 3-2, Fiesta Island Concept Plan – Option B, show the approximate location of the proposed land uses for all of Fiesta Island, with the different elements for each option shown in the Southwest Subarea.

3.2 RELATIONSHIP TO THE MISSION BAY PARK MASTER PLAN

The Fiesta Island Amendment will be incorporated into the Mission Bay Park Master Plan and will amend the existing discussion and policy recommendations for Fiesta Island, including figure 32, the Fiesta Island Concept Plan. The goal for Fiesta Island, as adopted in the Mission Bay Park Master Plan, is for Fiesta Island to be “An area which supports a diversity of regional-serving public and nonprofit recreation and natural resource management and enhancement uses.”

3.3 PROJECT OBJECTIVES

In accordance with CEQA Guidelines Section 15124(b), the following are basic objectives for the proposed project.

- Create a focused long-range concept plan for Fiesta Island as part of the Mission Bay Park Master Plan.
- Improve water quality by reducing erosion along the existing perimeter roadway.
- Improve water quality by providing hydraulic connectivity under the existing causeway.

3. Project Description

- Improve beach quality throughout Mission Bay Park by maintaining and enhancing the sand management area on Fiesta Island.
- Utilize and enhance the unique landscape of Fiesta Island by creating a regional recreation area with a number of active and passive uses.
- Enhance the existing habitat areas for the Least Tern, and create new habitat preserves and wetlands.
- Maintain the dog friendly nature of Fiesta Island by improving the existing fenced off-leash dog park.
- Improve safety for cyclists and pedestrians by improving the existing roadway and adding both hard surface and soft surface multi-use trails.
- Provide improved shoreline access to bay waters through the implementation of an on-site non-motorized water craft storage area, improved launching area, and convenient parking for vehicles with trailers for non-motorized watercraft near the launching point (Option A only).

3.4 FUTURE ACTIONS

The proposed project updates the vision and land uses for Fiesta Island in the Mission Bay Park Master Plan and describes a program for the general location, scope, and type of future improvements on Fiesta Island. No construction-level details or implementation plans have been developed to complete the future improvements proposed in the Fiesta Island Amendment. This PEIR evaluates the impacts of future development based on the proposed project.

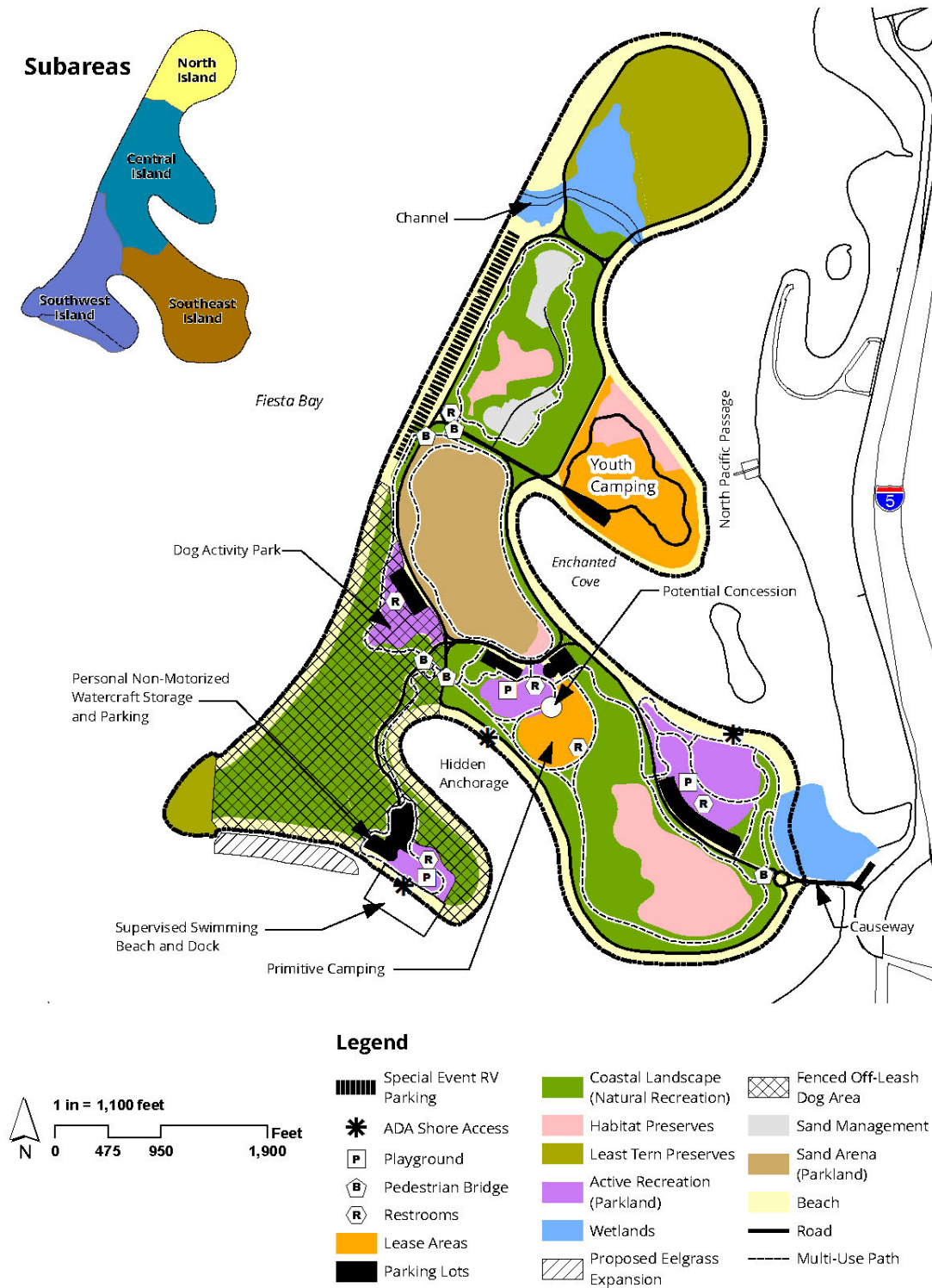
Future actions required to implement the proposed project include preparing General Development Plans (GDP) for each of the subareas of Fiesta Island to refine the design and extent of the improvements and provide construction-level details. This PEIR analyzes the impacts associated with the proposed project; however, the GDPs that are consistent with the proposed project will likely result in similar or reduced impacts.

All GDPs completed after the adoption of this PEIR, will be evaluated for consistency with the certified PEIR, consistent with Section 15162 of the CEQA Guidelines, to determine if the GDP would result in new significant impacts, or a substantial increase in any significant impacts identified in the PEIR.

A non-inclusive list of potential future discretionary actions that would occur as the proposed project is implemented is shown in Table 3-1.

3. Project Description

Figure 3-1 Fiesta Island Concept Plan – Option A



3. Project Description

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3. Project Description

Figure 3-2 Fiesta Island Concept Plan – Option B



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3. Project Description

Table 3-1 Potential Future Discretionary Actions Associated with Proposed Project Buildout

City of San Diego
General Development Plans Adoption
Lease Agreements
Park Use Permits (Preferential Use and Occupancy Permits, Special Use Permits; Athletic Program Permits, etc.)
Special Event Permits
Temporary Use Permits
Conditional Use Permits
Site Development Permits for Infrastructure (water, sewer, road improvements, habitat restoration, other related park improvements, etc.)
State of California
Water Quality Certification Determinations for Compliance with Section 401 of the Clean Water Act
Coastal Development Permits issued by Coastal Commission
Federal Actions
U.S. Army Corps of Engineers Section 404 Permits
U.S. Fish and Wildlife Service Section 7 or 10(a)

3.5 PROJECT DETAIL

The proposed project includes improvements that are part of a unified program that will be implemented throughout all of Fiesta Island. In addition, the proposed project includes elements that are specific to each of the four subareas of Fiesta Island.

3.5.1 Island-Wide Improvements

Island-wide improvements include improvements to access and circulation, changes to parking, construction of soft-surface trails and paved multi-use paths linking activities in each of the subareas, construction of recreational facilities, grading and landscaping, enhancements to signage, and upgrading utilities. Improvements are intended to enhance day to day use of the active and natural park areas, as well as, create a natural and stimulating place to gather for organized events and host community celebrations. Figure 3-1, Fiesta Island Concept Plan – Option A and Figure 3-2, Fiesta Island Concept Plan – Option B, show the approximate location of the proposed land uses for all of Fiesta Island, with the different elements for each option shown in the Southwest Subarea. Table 3-2 summarizes the estimated total area of each use in acres for both Option A and Option B, and provides the difference from the existing uses on Fiesta Island for each option. In Table 3-2, negative numbers represent a shift of area from one recreation use to another. The planning area remains the same in all scenarios and, consistent with the Mission Bay Park Master Plan, the island will remain a regional recreation facility. Many of the use categories have activities that overlap, and to avoid double counting of the areas, only the total for each category is shown in Table 3-2.

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Table 3-2 Comparison of Proposed Changes

Uses	Existing	Option A	Difference (Opt A - Existing)	Option B	Difference (Opt B - Existing)
Land Uses					
Youth Camping – Lease Area	24	22	-2	22	-2
Primitive Camping – Lease Area	0	7	7	7	7
Circulation / Parking / Multi-Use Paths	18	31	13	29	11
Sand Management Area	20	7	-13	7	-13
Habitat Preserves	0	34	34	34	34
Least Tern Preserves	35	35	0	35	0
Active Recreation	0	30	30	20	20
Sand Arena	31	36	5	36	5
Beach	54	51	-3	51	-3
Coastal Landscape	264	181	-83	193	-71
Wetlands Habitat	3	15	12	15	12
Subtotal	449	449	0	449	0
Water Uses					
Wetlands Habitat	0	12	12	12	12
Eelgrass Habitat	0	5	5	5	5
Undesignated ¹	17	0	-17	0	-17
Subtotal	17	17	0	17	0
Total	466	466	0	466	0

¹ Undesignated includes areas that do not have an existing water use designation.

3.5.1.1 ACCESS AND CIRCULATION

The proposed project includes modifications and enhancements to access and circulation on Fiesta Island to improve the flow of traffic on, off, and around the island. The improvements to access and circulation are designed to: accommodate cars, recreational vehicles, bicycles and pedestrians; improve connectivity throughout the island; improve beachside parking and the addition of parking lots; minimize runoff into Mission Bay; and better accommodate traffic during special events. It is expected that special events located on the island could include partial or full road closers to vehicular access as permitted by the City. Fiesta Island is also identified in the proposed project as an emergency large animal shelter which could temporarily restrict access to the island during emergency events.

Realignment of Fiesta Island Road Segments

The proposed project would realign Fiesta Island Road in two locations. The realignment would be located to decrease risks to the roadway from sea level rise and wave run-up as well as to limit impacts to sensitive habitat. The first roadway replacement would occur on the narrow “neck” between the North Subarea and

3. Project Description

the Central Subarea. This realignment would be further inland and could include elevated piles on both sides of the neck, or other strategies to minimize impacts to sensitive habitat. Realignment of Fiesta Island Road is also proposed in the Southeast Subarea.

New Crossover Roadways

Two new crossover roadways are proposed as part of the Fiesta Island Amendment, a north crossover roadway and a south crossover roadway, which would allow two-way traffic and would supplement the existing central crossover roadway on Fiesta Island. The existing central crossover roadway is a one-way road and would be modified to accommodate traffic in both directions. Permanent or temporary barriers would be installed to separate traffic traveling in each direction on the existing central crossover roadway and the north crossover roadway. The south crossover roadway would be a two-lane road with a center stripe. Together, these improvements would create four smaller sub-loops that would allow vehicles to bypass parts of the island. This allows for the protection of sensitive areas during nesting season, and for different special events to use parts of the island while keeping other portions open to the public.

Currently, all circulation must traverse the entire loop of Fiesta Island Road, with the exception that inbound traffic can bypass the northern part of Fiesta Island using the existing central crossover roadway. Outbound traffic cannot cut-across to return north because the central crossover roadway is one-way only.

The existing central crossover roadway would be modified to include a series of gates and barriers that allow the southern portion of the island to remain open during special events and closures on the northern part of the island. The new north crossover roadway would be located between the North Subarea and Central Subarea to connect the realigned segments described above. Gates would be constructed north of the new crossover to allow the roadway to be closed during breeding season for the least tern (April 1 through September 15) and to provide additional protection to the least tern nesting site. The new south crossover roadway would be located between the Central Subarea and Southeastern Subarea.

New Road Segments

Additional new road segments within the island are proposed to increase access to areas located in the interior of Fiesta Island and would supplement the main loop of Fiesta Island Road and the crossover roadways. A looped access road is proposed in the Central Subarea, and a two-way road is proposed in the Southwest Subarea for Option A only.

Change in One-Way Travel Direction on Fiesta Island Road

Fiesta Island Road is currently a one-way loop and traffic travels in a counterclockwise direction. The proposed project would change the one-way travel direction on Fiesta Island Road to clockwise.

Enhancement of Existing Road Segments

The project proposes a travel lane, a bike lane with a buffer between the lanes and the bio swale. The road will be designed consistent with City of San Diego Street Design Manual (2017) standards. This includes consideration for emergency access, lane widths, slopes, and bicycle treatments.

3. Project Description

The enhanced roadways will also be re-contoured to alter stormwater drainage to flow toward the interior of the island rather than over the beach and into Mission Bay. A bio swale of variable width will be created to capture stormwater runoff on the inland side of the road. Furthermore, the proposed change in direction from counterclockwise to clockwise will allow the bike lane to be positioned to the right of traffic and separated from parking. Other modifications to road segments may include installing turn or stacking lanes and providing wayfinding signage. New roadways described previously would have the same cross-section as the enhanced existing road segments.

Entry Roundabout

The proposed project would construct a roundabout at the western end of the causeway, replacing the existing “Y” configuration. Pedestrian and bicycle paths would be routed around the roundabout. Pedestrians and bicyclists would not interact with vehicles at this entry intersection, as both Option A and Option B include a separate Class I multi-use path offset from the loop road, and a proposed pedestrian/bicycle bridge that would crossover the entry road.

Causeway Improvements

The sole entry point onto the island is from a causeway extending from East Mission Bay Drive to Fiesta Island Road. The proposed project includes plans to widen the causeway to include additional room for a separate space for pedestrian and bicycle traffic. The causeway improvements include installation of a controlled hydraulic connection between the north and south sides of the bay bisected by the causeway. The connection will allow water flow to move under the causeway using tidal action.

3.5.1.2 PARKING

The proposed project includes creating improved parking areas throughout the island. Parking on the beaches is permitted in most locations on Fiesta Island, and along the roadway edges.

The existing parking lot at the Youth Camp and San Diego Youth Aquatic Center in the Central Subarea would remain without significant improvements. The existing parking area on the east side of the causeway before arriving on Fiesta Island is currently an unpaved dirt lot that would be enhanced and paved to create a formal parking area.

Other new parking areas are proposed at the following locations:

- Southeast Subarea near the new active recreation parks and as part of day use and walk-in overnight parking (three parking areas).
- Formal roadside parking along both sides of the north crossover roadway (one parking area).

3. Project Description

- Southwest Subarea includes two parking lots in both Option A and Option B. Both options include a parking lot for the fenced off-leash dog park. The second parking lot is located in:
 - Option A at the southerly beach of the Subarea and along the access road to this parking area.
 - Option B at the top of Hidden Anchorage Bay.

3.5.1.3 MULTI-USE PATHS AND RECREATION TRAILS / PATHWAYS

A paved multi-use path with a marked centerline is proposed throughout the island to accommodate pedestrians and bicyclists. In addition to the multi-use path, a compacted soil or decomposed granite side trail on each side of the concrete trail is proposed for use by runners and hikers.

Soft surface recreation trails are proposed in the Southeast and Southwest subareas. These trails are oriented towards hikers and joggers and those who walk their dogs on a more natural surface.

Pedestrian and bicycle bridges are also proposed at key locations to enable people that walk and bike on Fiesta Island using the multi-use paths and recreation trails to cross over the road. A total of five pedestrian bridges are proposed in Option A. A total of three pedestrian bridges are proposed in Option B.

3.5.1.4 GRADING AND LANDSCAPING

The proposed project would recontour parts of the island to support the intended activity. Most of the existing vegetation would be replaced with either maintained turf and landscaping, or with native vegetation. As each area of the island is improved, new vegetation would be planted to prevent erosion and to enhance the aesthetics. The recontouring of the island is intended to:

- Reduce roadway erosion;
- Improve viewing locations for events;
- Provide variety for hiking, biking, and equestrian trails and multi-use paths;
- Create grade-separated crossings for trails and multi-use paths;
- Provide playing fields; and
- Allow for wind breaks.

3.5.1.5 SIGNS

A variety of informational signage is proposed throughout the island. Signs may be installed to enhance direction/navigation/wayfinding; create identity/branding; communicate regulatory and operational information; promote education and interpretation; and for other purposes. In addition, a tower entry monument and consolidated entry signage is proposed near the entrance to Fiesta Island along the causeway.

3.5.1.6 UTILITIES

Fiesta Island would remain largely open and used for recreation, however, some utilities would be necessary to support restrooms, maintenance buildings, lighting and provide irrigation for maintained areas. Water and

3. Project Description

wastewater lines may be extended to serve the proposed campground and restrooms. To the extent possible, all utilities would be within a roadway, trail, or path. Power lines may also be extended, although solar may be used to minimize the need to extend lines.

3.5.2 North Subarea

The North Subarea would remain preserved habitat and a habitat buffer area with recreation limited to use of the perimeter roadway and permitted beach areas for swimming, fishing, parking. A portion of the shore in the North Subarea is restricted and swimming, beaching, or launching/retrieval of personal water crafts is not allowed. Along the northern side of the crossover roadway there will be a small area that allows for nature viewing and wildlife observation.

The existing least tern nesting site, along with the existing berm and fencing surrounding it would remain. A wetland habitat area would be expanded adjacent to the least tern nesting site. The wetland habitat would include a mixture of mudflats, and lower, mid-, and upper-salt marsh. Dredging is proposed to occur on both the western and eastern side of the island approximately at the entrance to the North Subarea to support new wetland habitat and improve water circulation by creating a channel that cuts through the island.

As described in Section 3.5.1.1, a segment of Fiesta Island Road would be realigned and potentially elevated. A gate would be installed to allow Fiesta Island Road to be closed during least tern nesting season.

There are no differences between Option A and Option B in the North Subarea.

3.5.3 Central Subarea

Proposed improvements in the Central Subarea include relocating the existing sand management area (currently in the Southeast Subarea). The sand management area includes sand storage, screening, kelp drying, and other operations. A new dirt access road would be created to access the new sand management area in the Central Subarea.

The unimproved land surrounding the sand management area would be enhanced through the creation of a habitat preserve, sand dune habitat, and native vegetation plantings.

No changes are proposed to the existing San Diego Youth Aquatic Center and the Fiesta Island Youth Camp, except an existing habitat area is identified within the northern portion of the lease area. New berms would be created to provide wind protection and arena seating as part of the sand recreation area. The sand arena used for recreational events such as Over-The-Line, is also identified in the proposed project as a location for an emergency large animal shelter. In addition, new sand volleyball courts and other sand-oriented recreation facilities would be created in the expanded sand recreation area.

There are no differences between Option A and Option B in the Central Subarea.

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3.5.4 Southeast Subarea

Improvements to the Southeast Subarea would include two active recreation parks, plazas and public restrooms, a group day use and primitive camp area, public parking areas, playgrounds, public art, ADA shore access at Enchanted Cove and Hidden Anchorage, an expanded fenced habitat, and wetland restoration. A large habitat preserve would be created to the west of the realigned Fiesta Island Road and north of the southern shore of the Southeast Subarea. Wetland restoration would occur in the water near the outfall of Tecolote Creek, on the north side of the causeway, and would include a portion of the beach on the island. The remaining land area would be revegetated with coastal landscape habitat which allows for passive recreation uses, trails and the multi-use path. There are no differences between Option A and Option B in the Southeast Subarea.

3.5.5 Southwest Subarea – Option A

Option A for the Southwest Subarea includes a fenced off-leash dog park and shoreline park. New developed facilities are also proposed as part of the dog park, including a small dog fenced off-leash area, a dog special event area, a special event obstacle course, and a canine competition staging area. Other facilities for the dog park would be created as part of the improvements, such as a series of fences and double-gates to help contain off-leash dogs. A new parking lot would also be constructed as part of the developed dog park facilities. Recreational trails would be enhanced throughout the fenced off-leash dog area.

A new roadway that extends south to a public parking area with trailer spaces is also proposed as part of Option A. The new roadway would provide access to a non-motorized boat storage, nearby beach watercraft storage areas, and shore launching area for non-motorized watercrafts. Adjacent to the boat storage, a plaza, a playground, a lifeguard tower, and public restrooms would all be located next to a supervised swimming beach along with ADA shore access. A pier, ramp, and floating dock are also proposed. The existing Stony Point least tern nesting site would remain as would the existing seasonal closure fencing and buffer. Eelgrass restoration is proposed off the southeast shore of Stony Point.

3.5.6 Southwest Subarea – Option B

Option B for the Southwest Subarea includes a fenced off-leash dog park and shoreline park. New developed facilities would include a proposed small dog fenced off-leash area. Other facilities for the dog park would be created as part of the improvements, such as a series of fences and double-gates to help contain off-leash dogs. Recreational trails would be enhanced throughout the fenced off-leash dog area. A view pavilion, plaza, and seating are also proposed as part of the trail improvements. Two new parking lots would also be constructed, one near the new developed dog park facility and one near Hidden Anchorage Bay adjacent to Fiesta Island Road. Similar to Option A, the existing Stony Point least tern nesting site would remain as would the existing seasonal closure fencing and buffer. Eelgrass restoration is also proposed off the southeast shore of Stony Point.

3. Project Description

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4. Regulatory Framework

This chapter lists the regulatory framework applicable to each subject area included within this PEIR.

4.1 AIR QUALITY AND ODOR

4.1.1 Federal

Clean Air Act

The federal Clean Air Act (CAA) was first passed in 1963 and has been amended and extended multiple times since. The law sets federal standards for numerous types of air pollutants from vehicles, aircraft, and stationary facilities such as power plants, refineries, and factories. The CAA regulates six common pollutants known as criteria air pollutants (ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, lead, and particulate matter), as well as 187 different toxic air pollutants (e.g., asbestos, chlorine, formaldehyde, and more). The Supreme Court extended the CAA's authority to cover greenhouse gases (GHGs), which are responsible for climate change, in the 2007 *Massachusetts v Environmental Protection Agency* case.

Ambient Air Quality Standards

In 1977, Congress amended the CAA to include nonattainment requirements for areas not meeting the National Ambient Air Quality Standards (NAAQS) and to create the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollutants. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practical date. The CAAQS tend to be more restrictive than the NAAQS.

The NAAQS and CAAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “sensitive receptors” most susceptible to further respiratory distress, such as asthmatics, the elderly, and very young children. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both the state and federal governments have established health-based ambient air quality standards (AAQS) for seven air pollutants. These pollutants are ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), coarse inhalable particulate matter (PM₁₀), fine inhalable particulate matter (PM_{2.5}), and lead (Pb). In addition, the State has set standards for sulfates (SO₄), hydrogen sulfide (H₂S), vinyl chloride, and visibility-reducing particles.

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California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- Assembly Bill (AB) 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Energy Code
- Title 24, Part 11, CCR: Green Building Standards Code (CALGreen)

4.1.2 State

California Air Resources Board

The California Air Resources Board (CARB) was established in 1967 to reduce air pollution throughout the state. CARB monitors air quality throughout the state, establishes fuel efficiency and pollution standards for all vehicles sold in California, sets air quality standards for major stationary facilities, and regulates emissions from portable equipment, among other duties. CARB is also the primary agency responsible for developing and enforcing California's GHG emissions reduction policies.

Air Pollutants of Concern

Criteria Air Pollutants

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary criteria air pollutants. Primary air pollutants are emitted directly from sources. CO, volatile organic compounds (VOC), nitrogen oxides (NO_x), SO₂, PM₁₀, PM_{2.5}, and lead (Pb) are primary criteria air pollutants. Of these, CO, SO₂, NO₂, PM₁₀, and PM_{2.5} are “criteria air pollutants,” which means that AAQS have been established for them. VOC and NO_x are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. O₃ and NO₂ are the principal secondary criteria air pollutants.

Toxic Air Contaminants

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being from diesel particulate matter (DPM).

4.1.3 Local

Air Quality Management Plan

To ensure continued progress toward clean air and to comply with state and federal requirements, the San Diego Air Pollution Control District (SDAPCD), in conjunction with CARB and the San Diego Association of Governments (SANDAG), prepared the 2016 San Diego Regional Air Quality Strategy (RAQS). The 2016 RAQS employs up-to-date science and analytical tools and incorporates a comprehensive strategy aimed at

4. Regulatory Framework

controlling pollution from all sources, including stationary sources, on-road and off-road mobile sources, and area sources.

The SDAB adopted its first RAQS in 1992 and it has undergone six revisions since. The amended and new rules considered in the current 2016 Triennial Revision of the RAQS are estimated to reduce NO_x by approximately 1.2 tons per day and VOC by approximately 0.3 tons per day. The 2016 RAQS provides additional reductions of O₃ precursor emissions relative to the 2009 RAQS and, therefore, is more effective in improving air quality.

The SDAPCD also is required to submit separate attainment plans to demonstrate to the United States Environmental Protection Agency (EPA) how the SDAB will achieve compliance with the federal CAA for nonattainment designations. These plans include:

- 2016 Attainment Plan – 8-Hour Ozone (2008 Standard)
- 2012 Maintenance Plan – 8-Hour Ozone (1997 Standard)
- 2007 Attainment Plan – 8-Hour Ozone (1997 Standard)
- 2005 Wildfire Natural Events Action Plan
- 2002 Maintenance Plan – 1-Hour Ozone (1979 Standard)

San Diego Air Pollution Control District

The SDAPCD is the regional agency responsible for regulating air quality. Although SDAPCD does not specifically provide land use guidance for San Diego communities, it establishes requirements for measures to reduce air pollutant emissions from industrial facilities, commercial processes, motor vehicles, and other sources, in cooperation with the SANDAG. While SDAPCD does not exercise specific land use authority, its policies can have land use implications with regard to how development occurs, including the encouragement of mixed-use development, in-fill development, jobs/housing balance, and limits on suburban growth that have a positive effect on air quality.

SDAPCD Rules and Regulations

All projects are subject to SDAPCD rules and regulations in effect at the time of activity, including:

- **Rule 51, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons, to the public, or cause injury or damage to business or property.
- **Rule 55, Fugitive Dust Control.** This rule is intended to reduce the amount of fugitive dust emitted from commercial construction or demolition activities. Specifically, this rule limits the amount of visible dust emissions discharged into the atmosphere beyond the property line and also imposes requirements to minimize visible roadway dust associated with transport trucks, erosion, or track-out/carry-out.

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- **Rule 67.0.1, Architectural Coatings.** This rule limits the VOC content of architectural coatings used on projects in the SDAPCD. Any person who supplies, sells, or manufactures any architectural coating for use on projects in the SDAPCD must comply with the current VOC standards in this rule.

4.2 BIOLOGICAL RESOURCES

4.2.1 Federal

Endangered Species Act

The federal Endangered Species Act (ESA) of 1973, as amended, protects and conserves any species of plant or animal that is endangered or threatened with extinction, as well as the habitats where these species are found. “Take” of endangered species is prohibited under Section 9 of the ESA. “Take” means to “harass, harm, pursue, hunt, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.” Section 7 of the ESA requires federal agencies to consult with the U.S. Fish and Wildlife Service (USFWS) on proposed federal actions that may affect any endangered, threatened, or proposed (for listing) species or critical habitat that may support the species. Section 4(a) of the ESA requires that critical habitat be designated by the USFWS “to the maximum extent prudent and determinable, at the time a species is determined to be endangered or threatened.” This provides guidance for planners/managers and biologists by indicating locations of suitable habitat and where preservation of a particular species has high priority. Section 10 of the ESA provides the regulatory mechanism for incidental take of a listed species by private interests and nonfederal government agencies during lawful activities. Habitat conservation plans for the impacted species must be developed in support of incidental take permits to minimize impacts to the species and formulate viable mitigation measures.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act of 1918 (MBTA) affirms and implements the United States’ commitment to four international conventions—with Canada, Japan, Mexico, and Russia—to protect shared migratory bird resources. The MBTA governs the take, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests. It prohibits the take, possession, import, export, transport, sale, purchase, barter, or offering of these items, except under a valid permit or as permitted in the implementing regulations. USFWS administers permits to take migratory birds in accordance with the MBTA.

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (Corps) acts under two statutory authorities: the Clean Water Act ([CWA] Section 404), which governs activities within waters of the United States, and the Rivers and Harbors Act (33 U.S.C., Sections 9 and 10), which governs operation and activities within navigable waters. The Corps has the primary federal oversight over waters of the United States, as prescribed under the CWA Section 404, and requires a permit for projects placing structures within or altering identified waters of the United States. The regulations enforced by the Corps including those by other federal agencies provide protections for wetlands to the maximum extent possible.

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4.2.2 State

California Endangered Species Act

California Fish and Game Code Section 2080

The California Endangered Species Act (CESA) generally parallels the main provisions of the ESA and is administered by the California Department of Fish and Wildlife (CDFW). Its intent is to restrict take and protect state-listed endangered and threatened species of fish, wildlife, and plants. Unlike its federal counterpart, CESA also applies the take prohibitions to species petitioned for listing (state candidates). At the discretion of the Fish and Game Commission, candidate species can be given temporary protection similar to listed threatened or endangered species. Unlike the ESA, CESA does not include listing provisions for invertebrate species. Under certain conditions, CESA has provisions for take through an Incidental Take Permit under Section 2081 or Memorandum of Understanding. In addition, some sensitive mammals and birds are protected by the state as Fully Protected Species. California Species of Special Concern are species designated as vulnerable to extinction due to declining population levels, limited ranges, and/or continuing threats. This list is primarily a working document for the CDFW's California Natural Diversity Data Base (CNDDB) project, which maintains a database of known and recorded occurrences of sensitive species. Informally listed species are not protected per se, but warrant consideration in the preparation of biological resources assessments. CESA is implemented through regulations in CCR Title 14, Sections 783 to 786.6.

California Fish and Game Code

California Fish and Game Code Section 1600

The Lake and Streambed Alteration Program requires that a project proponent notify the CDFW of any proposed alteration of streambeds, rivers, and lakes. The intent of the program is to protect habitats that are important to fish and wildlife. CDFW has regulatory authority over activities in streams and lakes that will:

- Substantially divert or obstruct the natural flow of any river, stream or lake.
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake.
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Notification is required by any person, business, state, or local government agency or public utility that proposes an activity pursuant to Sections 1600 et seq. of the Fish and Game Code.

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. Based on this notification and other information, CDFW will determine if a Lake and Streambed Alteration Agreement is required prior to construction. To minimize additional requirements pursuant to Sections 1600 et seq., the CEQA

4. Regulatory Framework

document should fully identify the potential impacts to streams or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the alteration agreement.

California Fish and Game Code Section 3503 and 3503.5

Fish and Game Code Section 3503 regulates the taking or destruction of bird nests and eggs. Under this section, “it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird,” except as otherwise provided by the Fish and Game Code or any regulation implementing the Fish and Game Code.

Fish and Game Code Section 3503.5 prohibits the take, possession, or destruction of any birds in the orders Falconiformes or Strigiformes (birds of prey) and the take, possession, or destruction of the nests or eggs of any such birds except as otherwise provided by the Fish and Game Code or any regulation implementing the Fish and Game Code.

Porter-Cologne Water Quality Act

Under the Porter-Cologne Water Quality Control Act, which was passed in California in 1969 and amended in 2013, the State Water Resources Control Board (SWRCB) has authority over state water rights and water quality policy. This act divided the state into nine regional basins, each under the jurisdiction of a Regional Water Quality Control Board (RWQCB) to oversee water quality on a day-to-day basis at the local and regional level. The RWQCBs have a number of water quality functions in their respective regions, and they regulate all pollutant or nuisance discharges that may affect surface water or groundwater. The project site is overseen by the San Diego RWQCB.

4.2.3 Local

Multiple Species Conservation Program/Multi-Habitat Planning Area

The Multiple Species Conservation Program (MSCP) is a County-wide environmental conservation program aimed at preserving San Diego’s unique native habitats and wildlife for future generations and is implemented by the MSCP Plan. The Plan’s boundaries extend over multiple jurisdictions and environments including regional watersheds and migratory wildlife corridors. The Plan also protects the region’s diverse native plant and animal species, including those that are threatened and endangered. The MSCP also provides provisions and regulations which accommodate future growth and streamline building regulations while protecting natural resources in the region.

City of San Diego MSCP Subarea Plan

To facilitate inter-jurisdictional coordination and consistency, the MSCP is implemented through subarea plans. The City of San Diego’s MSCP Subarea Plan which covered the entire City, was approved in March 1997. The MSCP Subarea Plan includes a process for the issuance of permits under the California Natural Communities Conservation Planning Act of 1991 and the federal and State Endangered Species Act. The MSCP Subarea Plan also provides guidance for simultaneous growth of local economies while protecting of sensitive species and to conserving regional biodiversity.

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Multi-Habitat Planning Area

Within the MSCP Subarea Plan area are Multi-Habitat Planning Areas (MHPAs) which will make up the bulk of the City's final MSCP Preserve at the end of the 50-year permit. The City's MHPAs allow "limited development permitted based on the development area allowance of the OR-1-2 zone [open space residential zone]". The MHPA boundaries can be adjusted given that the new boundaries enhance the biological value of the MHPA and must be approved by the applicable wildlife agencies and the City.

Changes to the MHPA boundaries may be made through Boundary Line Corrections or Boundary Line Adjustments. A Boundary Line Correction shifts already developed land out of the MHPA. A Boundary Line Adjustment adjusts the boundaries without the need to amend either the City's MSCP Subarea Plan or the MSCP Plan in cases where the new MHPA boundary results in an area of equivalent or higher biological value. The determination of the biological value of a proposed boundary change is made by the City in accordance with the MSCP Plan with the concurrence of the wildlife agencies. If the determination is that the adjustment will result in the same or higher biological value of the MHPA, no further action by the jurisdictions or wildlife agencies is required.

MHPA Land Use Adjacency Guidelines

The MHPA Land Use Adjacency Guidelines were developed to ensure that urban edge effects on adjacent MHPA lands are avoided or minimized pursuant to the requirements of the MSCP. The Land Use Adjacency Guidelines address drainage, toxics, lighting, noise, barriers, invasive species, brush management, and grading. Where applicable, such guidelines should be included in the requirements of a project's Mitigation Monitoring and Reporting program and/or applicable development permits.

Environmentally Sensitive Lands Regulations

The purpose of the Environmentally Sensitive Lands (ESL) Regulations is to, "protect, preserve and, where damaged, restore the ESL of San Diego and the viability of the species supported by those lands." The regulations are established to promote conservation of resources and natural character, retain biodiversity, encourage a sensitive form of development, interconnect habitat, reduce impacts from natural hazards, and maximize physical and visual public access to beaches in concurrence with development. Within the Coastal Overlay Zone where the project lies, both within and outside the MHPA, impacts to wetlands shall be avoided and only those uses identified in SDMC Section 143.0130(d) of the ESL shall be permitted which are limited to aquaculture, nature study projects or similar resource dependent uses, wetland restoration projects and incidental public service projects. Such impacts to wetlands shall occur only if they are unavoidable, the least environmentally-damaging feasible alternative, and adequate mitigation is provided. Deviations from the ESL Regulations within the Coastal Overlay Zone shall be approved only after the decision maker makes an economically viable use determination and findings pursuant to SDMC Section 126.0708(e).

City of San Diego Biology Guidelines

The City's Biology Guidelines (2012) aid in the implementation and interpretation of the ESL Regulations (SDMC Chapter 14, Article 3, Division 1) and the Open Space Residential (OR-1-2) Zone (SDMC Chapter

4. Regulatory Framework

13, Article 1, Division 2). Section III of the Biology Guidelines (Biological Impact Analysis and Mitigation Procedures) also serves as standards for the determination of impact and mitigation under CEQA and the California Coastal Act. The Biology Guidelines are the baseline biological standards for processing Neighborhood Development Permits, Site Development Permits, and Coastal Development Permits issued pursuant to ESL Regulations. Deviations from the ESL Regulations are outlined in SDMC Section 143.0150 et seq. If a proposed project does not comply with all development regulations in the ESL Regulations and a deviation is requested, the Planning Commission may approve, conditionally approve, or deny the proposed Site Development Permit in accordance with Process Four. The City's Biology Guidelines include a process and findings that must be made before a deviation from ESL Regulations can be approved. Deviations for projects within the Coastal Overlay Zone may be granted only if the decision maker makes findings for Coastal Development Permit Approval specified in SDMC Section 126.0708.

4.3 GEOLOGIC CONDITIONS

4.3.1 State

California Building Code

Current law states that every local agency enforcing building regulations, such as cities and counties, must adopt the provisions of the California Building Code (CBC) within 180 days of its publication. The publication date of the CBC is established by the California Building Standards Commission, and the code is in Title 24, Part 2 of the CCR. The most recent building standard adopted by the legislature and used throughout the state is the 2016 version of the CBC (effective January 1, 2017). Local jurisdictions can adopt more-restrictive amendments based on local geographic, topographic, or climatic conditions. The CBC provides minimum standards to protect property and public safety by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC has provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground shaking with specified probability of occurring at a site.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act (1972) was established to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The act delineates Earthquake Fault Zones along faults that are “sufficiently active”¹ and “well defined”² (California Geological Survey, 2007). The act also requires that cities and counties withhold development permits for sites in an earthquake fault zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Pursuant to this act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault.

¹ A fault is deemed “sufficiently active” if there is evidence of Holocene surface displacement (11,000 years ago to present day) along one or more of its segments or branches. Holocene surface displacement may be directly observable or inferred; it need not be present everywhere along a fault to qualify that fault for zoning.

² A fault is considered “well-defined” if its trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface.

4. Regulatory Framework

Seismic Hazard Mapping Act

The Seismic Hazard Mapping Act (SHMA) was adopted by the State in 1990 to protect the public from the effects of nonsurface fault rupture earthquake hazards, including strong ground shaking, liquefaction, seismically induced landslides, ground amplification, or other ground failure caused by earthquakes. The goal of the act is to minimize loss of life and property by identifying and mitigating seismic hazards. The California Geological Survey (CGS) is the primary agency responsible for the implementation of the SHMA. The CGS prepares maps identifying seismic hazard zones and provides them to local governments; which include areas susceptible to amplified shaking, liquefaction, earthquake-induced landslides, and other ground failures. SHMA requires responsible agencies to only approve projects within these zones following a site-specific investigation to determine if the hazard is present, and if so, the inclusion of appropriate mitigation(s). In addition, the SHMA requires real estate sellers and agents at the time of sale to disclose whether a property is within one of the designated seismic hazard zones.

4.3.2 Local

City of San Diego Seismic Safety Study

The City's Seismic Safety Study includes maps that indicate potential and established geological hazards throughout the City. These maps can be used to evaluate whether a proposed project site is in an identified area of geologic risk and to determine if further geological studying is required for development or a building permit. SDMC Section 145.1803 describes when a geotechnical investigation is required, and the City's Development Services Information Bulletin 515 describes the minimum submittal requirements for geotechnical reports for development permits, subdivision approvals, or grading permits.

City of San Diego Geotechnical Guidelines

The Geotechnical Guidelines deal with how geotechnical and geologic investigations are conducted and the various hazards and issues that should be addressed. Geologic hazards that may impact the project include ground shaking, liquefaction, lateral spreading, and seismic slope stability. In addition, the City may require fault studies if the project warrants.

4.4 GREENHOUSE GAS EMISSIONS

4.4.1 Federal

The EPA announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 US Supreme Court decision that GHG emissions fit within the CAA definition of air pollutants. The findings did not themselves impose any emission reduction requirements but allowed the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the U.S. Department of Transportation (U.S. DOT).

4. Regulatory Framework

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and SF₆—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the proposed project’s GHG emissions inventory because they constitute the majority of GHG emissions; per guidance from the South Coast Air Quality Management District (SCAQMD), they are the GHG emissions that should be evaluated as part of a project’s GHG emissions inventory.

US Mandatory Reporting Rule for GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MTCO₂e or more per year are required to submit an annual report.

Update to Corporate Average Fuel Economy Standards (2010/2012)

The current Corporate Average Fuel Economy standards (for model years 2011 to 2016) incorporate stricter fuel economy requirements promulgated by the federal government and California into one uniform standard. Additionally, automakers were required to cut GHG emissions in new vehicles by roughly 25 percent by 2016 (resulting in a fleet average of 35.5 miles per gallon by 2016). Rulemaking to adopt these new standards was completed in 2010. California agreed to allow automakers who show compliance with the national program to also be deemed in compliance with state requirements. The federal government issued new standards in 2012 for model years 2017 to 2025 that will require a fleet average of 54.5 miles per gallon in 2025. However, the EPA is reexamining the 2017–2025 emissions standards.

EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)

Pursuant to its authority under the CAA, the EPA has been developing regulations for new, large, stationary sources of emissions, such as power plants and refineries. Under former President Obama’s 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. However, the EPA is reviewing the Clean Power Plan under President Trump’s Energy Independence Executive Order.

4.4.2 State

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation’s first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as “CALGreen”) was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.³ The mandatory provisions of CALGreen became effective January 1, 2011 and were last updated in 2016. The 2016 Standards became effective on January 1, 2017.

³ The green building standards became mandatory in the 2010 edition of the code.

4. Regulatory Framework

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that aimed to reduce GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implemented the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model year 2017 through 2025 light-duty vehicles. In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025, new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

Executive Order S-03-05

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

Assembly Bill 32, the Global Warming Solutions Act (2006)

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in AB 32, the Global Warming Solutions Act. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The final Scoping Plan was adopted by CARB on December 11, 2008. The *2008 Scoping Plan* identified that GHG emissions in California are anticipated to be approximately 596 MMTCO_{2e} in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 MMTCO_{2e} for the state (CARB 2008a). In order to effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 MTCO_{2e} per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan was adopted at the May 22, 2014, board hearing. The update highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the original 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated Global Warming

4. Regulatory Framework

Potentials (GWPs) in the Fourth Assessment Report, and the 427 MMTCO_{2e} 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher at 431 MMTCO_{2e} (CARB 2014b).

As identified in the Update to the Scoping Plan, California is on track to meeting the goals of AB 32. However, the update also addresses the state's longer-term GHG goals within a post-2020 element. The post-2020 element provides a high-level view of a long-term strategy for meeting the 2050 GHG goals, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014b). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014b).

Executive Order B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaption strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and CH₄. Black carbon is the light-absorbing component of fine particulate matter (PM_{2.5}) produced during incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030, as specified. The bill also establishes targets for reducing organic waste in landfill. On March 14, 2017, CARB adopted the "Final Proposed Short-Lived Climate Pollutant Reduction Strategy," which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s, despite the tripling of diesel fuel use (CARB 2017b). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020.

4. Regulatory Framework

Executive Order S-01-07

On January 18, 2007, the state set a new low carbon fuel standard (LCFS) for transportation fuels sold within the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in carbon dioxide equivalent gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the Renewables Portfolio Standard (RPS) established under SB 1078 (Sher) and SB 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08 was signed in November 2008, which expanded the state's Renewable Energy Standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SBX1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

SB 350 was signed into law September 2015. SB 350 establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Executive Order B-16-2012

On March 23, 2012, the state identified that CARB, the California Energy Commission, the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate zero-emissions vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directs the number of zero-emission vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are zero-emission by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions from the transportation sector 80 percent below 1990 levels.

Senate Bill 375

SB 375, signed by California Governor Schwarzenegger on September 30, 2008, provides a planning process that coordinates land use planning, regional transportation plans, and funding priorities in order to help California meet GHG reduction goals established in AB 32 (discussed in detail in Section 5.4, *Greenhouse Gas*

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Emissions). SB 375 requires regional transportation plans, developed by metropolitan planning organizations (MPOs) to incorporate a “sustainable communities strategy” (SCS) in its regional transportation plan (RTP). The SCS is intended to demonstrate how the coordination of land use and transportation planning efforts may achieve GHG emissions reduction targets set by AB 32. If an SCS cannot achieve the GHG emissions target, the MPO is required to adopt an “alternative planning scenario” that will demonstrate what would need to be done to achieve the GHG emissions reduction target and to define the barriers to accomplishing the reduction.

4.4.3 Local

City of San Diego Climate Action Plan (CAP)

The City adopted a Climate Action Plan (CAP) in December 2015 (San Diego 2015). With the adoption of the CAP Consistency Checklist in July 2016, the City of San Diego’s CAP meets the criteria identified in CEQA Guidelines Section 15183.5 for streamlining of GHG emissions analyses. The CAP serves as the City’s communitywide GHG reduction strategy to achieve the state’s GHG reduction targets for year 2020 and 2030 and can be used to mitigate and streamline future project-level GHG impacts. The CAP sets a target of 15 percent reduction below baseline (2010) for 2020 and a target of 40 percent below baseline for year 2030. In addition, the CAP also establishes an interim year 2035 reduction target of 50 percent below baseline. The interim year 2035 reduction target is used as an indicator to determine progress of the City meeting the long-term 2050 reduction target of 80 percent below baseline. To achieve these reduction targets, the CAP identifies five strategies to reduce GHG emissions:

- Strategy 1: Energy & Water Efficient Buildings
- Strategy 2: Clean & Renewable Energy
- Strategy 3: Bicycling, Walking, Transit, & Land use
- Strategy 4: Zero Waste (Gas & Waste Management)
- Strategy 5: Climate Resiliency

For year 2020, it is projected that the GHG emissions reductions would be attributed to Strategies 3 and 4. For 2030 and 2035, Strategy 2 is projected to provide the largest emissions reduction (primarily from creation of a community choice aggregation program) followed by Strategies 3 and 4.

4.5 HYDROLOGY/WATER QUALITY

4.5.1 Federal

Clean Water Act

The Federal Water Pollution Act of 1972, more commonly known as the Clean Water Act (CWA), establishes regulations to control the discharge of pollutants into the waters of the United States and regulates water quality standards for surface waters. Under the CWA, the EPA is authorized to set wastewater standards and runs the National Pollutant Discharge Elimination System (NPDES) permit program. Under the NPDES

4. Regulatory Framework

program, permits are required for all new developments that generate discharges that go directly into Waters of the United States. The CWA requires wastewater treatment of all effluent before it is discharged into surface waters. Section 404 of the CWA regulates discharge of dredged or fill material into “waters of the United States.”⁴ Section 401(a)(1) of the CWA specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal permitting agency with a certification, issued by the state in which the discharge originates, that any such discharge will comply with the applicable provisions of the CWA. Permits requiring Section 401 certification include Corps Section 404 permits and NPDES permits issued by the EPA under Section 402 of the CWA.

National Pollutant Discharge Elimination System

The NPDES permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source storm water runoff. NPDES permits generally identify effluent and receiving water limits on allowable connections and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant.

National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate the Federal Emergency Management Agency (FEMA) to evaluate flood hazards. FEMA provides Flood Insurance Rate Maps (FIRMs) for local and regional planners to promote sound land use and floodplain development, identifying potential flood areas based on the current conditions. To delineate a FIRM, FEMA conducts engineering studies referred to as Flood Insurance Studies (FISs), and uses the information gathered in these studies to delineate Special Flood Hazard Areas (SFHAs) on FIRMs.

The Flood Disaster Protection Act requires owners of all structures in identified SFHAs to purchase and maintain flood insurance as a condition of receiving federal or federally-related financial assistance, such as mortgage loans from federally insured lending institutions. Community members within designated areas are able to participate in the National Flood Insurance Program (NFIP) afforded by FEMA. The NFIP is required to offer federally subsidized flood insurance to property owners in those communities that adopt and enforce floodplain management ordinances that meet the minimum criteria established by FEMA. The National Flood Insurance Reform Act of 1994 further strengthened the NFIP by providing a grant program

4 "Waters of the United States," as applied to the jurisdictional limits of the Corps under the Clean Water Act, includes all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the tide; all interstate waters, including interstate wetlands; and all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds whose use, degradation, or destruction could affect interstate or foreign commerce; water impoundments; tributaries of waters; territorial seas; and wetlands adjacent to waters. The terminology used by Section 404 of the Clean Water Act includes “navigable waters,” which is defined at Section 502(7) of the act as “waters of the United States, including the territorial seas.”

4. Regulatory Framework

for state and community flood mitigation projects. The act also established the Community Rating System CRS, which credits communities that implement measures to protect the natural and beneficial functions of their floodplains, as well as manage erosion hazards.

4.5.2 State

The Water Conservation Act of 2009

The Water Conservation Act of 2009, SB X7-7, requires all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita water use by 20 percent by 2020, with an interim goal of a 10 percent reduction in per capita water use by 2015. Effective in 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill were not eligible for state water grants or loans. The SB X7-7 requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified standards; it also requires that agricultural water suppliers prepare plans and implement efficient water management practices.

State Water Resources Control Board

On May 2, 2006, the State Water Resources Control Board (SWRCB) adopted a General Waste Discharge Requirement (Order No. 2006-0003) for all publicly owned sanitary sewer collection systems in California with more than one mile of sewer pipe. The order provides a consistent statewide approach to reducing sanitary sewer overflows by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm drainage system, and to develop a sanitary sewer master plan. The General Waste Discharge Requirement also requires that storm drain overflows be reported to the SWRCB using an online reporting system.

The SWRCB has delegated authority to nine Regional Water Quality Control Boards (RWQCBs) to enforce these requirements within their region. The San Diego RWQCB issues and enforces NPDES permits in San Diego. NPDES permits allow the RWQCB to regulate where and how the waste is disposed, including the discharge volume and effluent limits of the waste and the monitoring and reporting responsibilities of the discharger. The RWQCB is also charged with conducting inspections of permitted discharges and monitoring permit compliance.

Recycled Water Regulations (CCR Title 22)

The California Department of Public Health (CDPH) and the SWRCB have the primary responsibility for regulating the application and use of recycled water. Planning and implementing water-recycling projects entails numerous interactions with these regulatory agencies prior to project approval.

The CDPH establishes the statewide effluent bacteriological and treatment reliability standards for recycled water uses in 22 CCR Division 4 (Environmental Health), where the standards are established for each general type of use based on the potential for human contact with recycled water.

The SWRCB is charged with establishing and enforcing requirements for the application and use of recycled water. Permits are required from the SWRCB for a water-recycling operation. As part of the permit

4. Regulatory Framework

application process, applicants are required to demonstrate that the proposed recycled water operation will not exceed the ground and surface water quality objectives in the basin management plan, and that it is in compliance with Title 22 requirements.

Executive Order B-37-16 (Making Water Conversation a California Way of Life)

Executive Order B-37-16, signed by Governor Brown on May 9, 2016, established a new water use efficiency framework for California. The order aims to strengthen the state's drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting from urban water suppliers to the SWRCB, including conservation achieved and enforcement efforts in progress. In addition, the order outlines new urban water use targets – building on Senate Bill X7-7 as well as eliminating wasteful water practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans.

State Model Water Efficient Landscape Ordinance

To improve water savings in the landscaping sector, the California Department of Water Resources updated the Model Ordinance in accordance with Executive Order B-29-15. The Model Ordinance promotes efficient landscapes in new developments and retrofitted landscapes. The executive order calls for revising the Model Ordinance to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, on-site stormwater capture, and limits on the portion of landscapes that can be covered in turf. It also requires reporting on the implementation and enforcement of local ordinances.

New development projects with landscape areas of 500 square feet or more are subject to the ordinance; the previous threshold ranged from 2,500 square feet to 5,000 square feet. The ordinance applies to residential, commercial, industrial, and institutional projects that require a permit, plan check, or design review.

Local agencies had to adopt the ordinance or adopt their own, equally effective ordinance. Local agencies working together could develop a regional ordinance, but if any local agency did not take action on a water efficient landscape ordinance by the specified date, the state's ordinance became effective by default.

4.5.3 Local

2013 San Diego County Integrated Regional Water Management Plan

The Integrated Regional Water Management Plan establishes goals for improving the reliability of local water supplies and protecting and enhancing water quality and natural resources in San Diego County's 11 watersheds. The Plan provides a mechanism to coordinate and refine existing planning efforts with a comprehensive and regional context, identify specific regional and watershed-based priorities for implementation projects, and provide funding support for the plans, programs, and projects of existing agencies and stakeholders. The Plan was formally adopted by the San Diego County Water Authority Board of Directors on September 26, 2013; by the City of San Diego City Council on October 8, 2013; and by the County of San Diego Board of Supervisors on October 9, 2013.

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San Diego Regional Water Quality Control Board

Order No. R9-2013-0001, as amended by Order No. R9-2015-0001 and Order No. R9-2015-0100, NPDES Permit No. CAS0109266

The San Diego RWQCB issued this order to the co-permittees of the board, including the 18 cities within San Diego County, the Port of San Diego, and the San Diego Regional Airport Authority. The order requires that each jurisdiction within the San Diego Region prepare Jurisdictional Runoff Management Plans which address water quality impacts and control for new construction activities and existing development.

Water Quality Control Plan for the San Diego Basin

The San Diego Basin is comprised of 11 Hydrologic Units (HU), 54 Hydrologic Areas, and 147 Hydrologic Subareas (HSA) that extend from Laguna Beach to the Mexican border. The San Diego RWQCB prepared the San Diego Basin Plan, which defines existing and potential beneficial uses and water quality objectives for coastal waters, groundwater, surface waters, imported surface waters, and reclaimed waters in the basin. Water quality objectives seek to protect the most sensitive of the beneficial uses designated for a specific water body. The San Diego Basin is also comprised of 10 Watershed Management Areas (WMAs).

City of San Diego Urban Water Management Plan 2015

In compliance with the Urban Water Management Planning Act, the City's Public Utilities Department adopted its 2015 Urban Water Management Plan in June 2016. The Plan evaluates if the City can meet the water demands of its customers over a 25-year planning horizon. The analysis of projected water supply and demand addresses normal, single-dry, and multiple-dry year conditions.

City of San Diego Water Facility Design Guidelines

The City's Water Facility Design Guidelines identify general planning, predesign, and design details and approaches to be used for water infrastructure. The guidelines provide uniformity in key concepts, equipment types, and construction materials on facilities. These design guidelines assist in providing professionally sound, efficient, uniform, and workable facilities; whether pipelines, pressure control facilities, pumping stations, or storage facilities.

City of San Diego Jurisdictional Runoff Management Program

The City's Jurisdictional Runoff Management Program (JRMP) was updated in December 2016 to comply with the most recent Municipal Separate Storm Sewer System (MS4) Permit. The JRMP discusses the City's approach to improving water quality in its rivers, bays, lakes, and ocean by reducing discharge volumes and pollutants into the MS4 Permit.

Watershed Asset Management Plan

The City's Storm Water Division completed a watershed asset management plan (WAMP) in 2013. It covers each of the six watershed management areas located at least partially within the City, including the Mission Bay Watershed area. The WAMP identifies and prioritizes potential water quality and flood risk management

4. Regulatory Framework

challenges, evaluates opportunities for integrating water quality and flood risk management into City projects, and identifies operations and maintenance activities within the watershed. The WAMP will provide information that will be used to develop Water Quality Improvement Plans (WQIPs) as required under the Regional MS4 Permit.

Water Quality Improvement Plans

The MS4 Permit requires development of Water Quality Improvement Plans (WQIPs) that pursue the CWA's objectives to protect, preserve, enhance, and restore the water quality of waters of the state. The WQIP guides the Co-permittees' individual JRMPs to improve water quality from MS4 discharges into receiving waters. These programs also identify the highest priority water quality conditions to address within the respective watersheds within each jurisdiction's JRMP.

City of San Diego Storm Water Management and Discharge Control Ordinance

An updated City Storm Water Management and Discharge Control Ordinance (SDMC §§ 43.0301 et seq.) was adopted on August 15, 2015, to comply with the 2013 MS4 Permit provisions. The amendments to the ordinance include updates to the list of non-storm water discharges (including conditions for the discharges) allowed into the City's storm drain system. Each of the discharges described in the ordinance require implementation activities to prevent pollution from leaving a property and entering the storm drain system.

Storm Water Standards Manual

In response to satisfying NPDES and MS4 Permit requirements, the City's Storm Water Standards Manual contains information for project applicants to comply with the storm water quality requirements for construction, development, and operation in the City. The manual is intended to be used by private and public project developers, representatives responsible for the preparation of storm water quality management plans, and City staff that would review these plans. The City's Storm Water Standards Manual was updated in 2016 to comply with the Regional Best Management Practices Design Manual.

Hydromodification

Hydromodification⁵ Management Requirements follow the City's Storm Water Standards Manual. If a project does not qualify for any of the possible exemptions listed in the regulations, the project will be required to implement hydromodification controls per the City's Storm Water Standards Manual. Both storm water pollutant control and flow control for hydromodification management can be achieved within the same structural best management practices (BMPs) or by a series of structural BMPs, however projects will need to demonstrate that pollutant and discharge standards are met under both circumstances.

⁵ Hydromodification, as defined by the San Diego Regional Water Quality Control Board, is the change in the natural hydrologic processes and runoff characteristics (i.e. interception, infiltration, overland flow, interflow and groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and changes in sediment transport.

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4.6 LAND USE

4.6.1 Federal

Federal Aviation Regulations

The Code of Federal Regulations ([CFR] Title 14, Part 77) contains regulations governing objects that may affect navigable airspace. The regulations cover noticing requirements; standards for determining obstructions to air navigation; aeronautical studies and determinations; and how to petition for discretionary review. These regulations apply to public and private use airports, heliports, military airports, joint-use (civil-military) airports, and seaplane bases.

4.6.2 State

California Coastal Act

The California Coastal Act of 1976 established a coastal zone boundary and mandated that all jurisdictions within that boundary prepare a LCP. The LCP brings the City's planning process into conformance with the 1976 Coastal Act. The entire Mission Bay Park, including Fiesta Island, is located within the Coastal Zone. Consequently, the Mission Bay Park Master Plan includes standards to protect and preserve the state's coastal resources pursuant to the adopted LCP.

SANDAG's San Diego Forward: The Regional Plan

SB 375 requires the MPOs to prepare a Sustainable Communities Strategy (SCS) in their Regional Transportation Plan (RTP). SANDAG adopted the San Diego Forward: The Regional Plan, which combines the region's Regional Comprehensive Plan and the RTP/SCS (SANDAG 2015). SANDAG's SCS shows how the region will meet the Scoping Plan targets for the region by using land in ways that make developments more compact, conserving open space, and investing in a transportation network that gives residents alternatives to driving alone. The proposed land uses pattern within SANDAG's SCS would accommodate 79 percent of all housing and 86 percent of all jobs within the Urban Area Transit Strategy Study Area where the greatest investments in public transit would be made. It is estimated that 82 percent of new housing in the region will be attached multifamily dwellings (SANDAG 2015). In addition to land use strategies, SANDAG's SCS relies on improvements to the transportation network (e.g., transit system, bicycle network), expansion of transportation demand measures, transportation system management measures, and pricing strategies. The SCS would result in a 15 percent reduction in emissions by 2020, and a 21 percent reduction by 2035—far more than what CARB mandates for the SANDAG region (SANDAG 2015).

Airport Land Use Compatibility Plan

The Airport Land Use Compatibility Plan (ALUCP) for San Diego International Airport (SDIA) is used by the San Diego County Airport Land Use Commission to promote airport land use compatibility in the area surrounding the airport. The ALUCP is required by state law and is intended to guide development of the airport and surrounding area while protecting public health, safety, and welfare. The ALUCP provides airport

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land use compatibility policies and standards related to four factors: noise, safety, airspace protection, and overflight.

The project area is located within SDIA's Airport Influence Area (AIA) Review Area 2, which is defined based on the combination of airspace protection and overflight boundaries. Commission review is required for land use plans and regulations within Review Area 2 that proposes increases in height limits and other projects that may present a hazard, as defined in the ALUCP.

City of San Diego General Plan

A comprehensive update of the City's General Plan was adopted in 2008, incorporating the City of Villages strategy, which in turn was developed and adopted as part of the Strategic Framework Element in 2002. The Strategic Framework Element represented the City's new approach for shaping how the City will grow while attempting to preserve the character of its communities and its most treasured natural resources and amenities. It was developed to provide the overall structure to guide the General Plan update and future community plan updates and amendments, as well as the implementation of an action plan.

The General Plan also references a series of community plans, which are intended to provide more area-specific guidance on development in the communities of San Diego. The General Plan includes ten elements to guide future development in the planning area: Land Use and Community Planning; Mobility; Urban Design; Economic Prosperity; Public Facilities, Services, and Safety; Recreation; Conservation; Noise; Historic Preservation; and Housing.

Land Use and Community Planning Element

The Land Use and Community Planning Element provides overarching policies to integrate the City of Villages strategy and guides the provision of public facilities while accommodating planned growth. Policies within this element, in combination with other elements, also ensure consistency with zoning regulations (e.g., the SDMC).

The Land Use and Community Planning Element is largely seen as the structure and framework for developing community plans. When appropriate, policies call for community plans to further identify appropriate land uses to meet the goals set by the General Plan and City of Villages strategy. The policies also indicate that mixed-use areas, villages, and community-specific policies are developed with public input and involvement.

Mobility Element

The Mobility Element (City 2008a) addresses the necessary components of a balanced and efficient transportation network, including regional cooperation, congestion management strategies, and transportation choices. In keeping with the City of Villages strategy, this element contains goals and policies to target growth into mixed-use villages that are pedestrian friendly and linked to the transit system. Tools or strategies such as pedestrian improvements and traffic calming measures are illustrated to help create a vision for smart growth and walkable communities. The Mobility Element also contains policies to encourage the development and use of alternative transportation modes such as walking, bicycling, and transit.

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Urban Design Element

The Urban Design Element includes goals and policies that integrate compatibility between land uses, design characteristics of various land use types, provide recommendations for creation of transit-focused and walkable village centers, provide for high-quality public spaces and civic architecture, enhance the visual quality of office and industrial development, and guide physical development toward a scale and consistency with the values of the City.

Public Facilities, Services, and Safety Element

The Public Facilities, Services, and Safety Element includes goals and policies regarding facilities and services that are publicly managed and have a direct influence on the location of land uses. These include Fire-Rescue, Police, Wastewater, Storm Water, Water Infrastructure, Waste Management, Libraries, Schools, Information Infrastructure, Disaster Preparedness, and Seismic Safety. The overall intent of the element is to ensure that current and future community planning and other specific land use planning studies provide the public facilities and services needed to serve the existing population and new growth.

Conservation Element

The Conservation Element contains policies to conserve natural resources such as water, air, minerals, and land, among others. One section of the Conservation Element addresses energy through policies that support increased renewable energy generation and energy conservation. It also directs the City to pursue funding sources for energy efficiency and renewable energy, ensure energy security during emergency events, and reduce energy use through water conservation and waste diversion programs.

Noise Element

The Noise Element includes goals and policies with regard to noise and land use compatibility, motor vehicle traffic noise, and trolley and train noise that are relevant to the community plan updates. They are intended to minimize excessive noise affects and improve the quality of life of people working and living in the City. The Noise Element articulates the City's goals and is implemented by the City's Noise Ordinance.

Recreation Element

The Recreation Element provides goals and polices designed to preserve, protect, acquire, develop, operate, maintain, and enhance public recreation opportunities and facilities throughout the City for all users. The City of San Diego provides three use categories of parks and recreation for residents and visitors: population-based, resource-based, and open space. These three categories of recreation, including land, facilities, and programming, constitute the City's municipal park and recreation system.

Mission Bay Park Master Plan

The Mission Bay Park Master Plan and LCP Land Use Plan serves as the guiding planning policy document for Mission Bay Park. Mission Bay Park, encompassing approximately 4,235 acres of equal parts land and water with 27 miles of shoreline, lies roughly north of Interstate 8 (I-8), south of Fiesta Bay and the area

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identified as De Anza in Mission Bay Park, and west of I-5. Mission Bay Park is an aquatic park - the largest of its kind with an annual attendance estimated at 15 million. The entire Mission Bay Park is located within the Coastal Zone. The Plan has the responsibility of including planning and development standards to protect and preserve the state's coastal resources pursuant to the adoption and certification of the City of San Diego's LCP. The Master Plan includes a Fiesta Island Concept Plan that is updated as part of this proposed project. The adopted Fiesta Island Concept Plan is shown on Figure 2-3 in Chapter 2, *Environmental Setting*.

San Diego River Park Master Plan

The San Diego River Park Master Plan (City of San Diego, 2013) is a policy document that provides recommendations and guidelines to be considered in concert with land use decisions along the San Diego River (River). The goal of the plan is to create a continuous river park linking all 17.5 miles of the river within the City, and ultimately from its headwaters near Julian to the Pacific Ocean. The Plan divides the San Diego River into six segments, or reaches, that are based on topographic characteristics and river conditions. The six reaches include the Estuary (Pacific Ocean to I-5), the Lower Valley (I-5 to I-15), the Confluence (I-15 to Friars Road Bridge), the Upper Valley (Friars Road Bridge to Mission Trails Regional Park), and the Plateau (east of Mission Trails to the City of Santee). The reach of the San Diego River within the proposed project area is the Lower Valley which extends from I-5 to I-15 and includes the SDCCU Stadium site north of the river.

City of San Diego Municipal Code

The San Diego Municipal Code (SDMC) is the set of laws adopted by the City, governing the issues that the City has regulatory authority over. This includes the adoption and enforcement of California's BSC, development standards for renewable energy facilities, and financing programs to support renewable energy and energy efficiency efforts. The SDMC also includes regulations on parking and traffic control, which affect vehicular fuel use in the community.

Land Development Code Regulations

SDMC Chapters 11 through 15 contain the City's Land Development Code (LDC). The LDC contains the City's planning, zoning, subdivision, and building regulations that regulate how land is to be developed and organized within the planning area. The LDC includes overlay and base zones that specify permitted land use, density, floor-area ratio (FAR), and other development requirements for given zoning classifications, as well as overlay zones and supplemental regulations that provide additional development requirements. The LDC also includes specific regulations for general development, environmentally sensitive lands, and historical resources.

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4.7 NOISE

4.7.1 State

California Building Code: Noise

Title 24, Part 2, Volume 1, Chapter 12, Section 1207.11.2, *Allowable Interior Noise Levels*, requires that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric is evaluated as either the day-night average sound level (L_{dn}) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan. CALGreen contains additional requirements for insulation that affect exterior-interior noise transmission for non-residential structures.

California Harbors and Navigation Code

California Harbors and Navigation Code Section 654.06 includes noise standards that limit the noise level of individual motorized recreational vessels. Noise levels generated by individual motorized recreational vessels shall not exceed the following, as measured at a distance of 50 feet:

- Engines manufactured on or after January 1, 1974, and before January 1, 1976: 86 dBA
- Engines manufactured on or after January 1, 1976, and before January 1, 1978: 84 dBA
- Engines manufactured on or after January 1, 1978: 82 dBA

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4.7.2 Local

City of San Diego General Plan Noise Element

The focus of the Noise Element is to minimize excessive noise effects and improve the quality of life of people working and living in the City. The Noise Element identifies goals and related policies with regard to noise and land use compatibility, motor vehicle traffic noise, and trolley and train noise that are relevant to the community plan updates. While the Noise Element articulates the City's goals, the enforcement mechanism to control noise is the City's Noise Abatement and Control Ordinance.

Noise Abatement and Control Ordinance

SDMC Section 59.5.0101 et seq., the Noise Abatement and Control Ordinance, regulates the sources of disturbing, excessive, or offensive noises within the City limits. Sound level limits are established for various types of land uses and are measured in 1-hour averages. The 1-hour, A-weighted equivalent sound level, $Leq(1)$, is the energy average of the A-weighted sound levels occurring during a 1-hour period. The Ordinance states that it is unlawful for any person to cause noise by any means to the extent that the 1-hour average sound level exceeds the applicable limit given for that land use. The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts. Table 4-2 shows the exterior noise limits specified in the City's Noise Control Ordinance.

Table 4-1 San Diego Property Line Noise Level Limits

Receiving Land Use Category	Noise Level [dBA]		
	7:00 A.M. to 7:00 P.M.	7:00 P.M. to 10:00 P.M.	10:00 P.M. to 7:00 A.M.
Single-family Residential	50	45	40
Multi-family Residential (up to a maximum density of 1 dwelling unit/2,000 square feet)	55	50	45
All Other Residential	60	55	50
Commercial	65	60	60
Industrial or Agricultural	75	75	75

Source: City of San Diego Municipal Code Section 59.5.0401

Construction noise is regulated by Section 59.5.0404 of the SDMC, which states:

- It shall be unlawful for any person, between the hours of 7:00 P.M. of any day and 7:00 A.M. of the following day, or on legal holidays as specified in Section 21.04 of the San Diego Municipal Code, with exception of Columbus Day and Washington's Birthday, or on Sundays, to erect, construct, demolish, excavate for, alter or repair any building or structure in such a manner as to create disturbing, excessive or offensive noise ...

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- ... it shall be unlawful for any person, including the City of San Diego, to conduct any construction activity so as to cause, at or beyond the property lines of any property zoned residential, an average sound level greater than 75 decibels during the 12-hour period from 7:00 A.M. to 7:00 P.M.

City of San Diego CEQA Significance Determination Thresholds

The City's CEQA Significance Thresholds for determining interior and exterior noise impacts from traffic-generated noise are presented in Table 4-2 below:

Table 4-2 Traffic Noise Significance Thresholds (dBA CNEL)

Structure or Proposed Use that would be impacted by Traffic Noise	Interior Space	Exterior Useable Space ¹	General Indication of Potential Significance
Single-family detached	45 dB	65 dB	Structure or outdoor useable area ² is < 50 feet from the center of the closest (outside) lane on a street with existing or future ADTs > 7500. ³
Multi-family, schools, libraries, hospitals, day care, hotels, motels, parks, convalescent homes.	Development Services Department (DSD) ensures 45 dB pursuant to Title 24.	65 dB	
Offices, Churches, Business, Professional Uses	n/a	70 dB	Structure or outdoor usable area is < 50 feet from the center of the closest lane on a street with existing or future ADTs > 20,000.
Commercial, Retail, Industrial, Outdoor Spectator Sports Uses	n/a	75 dB	Structure or outdoor usable area is < 50 feet from the center of the closest lane on a street with existing or future ADTs > 40,000.

¹ If a project is currently at or exceeds the significance thresholds for traffic noise described above and noise levels would result in less than a 3 dB increase, then the impact is not considered significant.

² Exterior usable areas do not include residential front yards or balconies, unless the areas such as balconies are part of the required usable open space calculation for multi-family units.

³ Traffic counts are available from: San Diego Regional Association of Governments (SANDAG) Regional Economic Development Information System (REDI): [http://cart.sandag.cog.ca.us/REDI/SANDAG Traffic Forecast Information Center](http://cart.sandag.cog.ca.us/REDI/SANDAG%20Traffic%20Forecast%20Information%20Center): <http://pele.sandag.org/trfic.html>

Airport Land Use Compatibility Plan

The San Diego County Regional Airport Authority prepared an ALUCP for SDIA. The project site is within SDIA's AIA Review Area 2. The AIA serves as the boundary for the ALUCP. In addition to the policies and criteria addressing land use compatibilities, including building heights and densities, the ALUCP contains policies and criteria concerning noise.

4.8 PUBLIC SERVICES AND FACILITIES

The City requires payment of Development Impact Fees (DIF) to collect a proportional fair-share cost of capital improvements needed to offset the impact of the development (SDMC Section 142.0640). DIF fees are based on community specific financing plans completed when community plans are updated. Financing

4. Regulatory Framework

plans were formerly known as Public Facilities Financing Plans (PFFP) and are now referred to as Impact Fee Studies (IFS).

The General Plan Public Facilities Element includes several policies that address financing of public facilities and specifies that IFS should be completed concurrent with preparation of Community Plan updates, should set community-level priorities for facility financing, and ensure new development pays its proportional fair-share of public facilities costs through payment of DIFs. Facility types that are eligible for DIF funding include transportation, storm drains, parks and recreation, fire-rescue, police, and libraries.

4.8.1 POLICE

As specified in the City General Plan, Public Facilities Element, Policy PF-E.2, the City goal is to maintain average response time goals as development and population growth occurs. Average response time guidelines are as follows:

- Priority E Calls (imminent threat to life) within seven minutes.
- Priority 1 Calls (serious crimes in progress) within 12 minutes.
- Priority 2 Calls (less serious crimes with no threat to life) within 30 minutes.
- Priority 3 Calls (minor crimes/requests that are not urgent) within 90 minutes.
- Priority 4 Calls (minor requests for police service) within 90 minutes.

4.8.2 PARKS

The General Plan provides standards for population-based parks and recreation facilities which include Recreation Centers and Aquatic Complexes. The standard for population-based parks is 2.8 useable acres per 1,000 residents, which can be achieved through a combination of neighborhood and community parks and park equivalencies. The standard for Recreation Center is a minimum of 17,000 square feet per recreation center or a population of 25,000. The standard for Aquatic Complex is one per 50,000 people or within approximately six miles.

4.8.3 FIRE

The General Plan's fire prevention measures include adopting safety codes and a proactive brush management program. Citywide fire service goals, policies and standards are located in the Public Facilities, Services, and Safety Element of the General Plan and the Fire-Rescue Services Department's Fire Service Standards of Response Coverage Deployment Study. Response time standards are provided in the General Plan Public Facilities, Services and Safety Element and summarized below:

- To treat medical patients and control small fires, the first-due unit should arrive within 7.5 minutes, 90 percent of the time from the receipt of the 911 call in fire dispatch. This equates to one-minute dispatch time, 1.5 minutes company turnout time and five minutes drive time in the most populated areas.

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- To provide an effective response force for serious emergencies, a multiple-unit response of at least 17 personnel should arrive within 10.5 minutes from the time of 911-call receipt in fire dispatch, 90 percent of the time.

4.9 TRANSPORTATION/CIRCULATION

4.9.1 State

Senate Bill 743 (Chapter 386, Statutes of 2013)

On September 27, 2013, Governor Brown signed SB 743, which creates a process to change the analysis of transportation impacts under the CEQA. On December 30, 2013, the California Office of Planning and Research (OPR) released a preliminary evaluation of alternative methods of transportation analysis. In August 2014, the OPR released a Preliminary Discussion Draft of Updates to CEQA Guidelines Implementing SB 743. The report recommends amendments to the CEQA Guidelines to replace the Level of Service (LOS), auto-delay-based standard with other metrics to measure transportation impacts; these other metrics may include, but are not limited to, vehicle miles traveled (VMT), vehicle miles traveled per capita, and automobile trips generated in order to align CEQA analyses more closely with other State goals, most notably the greenhouse gas emission reduction goals contained in the State's climate change law, AB 32.

The SB 743 legislation does not authorize OPR to set thresholds, but it does direct OPR to develop guidelines for determining the significance of transportation impacts for proposed projects. In November 2017, OPR transmitted a revised guidance document to the California Natural Resources Agency, and it is anticipated that the California Natural Resources Agency will adopt the proposed changes to the CEQA Guidelines in 2018. OPR has also prepared a Technical Advisory on Evaluating Transportation Impacts in CEQA. Statewide application of the CEQA Guidelines update that implements SB 743 will go into effect in 2020; thus no specific significance thresholds have yet been adopted for purposes of complying with SB 743. However, the OPR guidance does not preclude an agency from establishing their own significance thresholds prior to the adoption of the OPR amendment to the CEQA Guidelines and/or permitting additional analysis beyond the typical auto delay-based standards in the interim.

AB 1358 – California Complete Streets Act of 2008

Government Code Sections 65040.2 and 65302 (Complete Streets Act AB 1358) requires circulation elements as of January 1, 2011 to accommodate the transportation system from a multimodal perspective, including public transit, walking, and biking.

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4.9.2 Local

City of San Diego Municipal Code

SDMC Chapter 8, *Traffic and Vehicles*, regulates traffic control devices and signs on public roads; parking restrictions; restrictions on use of public roadways; parking regulations for vehicles transporting hazardous materials; and temporary (construction) traffic controls and road closures.

Regional Bicycle Plan

The San Diego Regional Bicycle Plan was developed by SANDAG and adopted in 2010. It proposes a set of infrastructure improvements, support facilities, and programs to help increase bicycling in San Diego County, which will help reduce fuel use by vehicles. Specific items in the Regional Bicycle Plan include a regional bicycle network over 500 miles long, educational safety programs, expanded bicycle parking, and improved bicycle signage.

City of San Diego Bicycle Master Plan

The 2013 update to the 2002 City Bicycle Master Plan presents a renewed vision closely aligned with the City's 2008 General Plan and includes a bicycle network with related bicycle projects, policies, and programs. The proposed bikeway network was developed to complement and connect with the proposed network in the 2002 BMP, the 2006 San Diego Downtown Community Plan, and the 2010 San Diego Regional Bicycle Plan. There are approximately 511 miles of existing bikeway facilities with the majority comprised of Bike Lanes. The recommended bicycle network includes recommendations for an additional 595 miles of bicycle facilities, for a future network totaling almost 1,090 miles.

The types of projects recommended in the Bicycle Master Plan include: Bikeways (Class I – Bike Path, Class II – Bike Lane, Class III – Bike Route, Bicycle Boulevards, and Cycle Tracks); Bike Parking such as bike racks and on-street bike corrals; end-of-trip facilities that may be identified as part of individual development project; maintenance activities such as road and sign repair; bicycle signal detection installation, signage and striping for warnings and wayfinding; and multi-modal connection improvements such as providing secure bicycle parking at transit stops.

Bicycle facilities in the project area that are identified in the Bicycle Master Plan include the Class I bike path around Mission Bay, a Class I facility that runs in the east-west direction along Sea World Drive, Class II bike lanes along Pacific Highway that extend east of Sea World Drive, Class I and II facilities along Friars Road, and the Class III bicycle route on E. Mission Bay Drive. A future Class II or III facility is identified linking E. Mission Bay Drive from Clairemont Drive to Sea World Drive.

Regional Transportation Improvement Plan

San Diego Association of Governments (SANDAG) is the metropolitan planning organization (MPO) and regional transportation planning agency for the San Diego Region. State and federal law requires MPOs to develop and adopt a regional transportation improvement program. This program is effective for five fiscal

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years and encompasses major transportation projects throughout the San Diego Region. The most recent version of the RTIP was adopted by the SANDAG Board of Directors on October 9, 2015.

SANDAG's San Diego Forward: The Regional Plan

See Section 4.6.2 for a discussion of SANDAG's San Diego Forward: The Regional Plan.

SANDAG Congestion Management Program

California State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare and regularly update a Congestion Management Program (CMP). The requirements within the State CMP were developed to monitor the performance of the transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG provided regular updates for the state CMP from 1991 through 2008. In October 2009, the San Diego region elected to be exempt from the State CMP and, since this decision, SANDAG has been abiding by the Federal Highway Administration's requirements to ensure the region's continued compliance with the federal congestion management process.

4.10 PUBLIC UTILITIES

4.10.1 State

Integrated Solid Waste Management Act of 1989

The Integrated Waste Management Act of 1989 (AB 939, Public Resources Code [PRC] §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses.

California Solid Waste Reuse and Recycling Access Act of 1991

The California Solid Waste Reuse and Recycling Access Act (AB 1327, PRC §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

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Solid Waste Disposal Measurement Act of 2008

Senate Bill (SB) 1016 (Solid Waste Disposal Measurement Act of 2008) builds on AB 939 compliance requirements by implementing a simplified measure of jurisdiction's performance by changing to a disposal-based indicator—the per capita disposal rate—that uses 1) a jurisdiction's population (or in some cases employment) and 2) its disposal, as reported by disposal facilities.

California Green Building Standards Code of 2013

Section 5.408 of the 2013 CALGreen (Title 24, CCR, Part 11) requires that at least 50 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

Assembly Bill 1826

In October of 2014 Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

4.10.2 Local

San Diego County Sanitation District

The San Diego County Sanitation District provides sewer service to over 35,000 county customers through 432 miles of pipeline, 8,200 manholes, ten lift stations/pressurized mains, and three wastewater treatment plants. The Sanitation District operates as the County's source for the collection, treatment, and disposal of wastewater in an environmentally safe and efficient manner.

County of San Diego Sewer System Management Plan

The County of San Diego Sewer System Management Plan was prepared in compliance with the requirements of the SWRCB, Order 2006-0003, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. The Sewer System Management Plan provides an overview of the sanitary sewer system, the regulations that serve as the impetus for the development of the Plan, and its purpose.

City of San Diego Standard Specifications for Public Works Construction

Public Works construction requirements are provided in the Standard Specifications for Public Works Construction ("Greenbook") and City of San Diego Supplement.

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City of San Diego Council Policy 400-13

This policy was adopted on January 22, 2002, and establishes policies and guidelines for safe access, maintenance, and repair of sewer infrastructure within and near sensitive environments. The main goal is to minimize effects on the environment by controlling access and establishing secure paths and procedures for construction vehicles.

City of San Diego Council Policy 400-14

This policy was adopted on January 22, 2002 and is used to establish a feasibility and planning outline to protect sensitive environments from sewer discharge. Recommended procedures include determining when to control and redistribute flows from environmentally sensitive areas, and subsequent property owner coordination to install a pump to effectively redirect sewage flows away from these lands.

Sewer Design Guide

The City of San Diego Sewer Design Guide includes engineering regulations in the design of the City's sewer systems. The design criteria address system components, including pump stations, gravity sewers, force mains, and related parts. The guide also includes recommendations for line and system capacity, alignment, estimating wastewater flow rates, corrosion control, and gravity sewers and force mains.

Zero Waste Plan

On July 13, 2015, the City Council approved a Zero Waste Plan. The Zero Waste Plan is a framework of potential sustainable diversion strategies for future action that would be implemented in incremental steps to achieve 75 percent diversion by 2020; 90 percent diversion by 2035, the goal currently proposed in the City's CAP; and zero waste by 2040.

City of San Diego Refuse and Recyclable Materials Storage Regulations

Effective on January 1, 2000, the purpose of these regulations (SDMC §§ 142.0801 et. seq.) is to provide permanent, adequate, and convenient space for the storage and collection of refuse and recyclable material. The intent of these regulations is to encourage recycling of solid waste to reduce the amount of waste material entering landfills and to meet the recycling goals established by the City Council and mandated by the State.

City of San Diego Construction and Demolition Debris Deposit Ordinance

On July 1, 2008, the Construction and Demolition (C&D) Debris Deposit Ordinance took effect (SDMC §§ 66.0601 et seq.). The ordinance requires that the majority of construction, demolition, and remodeling projects requiring building, combination, and demolition permits pay a refundable C&D Debris Recycling Deposit and divert their debris by recycling, reusing, or donating usable materials. The ordinance is designed to keep construction and demolition materials out of local landfills and ensure they get recycled.

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City of San Diego Recycling Ordinance

The Recycling Ordinance (SDMC §§ 66.0701 et seq.) established requirements for the recycling of recyclable materials generated from residential facilities, commercial facilities, City-owned buildings, and special events. These requirements are intended to increase the diversion of recyclable materials from landfill disposal, conserve the capacity and extend the useful life of the Miramar Landfill, reduce greenhouse gas emissions, and avoid the potential financial and other consequences to the City of failing to meet AB 939 requirements.

To ensure compliance with AB 341 (see above), the City amended the Recycling Ordinance in July 2012, lowering the exemption threshold from six cubic yards per week to four cubic yards per week. Thus, privately serviced businesses, commercial/institutional facilities, apartments, and condominiums generating four or more cubic yards of trash per week are required to recycle. The State’s mandatory recycling program is also applicable to multifamily properties with five or more units.

4.11 ENERGY

4.11.1 State

California Appliance Efficiency Regulations

California’s Appliance Efficiency Regulations, also known as Title 20, establish minimum energy efficiency standards for new appliances sold in California. It covers numerous appliances, including many not covered by the federal Energy Conservation Program for Consumer Products efforts. This includes computers, televisions, refrigerators, and air conditioners, among many others. The standards are developed and enforced by the California Energy Commission (CEC). Standards for individual equipment types are updated as needed.

4.12 VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

4.12.1 State

California Scenic Highways Program

Caltrans’ Scenic Highway Program (California Streets and Highways Code §§ 260–263) recognizes the visual resources and natural scenic beauty of California highways and adjacent corridors. Caltrans defines a scenic highway as any freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality. The Scenic Highway Program includes a list of officially designated scenic highways and highways that are eligible for such designation.

4.12.2 Local

Landscape Regulations

The purpose of these regulations (SDMC Sections 142.0401 et seq.) is to minimize the erosion of slopes and disturbed lands through revegetation; to conserve energy by the provision of shade trees over streets,

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sidewalks, parking areas, and other paving; to conserve water through low-water-using planting and irrigation design; to reduce the risk of fire through site design and the management of flammable vegetation ; and to improve the appearance of the built environment by increasing the quality and quantity of landscaping visible from public rights-of-way, private streets, and adjacent properties, with the emphasis on landscaping as viewed from public rights-of-way.

4.13 HISTORICAL AND TRIBAL CULTURAL RESOURCES

4.13.1 Federal

National Historic Preservation Act of 1966 and National Register of Historic Places

The National Historic Preservation Act of 1966 established the National Register of Historic Places (NRHP) as the official federal list of cultural resources that have been nominated by state offices for their significance at the local, state, or federal level. Listing in the NRHP provides recognition that a property is historically significant to the nation, the state, or the community. Properties listed (or potentially eligible for listing) in the NRHP must meet certain significance criteria and possess integrity of form, location, or setting. Barring exceptional circumstances, resources generally must be at least 50 years old to be considered for listing in the NRHP.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites on federal and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act is a federal law passed in 1990 that mandates museums and federal agencies to return certain Native American cultural items—such as human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants or culturally affiliated Indian tribes.

4.13.2 State

California Register of Historic Resources (Public Resources Code Section 5020 et seq)

Properties listed, or formally designated eligible for listing, in the NRHP are automatically listed in the California Register of Historic Resources (CRHR) as are State Historical Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

Native American Burials (Public Resources Code Section 5097 et seq.)

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if

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Native American skeletal remains are discovered during construction of a project; and designates the Native American Heritage Commission (NAHC) to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to a year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

Senate Bill 18

Native American involvement in the planning and development review process is addressed by several state laws. The most notable of the state laws is SB 18 which includes detailed requirements for local agencies to consult with identified California Native American Tribes early in the planning and/or development process.

Assembly Bill 52

On September 25, 2014, Governor Brown signed AB 52, which created the new category of “tribal cultural resources” that must be considered under CEQA. AB 52 requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a project if they have requested notice of projects proposed within that area. If the tribe requests consultation within 30 days upon receipt of the notice, the lead agency must consult with the tribe. AB 52 also provides a list of recommended mitigation measures to be included in the environmental document.

4.13.3 Local

Historical Resources Regulations

In January 2000, the City’s Historical Resources Regulations, part of the SDMC (Chapter 14, Article 3, Division 2: Purpose of Historical Resources Regulations or Sections 143.0201-143.0280), were adopted, providing a balance between sound historic preservation principles and the rights of private property owners. The Historical Resources Regulations have been developed to implement applicable local, state, and federal policies and mandates. Included in these are the City’s General Plan, CEQA, and Section 106 of the National Historic Preservation Act of 1966. Historical resources, in the context of the City’s Regulations, include site improvements, buildings, structures, historic districts, signs, features (including significant trees or other landscaping), places, place names, interior elements and fixtures designated in conjunction with a property, or other objects of historical, archaeological, scientific, educational, cultural, architectural, aesthetic, or traditional significance to the citizens of the City. These include structures, buildings, archaeological sites, objects, districts, or landscapes having physical evidence of human activities. These are usually over 45 years old, and they may have been altered or still be in use.

The Historical Resources Guidelines are incorporated in the City’s LDC Land Development Manual by reference. These Guidelines set up a Development Review Process to review projects in the City. This process is composed of two aspects: the implementation of the Historical Resources Regulations and the determination of impacts and mitigation under CEQA.

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4.14 PALEONTOLOGICAL RESOURCES

4.14.1 State

California Code of Regulations, Title 14 Division 3 Chapter 1 §§ 4307 and 4309

The CCR provides statewide mandates that protect paleontological resources from intentional destruction and desecration. Only with the issuance of a permit from the California Department of Parks and Recreation under Section 4309 may a paleontological resource be removed, treated, disturbed, or destroyed.

4.14.2 Local

The City of San Diego's guidelines for protecting paleontological resources are set forth in its CEQA Significance Determination Thresholds (2016). Impacts of a project to paleontological resources are considered potentially significant if the project would require over 1,000 cubic yards of excavation in a high resource potential geologic deposit/formation/rock unit; or, require over 2,000 cubic yards of excavation in a moderate resource potential geologic deposit/formation/rock unit.

4.15 HEALTH AND SAFETY

4.15.1 Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 is the principal federal law that regulates the generation, management, and transportation of waste. Hazardous waste management includes the treatment, storage, or disposal of hazardous waste. The RCRA gave the EPA the authority to control hazardous waste from “cradle to grave,” that is, from generation to transportation, treatment, storage, and disposal. The RCRA also set forth a framework for the management of nonhazardous wastes. The 1986 amendments to RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. It should be noted that RCRA focuses only on active and future facilities and does not address abandoned or historical sites.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

The CERCLA of 1980 was enacted to protect water, air, and land resources from the risks created by past chemical disposal practices such as abandoned and historical hazardous waste sites. Through the act, the EPA was given power to seek out the parties responsible for any release and assure their cooperation in the cleanup. This federal law created a tax on the chemical and petroleum industries that went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites, commonly known as the Superfund. CERCLA also authorized the revision of the National Contingency Plan, which provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The National Contingency Plan also established the National Priority List of sites, which are known as Superfund sites.

4. Regulatory Framework

Emergency Planning and Community Right to Know Act (EPCRA)

The Emergency Planning and Community Right to Know Act (EPCRA) was enacted by Congress as the national legislation on community safety. This law was designated to help local communities protect public health, safety, and the environment from chemical hazards. The primary purpose of EPCRA is to inform communities and citizens of chemical hazards in their areas by requiring businesses to report the locations and quantities of chemicals stored onsite to state and local agencies. These reports help communities prepare to respond to chemical spills and similar emergencies. Section 3131 of EPCRA requires manufacturers to report releases to the environment of more than 600 designated toxic chemicals, report offsite transfers of waste for treatment or disposal at separate facilities, create pollution prevention measures and activities, and participate in chemical recycling. These annual reports are submitted to the EPA and state agencies. The EPA maintains and publishes a database that contains information on toxic chemical releases and other waste management activities by certain industry groups and federal facilities. This online, publicly available, national digital database is called the Toxics Release Inventory and was expanded by the Pollution Prevention Act of 1990.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 was enacted by Congress to give the EPA the ability to track over 75,000 industrial chemicals currently produced or imported into the United States. The EPA repeatedly screens these chemicals and can require reporting or testing of any that may pose an environmental or human health hazard. It can ban the manufacture and import of those chemicals that pose an unreasonable risk. The EPA also has mechanisms in place to track the thousands of new chemicals that industry develops each year with either unknown or dangerous characteristics and it controls these chemicals as necessary to protect human health and the environment. The act supplements other federal statutes, including the CAA and the Toxics Release Inventory under EPCRA.

Accidental Release Prevention Program

CFR Title 40, Part 68 is the federal Accidental Release Prevention Program that lists regulated toxic and flammable substances and sets requirements concerning the prevention of accidental releases. It sets threshold quantities of regulated substances at which owners or operators of a stationary source are required to prepare risk management plans. These risk management plans must contain an assessment of the risks of accidental release, prevention measures, emergency response procedures, employee training, record keeping, and incident investigations.

Hazardous Materials Transportation Regulations

The Hazardous Materials Transportation Act and Hazardous Materials Transportation Uniform Safety Act provide regulatory and enforcement authority to the Secretary of Transportation to reduce risks to life and property from hazards associated with the transport of hazardous materials. These acts promote uniformity among different state and local highway routing regulations to develop criteria for the issuance of federal permits to motor carriers of hazardous materials, and to regulate the transport of radioactive materials. The

4. Regulatory Framework

CFR (Title 49, Parts 172, 173, 177, and 397) contains the rules for labeling, packing, shipping, and transporting hazardous materials, including medical waste.

4.15.2 State

California Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) is a department of the California Environmental Protection Agency (CalEPA), which regulates hazardous waste, cleans up existing contamination, and implements regulations to control and reduce hazardous waste produced in California primarily under the authority of RCRA and in accordance with the California Hazardous Waste Control Law (California Health and Safety Code [HSC], Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (CCR Title 22, Divisions 4 and 4.5). Permitting, inspection, compliance, and corrective action programs ensure that people who manage hazardous waste follow State and federal requirements and other laws that affect hazardous waste specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning.

Hazardous Materials Transportation

Section 31303 of the California Vehicle Code and the U.S. DOT regulations state that hazardous materials being directly transported from one location to another (“through-transport”) must use routes with the least overall travel time (e.g., major roadways/highways instead of local streets). The California Highway Patrol and California Department of Transportation (Caltrans) are the enforcement agencies for hazardous materials transportation regulations. Transporters of hazardous materials and waste are responsible for complying with all applicable packaging, labeling, and shipping regulations.

California Accidental Release Prevention Program

The California Accidental Release Prevention Program (CalARP) includes the Federal Accidental Release Prevention Program and with certain additions specific to California pursuant to Article 2, Chapter 6.95, of the HSC. The purpose of CalARP is to prevent the accidental releases of regulated substances. Businesses using regulated substances exceeding a threshold quantity are evaluated under this program to determine the potential for and impacts of accidental releases. Depending on the potential hazards, business owners may be required to develop and submit a risk management plan.

Business Plan Act

California’s Hazardous Materials Release Response Plans and Inventory Law, sometimes called the “Business Plan Act,” aims to minimize the potential for accidents involving hazardous materials and to facilitate an appropriate response to possible hazardous materials emergencies. The law requires businesses that use hazardous materials to provide inventories of those materials to designated emergency response agencies, to illustrate on a diagram where the materials are stored onsite, to prepare an emergency response plan, and to train employees to use the materials safely.

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Worker and Workplace Hazardous Materials Safety

Occupational safety standards exist in federal and state laws to minimize worker safety risks from both physical and chemical hazards in the workplace. The California Division of Occupational Safety and Health (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and ensuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA obligates many businesses to prepare Injury and Illness Prevention Plans and Chemical Hygiene Plans. The Hazard Communication Standard requires that workers be informed of the hazards associated with the materials they handle. For example, manufacturers are required to appropriately label containers, Material Safety Data Sheets are to be available in the workplace, and employers are required to properly train workers.

California Underground Storage Tank Regulations

The California Underground Storage Tank Regulations (CCR Title 23, Chapter 16) includes guidelines and standards to protect waters from hazardous substance discharges from underground storage tanks (USTs). The regulations establish construction requirements for new USTs; establish separate monitoring requirements for new and existing USTs; establish uniform requirements for unauthorized release reporting and for the repair, upgrade, and closure of USTs; and specify variance request procedures. It requires responsible parties to remediate any unauthorized releases from USTs.

Certified Unified Program

In 1993, Senate Bill (SB) 1082 set up a program to foster effective partnerships between local, state, and federal agencies through designated Certified Unified Program Agencies (CUPAs). The Certified Unified Program consolidated the administration, permit, inspection, and enforcement programs that regulate activities such as the storage, accidental release, and management of hazardous materials. The Certified Unified Program is implemented at the local level by government agencies certified by the Secretary of CalEPA. The CUPA for the proposed project site is the County of San Diego Department of Environmental Health.

California Building Code (California Code of Regulations, Title 24, Part 2)

Chapter 7A of the CBC, *Materials and Methods for Exterior Wildfire Exposure*, prescribes building materials and construction methods for new buildings in a Fire Hazard Severity Zone. Chapter 7A contains requirements for roofing, attic ventilation, exterior walls, exterior windows and glazing, exterior doors, decking, protection of underfloor, appendages, floor projections, and ancillary structures. The California Fire Code (CFC) comprises CCR Title 24 Part 9. CFC Chapter 49, *Requirements for Wildland-Urban Interface Fire Areas*, prescribes construction materials and methods in fire hazard severity zones; requirements that generally parallel CBC Chapter 7A. California PRC Sections 4291 et seq. requires that brush, flammable vegetation, or combustible growth within 100 feet of buildings be removed. Requirements regarding hazardous vegetation and fuel management are also contained in CFC Sections 4906 and 4907.

4. Regulatory Framework

4.15.3 Local

County of San Diego Department of Environmental Health

The Hazardous Materials Division of the County of San Diego Department of Environmental Health controls hazardous wastes, permitting, USTs, aboveground petroleum storage tanks, risk management plans, medical waste, chemical inventory, and hazardous business plans throughout the County. The Hazardous Materials Division's goal is to "protect human health and the environment by ensuring that hazardous materials, hazardous waste, medical waste, and underground storage tanks are properly managed" (County of San Diego 2017).

San Diego County Multi-Jurisdictional Hazard Mitigation Plan

The San Diego County Multi-Jurisdictional Hazard Mitigation Plan, originally adopted in 2004 and last revised in 2010, identifies existing and potential risks and includes recommendations to minimize damage from natural and manmade disasters countywide. The Plan serves the County as a tool for risk management, complies with applicable federal and state regulations, and serves to promote public awareness of hazards and risks in their community.

San Diego County Emergency Operations Plan

The San Diego County Emergency Operations Plan was approved by the County Board of Supervisors in September 2014. This Plan was developed in coordination with the County and partner agencies to efficiently respond to emergencies and disasters throughout the County.

County of San Diego Consolidated Fire Code

The San Diego region includes fire protection districts within its boundaries. The County Fire Code includes the Consolidated Fire Code (CCR Title 24 Part 9, adopted by reference) and provides regulations for the unincorporated areas within San Diego County. The purpose of the code is to protect public health and safety. The code includes requirements for the installation, alteration, and repair of existing and new fire protection systems. Provisions of the code also address site access requirements, water supply and distribution, fire protection systems, vegetation management, and construction.

City of San Diego Fire Code

The CFC is adopted, with certain amendments and exceptions, as SDMC Sections 55.0101 et seq.

5. Environmental Analysis

Chapter 5 analyzes the potential environmental impacts that may result from implementation of the proposed Mission Bay Park Master Plan – Fiesta Island Amendment and associated discretionary actions. The environmental issues addressed in this chapter include the following:

- Air Quality and Odor
- Biological Resources
- Geologic Conditions
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services and Facilities
- Transportation/Circulation
- Public Utilities
- Energy Use
- Visual Effects and Neighborhood Character

Organization of Environmental Analysis

Each issue analysis section is organized under major headings:

- Thresholds of Significance
- Environmental Impacts
- Mitigation Measures
- Level of Significance after Mitigation
- Cumulative Impacts

In addition, the *Executive Summary* includes a table that summarizes all impacts by environmental issue.

Terminology Used in This PEIR

The level of significance is identified for each impact in this PEIR. Although the criteria for determining significance is unique for each issue area, the environmental analysis applies a uniform classification of the impacts based on definitions consistent with CEQA and the CEQA Guidelines:

- **No impact.** The project would not change the environment.
- **Less than significant.** The project would not cause any substantial, adverse change in the environment.

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- **Less than significant with mitigation incorporated.** The project could result in a significant impact on the environment, however incorporation of mitigation reduces the impact to less than significant.
- **Significant and unavoidable.** The project would cause a substantial adverse effect on the environment, and no feasible mitigation measures are available to reduce the impact to a less than significant level.

5. Environmental Analysis

5.1 AIR QUALITY AND ODOR

This section evaluates the potential air quality and odor impacts that would result from implementation of the proposed project. This evaluation is based on the methodology recommended by the San Diego Air Pollution Control District (SDAPCD). The analysis in this section is based on buildout of the proposed project, as modeled generally using the California Emissions Estimator Model (CalEEMod) and trip generation provided by STC Traffic, Inc. (see Appendix 5.9-1). The criteria air pollutant emissions modeling for construction and operational phases are included in Appendix 5.1-1.

5.1.1 Existing Conditions

The existing regional environmental setting and regulatory framework are summarized in Chapters 2.0 and 4.0, respectively.

5.1.2 Significance Determination Thresholds

The City's CEQA Significance Determination Thresholds (2016) provides guidance to determine the potential significant impacts related to air quality and odor. Thresholds are modified from the City's CEQA Significance Determination Thresholds to reflect a programmatic analysis for the proposed project. Based on the City's thresholds, impacts to air quality and odor would be significant if the proposed project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- AQ-3 Expose sensitive receptors to substantial pollutant concentrations.
- AQ-4 Create objectionable odors affecting a substantial number of people.
- AQ-5 Exceed 100 pounds per day of Particulate Matter (PM)(dust).
- AQ-6 Result in a substantial alteration of air movement in the area of the project.

5.1.2.1 SAN DIEGO AIR POLLUTION CONTROL DISTRICT THRESHOLDS

Regional Significance Thresholds

CEQA allows for the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. The SDAPCD does not provide emissions thresholds for air pollutants emitted during construction and operational activities. However, the SDAPCD specifies Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources under SDAPCD Regulation II, Rule 20.2. These trigger levels are utilized by the City of San Diego in their CEQA Significance Determination Thresholds as one of the considerations when determining the potential

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AIR QUALITY AND ODOR

significance of air quality impacts for projects within the City. These thresholds are shown in Table 5.1-1, *City of San Diego Air Quality Significance Thresholds* (San Diego 2016).

Table 5.1-1 City of San Diego Air Quality Significance Thresholds

Air Pollutant	Threshold
Volatile Organic Gases (VOC) ¹	137 lbs/day
Nitrogen Oxides (NO _x)	250 lbs/day
Carbon Monoxide (CO)	550 lbs/day
Sulfur Oxides (SO _x)	250 lbs/day
Coarse Inhalable Particulate Matter (PM ₁₀)	100 lbs/day
Fine Inhalable Particulate Matter (PM _{2.5}) ²	55 lbs/day

Source: City of San Diego 2016.

Notes: Based on SDAPCD Regulation 2, Rule 20.2 (d) (2): Operational Emission Thresholds, and SDAPCD Regulation 20.3.

¹ Threshold for VOCs based on the threshold of significance for VOCs from the South Coast Air Quality Management District (SCAQMD) and the Monterey Bay Air Pollution Control District.

² Based on the SCAQMD PM_{2.5} threshold.

CO Hotspot Analysis

The significance of localized project impacts depends on whether the project would cause substantial concentrations of CO. In 1998, the SDAPCD was designated as in attainment for CO under both the CAAQS and NAAQS and was placed under a 10-year federal maintenance plan for CO as a result of its redesignation. Although the SDAB is currently an attainment/maintenance area for CO, exhaust emission can potentially cause a direct, localized “hotspot” impact at or near proposed development.

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017).

Health Risk Analysis

Whenever a project would require the use of chemical compounds that have been identified in SDAPCD Rule 1200; placed on CARB’s air toxics list pursuant to AB 1807, the Air Contaminant Identification and Control Act (1983); or placed on the EPA’s National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the SDAPCD. Table 5.1-2, *SDAPCD Toxic Air Contaminants Incremental Risk Thresholds*, lists SDAPCD’s TAC incremental risk thresholds for the operation of a project. For the purposes of evaluating the potential health risks associated with air toxics addressed in this assessment, a significant impact would occur if the worst-case incremental cancer risk exceeds the thresholds listed in Table 5.1-2.

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Table 5.1-2 SDAPCD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Individual Cancer Risk	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 1.0 excess cancer cases
Hazard Index (project increment)	≥ 1.0
Source: SDAPCD Rule 1210.	

5.1.3 Methodology

Modeling of criteria air pollutants was conducted using CalEEMod, version 2016.3.1, based on the following:

- **Transportation:** Average trip generation data was provided by STC Traffic, Inc. (see Appendix 5.9-1), and the CalEEMod default vehicle mix was used for mobile source emissions. For the purposes of this analysis, approximately 6,225 average daily weekday trips (ADT) and 7,550 weekend ADTs are assumed for the existing conditions while approximately 6,858 weekday ADTs and 8,564 weekend ADTs are assumed for the proposed project (both Option A and Option B). Additionally, mobile-source emissions for the proposed project utilizes year 2035 emission factors which are slightly more conservative than year 2038 emission factors.
- **Area Sources:** Area and stationary sources are based on the CalEEMod defaults for emissions generated from the use of consumer products and cleaning supplies. Additionally, emissions from wood-burning in the fire rings was based on CARB's Smoke Emissions Estimation prescribed emission factors (wood 3+ in) and fire ring usage information. Approximately 34 youth campsite fire rings and 43 open beach fire rings are assumed for the existing conditions. For the purposes of this analysis, it assumed that the proposed Options A and B and the Adopted Plan would result in a total of 138 fire rings at buildout consisting of the existing 77 fire rings, 30 new primitive campsite fire rings, and 31 new group day-use fire rings.
- **Energy:** For the purposes of this analysis, it is assumed that no components of the existing and proposed uses would consume natural gas.
- **Construction:** For the purposes of this analysis, it is assumed that development of the proposed project for both Options A and B would generally occur over seven development phases with a year 2038 buildout. Furthermore, it is assumed that each development phase would have the same timeframe of and that the various construction activities within each development phase would overlap. It is also assumed that any excess soil would be removed off-site and any needed fill material would be imported from an off-site location. Moreover, the calculated construction emissions are generally based on the anticipated construction activities for Phase 1, which is assumed to generate the worst-case scenario for daily emissions. Lastly, construction emissions also account for emissions generated from the operation of a barge utilized in dredging operations. Emission factors from Offroad2011 for a commercial harbor craft are used to calculate emissions associated with the barge.

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Construction assumptions are generally based on CalEEMod defaults such as construction equipment mix and worker, vendor, and haul trips. Haul trips are based on the anticipated roadway demolition debris and import and export earthwork amounts. Construction under Options A and B are assumed to generally require the same construction activities and phasing, thus, the calculated emissions are representative for both options. Table 5.1-3, *Construction Activities, Phasing, and Equipment*, shows the assumed construction activities and the start and end dates (normalized to a 20-year buildout) and equipment mix for each of the activities.

Table 5.1-3 Construction Activities, Phasing and Equipment

Activities ¹	Duration ¹	Equipment ²
Phase 1		
Demolition	2 months	1 concrete/industrial saw; 3 excavators; 2 rubber tired dozers; 1 water truck
Site Preparation	1 month	3 rubber tired dozers; 4 tractors/loaders/backhoes; 1 water truck
Grading	3 months	2 excavators; 1 grader; 1 rubber tired dozer; 2 scrapers; 2 tractors/loaders/backhoes; 1 water truck
Building Construction ²	2 years	3 forklifts; 1 generator set; 3 skid steer loaders
Asphalt Paving	2 months	2 pavers; 2 paving equipment; 2 rollers
Architectural Coating	2 years	1 air compressor
Dredging	70 days	1 deck barge
Phase 2 (GHG Analysis Only)		
Site Preparation	1 month	3 rubber tired dozers; 4 tractors/loaders/backhoes; 1 water truck
Grading	3 months	2 excavators; 1 grader; 1 rubber tired dozer; 2 scrapers; 2 tractors/loaders/backhoes; 1 water truck
Building Construction	2 months	1 crane; 3 forklifts; 1 generator set; 3 tractors/loaders/backhoes; 1 welder
Asphalt Paving	2 months	2 pavers; 2 paving equipment; 2 rollers
Architectural Coating	2 years	1 air compressor
Dredging	70 days	1 deck barge

n/a = not applicable

¹ Based on CalEEMod defaults and an assumed 20-year buildout duration for purposes of this analysis.

² Assumed construction equipment mix based on the general anticipated types of improvements, which primarily include open space improvements and trail building.

5.1.4 Environmental Impacts

The following impact analysis addresses the thresholds of significance identified above. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.1-1: Would construction emissions associated with the proposed project violate any air quality standard or contribute substantially to an existing or projected air quality violation? [Thresholds AQ-2 and AQ-5]

Impact Analysis: The following construction-related impacts analysis is applicable to both Options A and B of the proposed project.

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Construction activities under Options A and B would temporarily increase PM₁₀, PM_{2.5}, VOC, NO_x, SO_x, and CO regional emissions within the SDAB. The primary source of NO_x, CO, and SO_x emissions would be from the operation of construction equipment. The primary sources of PM₁₀ and PM_{2.5} emissions would be from activities that disturb the soil, such as grading and excavation, road construction, and building demolition and construction. The primary source of VOC emissions would from off-gas emissions associated with asphalt paving.

Construction activities associated with buildout of the proposed project for both Options A and B are anticipated to occur over an approximately 20-year period or longer. Buildout is anticipated to be comprised of seven general development phases, each with its own construction timeline and activities. However, there is no defined development schedule for these future projects at this time. For this analysis, the maximum daily emissions are based on Phase 1 and assumes several construction projects are occurring at any one time and overlap of all construction phases occur at the same time. An estimate of the maximum daily construction emissions, which are assumed to represent a worst-case day is provided in Table 5.1-4, *Maximum Daily Construction Emissions (Options A and B)*. The table shows the highest daily emissions that would be generated over the anticipated development period.

Table 5.1-4 Maximum Daily Construction Emissions (Options A and B)

Construction Phase(s)	Criteria Air Pollutants (pounds per day) ^{1, 2}					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Demolition	4	39	23	<1	2	2
Site Preparation	5	49	23	<1	10	7
Grading ¹	17	450	121	1	28	11
Building Construction	2	16	15	<1	2	1
Paving	2	18	15	<1	1	1
Architectural Coating	3	2	2	0	<1	<1
Dredging Operations ³	1	9	3	0	1	1
Worst-Case Day ⁴	33	583	203	1	44	22
City of San Diego Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	Yes	No	No	No	No

Source: CalEEMod Version 2016.3.1. Highest winter or summer emissions are reported.

¹ Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults.

² Includes implementation of fugitive dust control measures required by SDAPCD under Rule 55, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping.

³ Assumes use of one barge for a duration of 70 days. While it is assumed dredging operations would occur during Phase 2, associated emissions are incorporated into the totals for purposes of this analysis.

⁴ Based on Phase 1 and overlap of all the construction phases for year 2018.

As shown in the table, construction activities associated with improvements under the proposed project would not exceed 100 pounds per day for PM₁₀ and PM_{2.5} and would also be below the City's significance thresholds for those criteria air pollutants. Construction-related VOC, CO, and SO₂ emissions would also be under their respective significance thresholds. However, construction activities associated with the proposed project could potentially exceed the City's significance threshold for NO_x. Mobile source emissions from

¹ Modeling assumes a very conservative scenario that all tested soil would need to be removed.

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anticipated earthwork material haul trips would be a primary contributor in the generation of NO_x emissions. As NO_x is a precursor to the formation of both O₃, PM₁₀, and PM_{2.5}, project-related emissions of NO_x would contribute to the O₃, PM₁₀, and PM_{2.5} nonattainment designations of the SDAB. Therefore, project-related construction activities could result in potential significant regional air quality impacts.

Mitigation Measures

AQ-1 Construction contractors shall be required to use equipment that meets the EPA Tier 4 Interim emissions standards for off-road diesel-powered construction equipment with more than 50 horsepower, unless it can be demonstrated to the City that such equipment is not available. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine, as defined by CARB's regulations.

Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 4 Interim or higher emissions standards for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

AQ-2 Construction contractors shall limit the number of soil haul trucks to no more than 32 trucks per day (64 truck trips). Prior to construction, the project engineer shall ensure that all grading plans clearly show the requirement to limit the number of soil haul trucks.²

Level of Significance after Mitigation

As shown in Table 5.1-5, implementation of mitigation measures AQ-1 and AQ-2 would reduce criteria air pollutant emissions below the City's significance thresholds. Therefore, Impact 5.1-1 would be less than significant.

² Modeling is based on a conservative scenario that assumes Phase 1 would require approximately 357,000 cubic yards (CY) of soil export and 216,000 CY of soil import.

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Table 5.1-5 Maximum Daily Construction Emissions (Options A and B) – With Mitigation

Construction Phase(s) ⁵	Criteria Air Pollutants (pounds per day) ^{1, 2}					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Demolition	1	14	25	<1	<1	<1
Site Preparation	1	12	24	<	8	4
Grading ⁵	6	184	74	<1	13	5
Building Construction	1	12	16	<1	1	<1
Paving	1	10	18	<1	<1	<1
Architectural Coating	3	1	2	0	<1	<1
Dredging Operations ³	1	9	3	0	1	1
Worst-Case Day ⁴	13	243	161	1	23	10
City of San Diego Threshold	137	250	550	250	100	55
Exceeds Threshold?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1. Highest winter or summer emissions are reported.

¹ Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults.

² Includes implementation of fugitive dust control measures required by SDAPCD under Rule 55, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping.

³ Assumes use of 1 barge for a duration of 70 days. While it is assumed dredging operations would occur during Phase 2, associated emissions are incorporated into the totals for purposes of this analysis.

⁴ Based on Phase 1 and overlap of all the construction phases for year 2018.

⁵ Includes implementation of Mitigation Measure AQ-1 and AQ-2.

Impact 5.1-2: Would operations emissions associated with the proposed project violate any air quality standard or contribute substantially to an existing or projected air quality violation? [Thresholds AQ-2]

Impact Analysis: The following analysis evaluates impacts to regional air quality from operational activities under Options A and B of the proposed project. Buildout under Options A and B of the proposed project would result in direct and indirect criteria air pollutant emissions from transportation and area sources (e.g., aerosols, landscaping equipment, and campfires). Mobile-source criteria air pollutant emissions are based on the traffic analysis conducted by STC Traffic, Inc. The net change in emissions is based on the new emissions associated with the new land uses subtracted by the emissions associated with the existing land uses. The primary criteria air pollutant emissions from campfires would be VOC, CO, PM₁₀, and PM_{2.5}. For transportation sources, the primary criteria air pollutant emissions generated would be VOC, NO_x, CO, PM₁₀, and PM_{2.5}. Area sources would primarily generate VOC emissions.

Option A

The results of the CalEEMod modeling are shown in Table 5.1-6, *Maximum Daily Operation Phase Emissions – Option A*. As shown in the table, air emissions from buildout under Option A of the proposed project would not generate net criteria air pollutant emissions that exceed the City's significance thresholds. Therefore, impacts related to long-term operational air emissions under Option A of the proposed project would be less than significant.

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Table 5.1-6 Maximum Daily Operation Phase Emissions – Option A

Source	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Existing (Year 2035)						
Area	<1	<1	<1	0	<1	<1
Transportation ¹	6	29	70	<1	34	9
Fire Rings/Camp Fires ²	18	<1	254	3	27	23
Total	25	29	323	3	61	32
Project						
Area	1	<1	<1	0	<1	<1
Transportation ¹	7	33	79	<1	39	11
Fire Rings/Camp Fires ²	32	<1	454	5	48	40
Total	40	33	534	5	87	51
Net Change (Project – Existing)						
Net Change	15	4	211	2	26	19
City of San Diego Thresholds	137	250	550	250	100	55
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1. Based on highest winter or summer emissions using 2035 transportation emission rates. Totals may not equal 100 percent due to rounding.

¹ Due to CalEEMod modeling limitations, emissions are based on year 2035 emission factors which are generally slightly greater than year 2038 emission factors.

² Based on CARB Smoke Emission Estimator emission factors for wood with a diameter of three inches or larger.

Option B

The results of the CalEEMod modeling are shown in Table 5.1-7, *Maximum Daily Operation Phase Emissions – Option B*. As shown in the table, air emissions from buildout under Option B of the proposed project would generate slightly less emissions compared to Option A and would not generate net criteria air pollutant emissions that exceed the City's significance thresholds. The decrease in emissions under Option B is attributed to the slightly less vehicle trips that would be generated compared to Option A. Impacts related to long-term operational air emissions under Option B of the proposed project would be less than significant.

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Table 5.1-7 Maximum Daily Operation Phase Emissions – Option B

Source	Operation-Related Regional Emissions (pounds/day)					
	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Existing (Year 2035)						
Area	<1	<1	<1	0	<1	<1
Transportation ¹	6	29	70	<1	34	9
Fire Rings/Camp Fires ²	18	<1	254	3	27	23
Total	25	29	323	3	61	32
Project						
Area	1	<1	<1	0	<1	<1
Transportation ¹	7	31	75	<1	37	10
Fire Rings/Camp Fires ²	32	<1	454	5	48	40
Total	39	32	530	5	85	50
Net Change (Project – Existing)						
Net Change	14	3	207	2	24	18
City of San Diego Thresholds	137	250	550	250	100	55
Significant?	No	No	No	No	No	No

Source: CalEEMod Version 2016.3.1. Based on highest winter or summer emissions using 2035 transportation emission rates. Totals may not equal 100 percent due to rounding.

¹ Due to CalEEMod modeling limitations, emissions are based on year 2035 emission factors which are generally slightly greater than year 2038 emission factors.

² Based on CARB Smoke Emission Estimator emission factors for wood with a diameter of three inches or larger (CARB 2008).

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.1-3: Would implementation of the proposed project expose sensitive receptors to substantial pollutant concentrations? [Threshold AQ-3]

Impact Analysis: The following analysis evaluates potential localized impacts from criteria air pollutant and TACs emissions associated with the proposed project. This analysis is applicable to both Options A and B of the proposed project.

CO Hotspots

The proposed project would result in an increase of approximately 50 weekday peak hour trips and 80 weekend peak hour trips under Option A and 30 weekday peak hour trips and 48 weekend peak hour trips under Option B. The increase in net peak hour trips under both options is substantially less than the volumes needed to result in a CO hotspot. In addition, the potential for CO hotspots to be generated in the SDAB is extremely unlikely because of the improvements in vehicle emission rates and control efficiencies. Therefore, impacts associated with CO hotspots would be less than significant.

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Construction Health Risk

Neither the City nor the SDAPCD currently require health risk assessments (HRA) to be conducted for short-term emissions from construction equipment. Emissions from construction equipment primarily consist of diesel particulate matter (DPM). OEHHA has developed a cancer risk factor and non-cancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM.

The proposed project for both Options A and B would likely be implemented over a period of 20 years. In addition, it is anticipated that construction of the individual development phases under the proposed project would likely be spread out incrementally over this period, which would limit exposure to nearby receptors. For these reasons, it is anticipated that construction emissions would not pose a threat to nearby receptors. Therefore, construction-related health impacts would be less than significant.

Operational Health Risk

There are currently approximately 77 fire rings (34 youth campsite fire rings and 43 open beach fire rings) available for use on Fiesta Island.. For the purposes of this analysis, it is assumed that buildout of the proposed project under both Options A and B would increase the total number of fire rings to 138 fire rings (30 primitive campsite fire rings and 31 group day-use fire rings). To evaluate potential impacts to nearby receptors from the installation of additional fire rings on the project site, an operations HRA was conducted following SDAPCD and the OEHHA guidelines (see Appendix 5.1-2).

As stated, the nearest off-site residential receptors are approximately 1,000 feet to the north across Fiesta Bay. The nearest off-site worker receptors are approximately 700 feet to the east at the Hilton San Diego Resort & Spa. The HRA evaluated the burning of fuels (firewood) in the fire rings. Emissions from the combustion of firewood are based on an assumed use of two bundles of firewood (approximately 32 pounds total) per fire ring use. Dispersion modeling was prepared using AERMOD View, version 9.5 to determine pollutant concentrations and CARB's Hotspots Analysis and Reporting Program (HARP2), Risk Assessment Standalone Tool was used to calculate cancer risk and chronic and acute non-cancer health risk values. The results of the analysis are shown in Table 5.1-8, *Operational Health Risk Summary – Air Toxics*.

Table 5.1-8 Operational Health Risk Summary – Air Toxics

Receptor	Cancer Risk (per million)	Chronic Hazard Index	1-Hour Hazard Index
Residential Maximum Exposed Receptor (MER) ¹	0.690	0.002	0.010
Worker MER ¹	0.120	0.004	0.016
SDAPCD Threshold	10	1.0	0.3
Exceeds Threshold?	No	No	No

Sources: PlaceWorks 2017.

¹ The MER is the receptor exposed to the highest concentration of TACs and subject to the highest risks.

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As shown in the table, cancer risk for the off-site resident MER and off-site worker MER from fire ring emissions was calculated to be 0.69 in a million and 0.12 in a million, which is below the 10 in a million significance threshold. For non-carcinogenic effects, the chronic and acute hazard indices identified for each toxicological endpoint totaled less than one for both off-site residents and workers. Therefore, chronic and acute non-carcinogenic hazards are within acceptable limits.

Based on a comparison to the carcinogenic and non-carcinogenic thresholds established by OEHHA and SDAPCD, hazardous air emissions generated from the operation of the fire pits in beach areas and at campgrounds are not anticipated to pose an actual or potential endangerment to the surrounding sensitive receptors and operations-related health risk impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.1-4: Would implementation of the proposed project result in objectionable odors that would affect a substantial number of people? [Threshold AQ-4]

Impact Analysis: The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, and landfills among others. The improvements under the proposed project do not fit into these types of facilities as they would primarily consist of open space recreational uses, native habitat improvements, parking lots, and roadway/access improvements. Furthermore, the proposed project would be required to comply with SDAPCD Rule 51 which prohibits the discharge of air contaminants or other materials that would be a nuisance or annoyance to the public. Potential odors would also be controlled and minimize through compliance with the City's "Air Contaminant Regulations" under Section 142.0710 of the SDMC. Moreover, the large distances to nearby off-site receptors would help minimize any potential odors that are generated. Therefore, odor impacts from operational activities would be less than significant.

Construction activities associated with the proposed project could generate airborne odors from diesel exhaust emissions and VOCs emissions from architectural coatings and paving activities. However, odors generated from vehicles and/or equipment exhaust during construction would be temporary, localized, and would occur at levels that would not affect people. Therefore, odor impacts from construction activities would be less than significant.

Mitigation Measures

No mitigation measures are required.

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Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.1-5: Implementation of the proposed project would not result in a substantial alteration in air movement. [Threshold AQ-6]

Impact Analysis: Implementation of the proposed project would generally result in similar land uses as the current existing conditions. Fiesta Island would generally remain open space for recreational uses and conservation areas similar to the existing conditions on site. It is not anticipated that implementation of the proposed project would result in a substantial alteration in air movement compared to existing conditions; therefore, impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.1-6: Would the proposed project conflict with or obstruct implementation of the applicable air quality plan? [Threshold AQ-1]

Impact Analysis: The SDAPCD is directly responsible for reducing emissions from area, stationary, and mobile sources in the SDAB to achieve the NAAQS and the CAAQS. A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the San Diego RAQS, which is the air quality management plan prepared for the region. The RAQS relies on information from CARB and SANDAG in order to project future emissions and determine the strategies necessary for the reduction of stationary source emissions through regulatory controls. The CARB's mobile source emission projections and SANDAG's growth projections are based on population and vehicle trends, and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with the growth anticipated by the general plans of each city and the County would be consistent with the RAQS.

The proposed project under both Options A and B would result in improvements to the project site by adding more recreational features, improving the circulation network, and conserving more of the natural habitat. The types of subsequent projects contemplated by the proposed project would not result in population growth and would not cause an increase in currently established population projections. Furthermore, as discussed in Impact 5.1-2, the proposed project under both Options A and B would not generate long-term operational emissions of criteria air pollutants that would exceed the City's significance thresholds, which are indicators to determine whether a project has the potential to cumulatively contribute to the SDAB's nonattainment designations. Thus, because the proposed project is consistent with the growth anticipated by the City's General Plan and implementation of the proposed project would not result in a

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significant increase in operational emissions, the proposed project would be consistent with assumptions contained in the RAQS, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

5.1.5 Cumulative Impacts

The City has not established specific significance criteria for cumulative impacts; consequently, the methodology established by the County of San Diego was utilized to evaluate cumulative air quality impacts. Pursuant to the County of San Diego's *Guidelines for Determining Significance and Report Format and Content Requirements, Air Quality* (SDAPCD 2007), cumulative construction and operation-related air quality impacts could occur if a project has a significant direct impact on air quality with regard to emissions of PM₁₀, PM_{2.5}, NO_x, and/or VOCs. For the purposes of this analysis, a significant direct impact would occur if project-related short- and long-term emissions of PM₁₀, PM_{2.5}, NO_x, and/or VOC exceed the City's significance thresholds. Furthermore, for operation, a cumulative impact may also occur if a project is inconsistent with the RAQS or implementation of the project results in a CO hotspot.

Construction

Options A and B

The cumulative study area for air quality emissions is the SDAB. The SDAB is currently designated nonattainment for O₃, PM₁₀, and PM_{2.5}. As discussed under Impact 5.1-1, implementation of the proposed project could generate construction-related emissions that exceed the City's significance threshold for NO_x. Implementation of mitigation measures AQ-1 and AQ-2 would reduce NO_x emissions from construction equipment to below a level of significance and would not result in an air quality violation. Consequently, the proposed project's contribution to cumulative air quality impacts would be less than significant.

Operation

Options A and B

The cumulative study area for air quality emissions is the SDAB. As discussed under Impact 5.1-2, implementation of the proposed project would not result in long-term emissions that would exceed the City's significance thresholds. Furthermore, as discussed under Impacts 5.1-3 and 5.1-6, the proposed project would not expose sensitive receptors to substantial pollutant concentrations and would be consistent with SDAPCD's RAQS. The proposed project would not significantly contribute to the cumulative increases in any of the nonattainment criteria air pollutants, therefore, the project's contribution to cumulative air quality impacts would be less than significant.

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Odors

Options A and B

Implementation of the proposed project would not result in a significant cumulative odor impact because the proposed project would not develop land uses that are associated with the generation of substantial odors. Therefore, cumulative odor impacts would be less than significant.

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5.2 BIOLOGICAL RESOURCES

The analysis in this section is based in part on the following technical report:

- *Biological Technical Report for the Mission Bay Park Master Plan Update: Fiesta Island Amendment*, Alden Environmental, Inc., October 19, 2017

A complete copy of this study is included in Appendix 5.2-1 to this PEIR.

5.2.1 Existing Conditions

The existing environmental setting and regulatory framework are summarized in Chapters 2.0 and 4.0, respectively, of this PEIR.

5.2.2 Significance Determination Thresholds

The City's CEQA Significance Thresholds provides guidance to determine potential significant impacts related to biological resources. Thresholds are modified from the City's CEQA Significance Determination Thresholds to reflect a programmatic analysis of the proposed project. Based on the City's thresholds (2016), impacts to biological resources would be significant if the proposed project would result in:

- BIO-1 A substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the Multiple Species Conservation Program (MSCP) or other local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife (CDFW) or US Fish and Wildlife Service (USFWS);
- BIO-2 A substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats, as identified in the City's Biology Guidelines or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS;
- BIO-3 A substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means;
- BIO-4 Interfering substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the Multiple Species Conservation Program Plan, or impeding the use of native wildlife nursery sites;
- BIO-5 A conflict with the provisions of the City's Multiple Species Conservation Program (MSCP) Subarea Plan, an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan; or
- BIO-6 Introducing land use within an area adjacent to a Multi-Habitat Planning Area (MHPA) that would result in adverse edge effects.

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5.2.3 Environmental Impacts

The following impact analysis addresses the thresholds of significance identified above. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.2-1	Would the proposed project result in a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife (CDFW) or US Fish and Wildlife Service (USFWS)? [Threshold BIO-1]
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Impact Analysis:

Impacts to Sensitive Plant Species

The proposed project could impact sensitive plant species through removal during construction and grading, or through the creation or expansion of new habitat. Consistent with City policy, this PEIR assumes removal of sensitive species to be a significant impact, even if the impact would be temporary, such as part of a wetland creation/restoration project. Table 5.2-1 shows the plant species that may be impacted by the proposed project.

Table 5.2-1 Rare and Sensitive Plants Impacted by the Proposed Project

Name	Description	Project Impact
Nuttall's Lotus	Nuttall's lotus has a CNPS Rare Plant Rank of 1B.1 and is an MSCP Covered Species. Forty- four individuals of Nuttall's lotus could be removed with development under Options A and B, which represents approximately 2 percent of the estimated population in the project area. Most of this species occurs in areas proposed as habitat preserves. However, due to its Rare Plant Rank and because it is an MSCP Covered Species, impacts to Nuttall's lotus would be significant.	Significant
Coast Woolly-Heads	Coast woolly-heads has a CNPS Rare Plant Rank of 1B.2. Approximately 171 individuals of coast woolly-heads could be removed with development under Options A and B, which represents approximately 7 percent of the estimated population in the project area. Most of this species occurs in areas proposed as habitat preserve. Due to its Rare Plant Rank, impacts to coast woolly-heads would be significant.	Significant
Estuary Seablite	Estuary seablite has a CNPS Rare Plant Rank of 1B.2. Three individuals of estuary seablite could be removed during wetland creation/restoration activities under Options A and B. This is 100 percent of the population in the project area. Due to its Rare Plant Rank, impacts to estuary seablite would be significant.	Significant
Lewis' Evening Primrose	Lewis' evening primrose has a CNPS Rare Plant Rank of 3. Approximately 17,905 individuals of this species could be removed with development under Options A and B, which represents approximately 16 percent of the estimated population in the project area. Most of this species occurs in areas proposed as habitat preserves. Due to its lower CNPS Rare Plant Rank of 3, and the minor percentage of the population affected, impacts to Lewis' Evening Primrose would be less than significant.	Less Than Significant
Red Sand-Verbena	Red sand-verbena has a CNPS Rare Plant Rank of 4.2. Eight out of a total of 15 individuals (53 percent) of this species could be removed with development under Options A and B. Due to its low Rare Plant Rank, impacts to Red Sand-Verbena would be less than significant.	Less Than Significant

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Table 5.2-1 Rare and Sensitive Plants Impacted by the Proposed Project

Name	Description	Project Impact
Woolly Seablite	Woolly seablite has a CNPS Rare Plant Rank of 4.2. Development under Option A could impact approximately 4,983 individuals of this species, which is 89 percent of the population in the project area. Development under Option B could impact approximately 5,318 individuals of this species, which is 95 percent of the population in the project area. However, due to its low Rare Plant Rank, impacts to woolly seablite would be less than significant.	Less Than Significant

At a programmatic-level of analysis, it is not possible to know the full extent of the impact on the species listed in Table 5.2-1. The City's environmental review process will require a more detailed project-level analysis of biological impacts prior to the construction of any improvements on Fiesta Island. Mitigation Measure BIO-1 requires the preparation of a mitigation plan that will ensure future projects fully mitigate any impacts to sensitive species at ratios consistent with the City's Land Development Code (LDC). Tables 5.2-2 and 5.2-3 show the mitigation ratios in the City's Land Development Manual for project impacts to vegetation communities potentially impacted under Options A and B.

Table 5.2-2 Mitigation Potentially Required for Significant Impacts to Sensitive Vegetation Communities, Option A

Vegetation Community/Land Cover Type	Permanent Impact	Mitigation Ratio	Mitigation Required, Acres
Wetland Habitats			
Southern coastal salt marsh	0.55	4:1	2.20
Southern coastal salt marsh disturbed	--	4:1	--
Saltpan/mudflats	0.50	4:1	2.00
Beach	2.34	4:1	9.36
Open water	0.04	2:1	0.08
Eelgrass beds ¹	0.04	1.38:1	0.06
Subtotal	3.47	--	13.70
Upland Habitats			
Southern foredunes	0.3	2:1	0.6
Diegan coastal sage scrub ²	0.8	1.5:1	1.2
Disturbed land	205.9	--	--
Urban/developed/ornamental	17.6	--	--
Subtotal	224.6	--	1.8
Total	228.07	--	15.5

Source: Alden 2017.

¹ Mitigation ratio is per the California Eelgrass Mitigation Policy.

² Includes 0.2 acre of temporary impact to this upland habitat that would be permanently converted to a wetland habitat through creation/restoration.

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Table 5.2-3 Mitigation Potentially Required for Significant Impacts to Sensitive Vegetation Communities, Option B

Vegetation Community/Land Cover Type	Permanent Impact	Mitigation Ratio	Mitigation Required, Acres
Wetland Habitats			
Southern coastal salt marsh	0.55	4:1	2.20
Southern coastal salt marsh disturbed	--	4:1	--
Saltpan/mudflats	0.50	4:1	2.00
Beach	2.34	4:1	9.36
Open water	0.00	2:1	0.00
Eelgrass beds ¹	--	1.38:1	--
Subtotal	3.39	--	13.56
Upland Habitats			
Southern foredunes	0.3	2:1	0.6
Diegan coastal sage scrub ²	0.8	1.5:1	1.2
Disturbed land	172.6	--	--
Urban/developed/ornamental	17.5	--	--
Subtotal	191.2	--	1.8
Total	194.59	--	15.4

Source: Alden 2017.

¹ Mitigation ratio is per the California Eelgrass Mitigation Policy.

² Includes 0.2 acre of temporary impact to this upland habitat that would be permanently converted to a wetland habitat through creation/restoration.

The acreages shown in Tables 5.2-2 and 5.2-3 are estimates based on basic information for the proposed project. The acreages could change as more precise project details are available as part of the General Development Plans.

Impacts to Sensitive Animal Species

Invertebrate

The wandering skipper (*Panoquina errans*) is an MSCP Covered Species and has a moderate potential to occur on-site in salt marsh because its larval host plant saltgrass (*Distichlis spicata*) is present. Conditions for its conservation include controlling exotic weeds and invertebrate predators (where appropriate) as well as controlling access to salt marsh habitat. Should the wandering skipper be present, impacts to the species would be less than significant because the project would comply with the City's LDC Landscape Regulations (Chapter 14, Article 2, Division 4) which prohibits the use of invasive plant species in landscaping. Additionally, created/restored wetland habitat that includes salt marsh in the northern part of the island would be fenced off and accessible only to authorized individuals.

Shorebirds

No impacts are anticipated to occur to the two California least tern preserves, but wetland creation/habitat restoration efforts will be conducted adjacent to these breeding grounds, and the existing perimeter road will be reconfigured near the northern breeding ground. If these activities take place during the least tern

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breeding season of April 1 through September 15, indirect impacts due to noise, for example, may disrupt breeding activities. This disruption would be significant.

Other sensitive species that could breed within the coastal salt marsh habitats in the project area include light-footed clapper rail and Belding's savannah sparrow. Any construction or wetland creation/restoration activity that takes place within or adjacent to the coastal salt marsh habitats during the breeding seasons for these species could result in direct and indirect impacts to them. These impacts would be significant. The City's general avian breeding season is February 1 to September 15, which would cover the breeding seasons of both the clapper rail and Belding's savannah sparrow.

The long-billed curlew, black skimmer, elegant tern, reddish egret, and Canada goose have a moderate to high potential to forage in wetlands on-site and/or in the waters surrounding the project area in the winter and during migration. There is also a high potential for the western snowy plover to occur on-site on beaches, dunes, or saltpan/mudflats in the winter. It is not expected to breed on-site, however, as the last breeding attempt in Mission Bay Park was in 1995. Impacts to potential foraging habitat for these species would be limited because the majority of impacts on-site would be to previously disturbed land, and habitat preservation, creation, and restoration activities on-site as part of the proposed project would benefit these species. Potential impacts to these species would be less than significant.

The common loon, California brown pelican, double-crested cormorant, Caspian tern, and other nonbreeding, coastal species are not expected to be significantly impacted by the proposed project. If construction or grading activities take place during winter months when these species are foraging along the beaches and at the Tecolote Creek outlet, while the construction noise may temporarily disrupt their foraging activities, implementation of the wetland creation/restoration would permanently increase foraging habitat for these species in the project area. Also, Mitigation Measure BIO-1 requires compliance with the MHPA Land Use Adjacency Guidelines, which address construction noise. Overall, the proposed project would result in long-term beneficial impacts to these species.

Raptors

Northern harrier and white-tailed kite have been observed on Fiesta Island and may nest there. Direct or indirect impacts to these nesting raptors would be significant. Although not observed during previous biological surveys, the burrowing owl has been reported on Fiesta Island and has the potential to occur there year-round. Direct or indirect impacts to the burrowing owl or an active burrowing owl burrow would be significant.

Other sensitive raptors with the potential to occur include Cooper's hawk and American peregrine falcon, with a moderate potential to forage on-site, and osprey with a high potential to forage in waters surrounding the island. Suitable nesting habitat for these species is not present. Impacts to potential foraging habitat for these species would be limited, because the majority of impacts on-site would be to disturbed land, and habitat preservation, creation, and restoration activities on-site as part of the proposed project would benefit these species. Therefore, potential impacts to the Cooper's hawk, American peregrine falcon, and osprey would be less than significant.

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Upland Bird Species

Sensitive bird species that inhabit upland vegetation on Fiesta Island, such as California horned lark and loggerhead shrike, may be impacted if construction takes place during the breeding season for these species (considered February 1 to September 15 in the City). Direct and indirect impacts to nesting California horned larks and loggerhead shrikes would be significant.

Mammals

Impacts to the San Diego black-tailed jackrabbit would occur from habitat removal (the species was observed in disturbed salt marsh and disturbed land in 2006), and potential injury or mortality could occur during construction to very young jackrabbit litters that may be immobile. The impact to the black-tailed jackrabbit would be significant. Additional sensitive mammals are not likely to be found but could be detected during subsequent project review.

Sea Mammals

All marine mammals that occur within or have the potential to occur in the project area are afforded protection under the Marine Mammal Protection Act (MMPA) (16 U.S.C. § 1361 et. seq.). With limited exception, the MMPA makes it illegal to "take" a marine mammal without authorization granted by National Marine Fisheries Service (NMFS). "Take" is defined as harassing, hunting, capturing, or killing, or attempting to harass, hunt, capture, or kill any marine mammal. "Harassment" is defined as pursuit, torment, or annoyance which has the potential to injure a marine mammal in the wild or has the potential to disturb a marine mammal in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.

For marine mammals, the greatest concern for potential effects related to hydroacoustic impacts that may occur is when animals are exposed to sound pressure waves in the water generated from the project activities. NMFS is presently developing comprehensive guidance on sound characteristics that are likely to cause injury and behavioral disruption which would be considered "take" in the context of the MMPA and federal Endangered Species Act (ESA). Prior to release of formal guidance, NMFS has applied conservative (more protective than may be required) thresholds based on sound pressure levels from broad band sounds that may cause behavioral disturbance and injury. The thresholds are published by NMFS as Interim Sound Threshold Guidance and are presently applied in MMPA permits and ESA Section 7 consultations for listed marine mammals in order to evaluate the potential for sound effects to result in a taking of mammals (NMFS 2015). For in water noise generation, the applied acoustic thresholds for marine mammal harassment are as follows:

- Level A (potential for injury) for pinnipeds (seals and sealions) is 180 dBrms (root mean square)
- Level B (behavioral disruption) impulsive noise (e.g., impact driving) is 160 dBrms
- Level C (behavioral disruption) non-impulsive noise (e.g., vibratory driving) is 120 dBrms

A potentially significant impact to marine mammals would occur if animals are exposed to sound pressure levels exceeding one or more of the identified acoustic thresholds. Mitigation Measure BIO-5 would reduce

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this impact to less than significant through modification of construction techniques and through monitoring to ensure that construction does not affect marine mammals.

Green Sea Turtles

The green sea turtle (*Chelonia mydas*) is a federally listed threatened species that is rarely reported in Mission Bay. However, in very recent years, a number of turtles have been observed, and their presence is believed to be related to warm ocean temperatures in the eastern Pacific Ocean during the past five years. A potentially significant impact to green sea turtles would occur if the animals are exposed to excessive sound pressure levels. Mitigation measure BIO-5 would monitor for the presence of green sea turtles and pause construction until they leave the area.

Mitigation Measures

The following mitigation measures are organized by topic area to aid the reader in finding mitigation specific to habitat or species. Note that the mitigation measures often overlap and that all mitigation applies to any development on Fiesta Island.

- BIO-1 **Habitat/Sensitive Plant Species.** Prior to any construction or grading activities, the City shall prepare a mitigation plan in accordance with the requirements of the City's Biology Guidelines, MSCP Subarea Plan, and Land Use Adjacency Guidelines. The mitigation plan shall be reviewed and approved by the Development Services Department, MSCP staff, and appropriate regulatory agencies. At a minimum the mitigation plan shall address the following:
- Mitigation for impacts to Nuttalls lotus, coast woolly heads, and estuary seablite. Mitigation measures for these species should include avoidance, translocation/salvaging of impacted individuals, propagation, and/or incorporation of species into the restoration area(s). Specific methods will be determined during preparation of the habitat restoration plan by the project biologist.
 - Planting of seeds or translocation of impacted individual as mitigation for the impacts to Nuttall's lotus and coast woolly-heads.
 - Mitigation to ensure that the plant palette for proposed improvements is consistent with the MHPA.
 - Mitigation for impacts to southern foredunes and Diegan coastal sage scrub habitats shall be at the ratios defined in the City Biological Guidelines.
 - Mitigation for impacts to estuary seablite, including measures such as flagging and avoiding individuals during habitat creation/restoration construction activities or salvaging and transplanting these individuals to existing or restored, suitable wetland habitat in the study area.

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- Mitigation for eelgrass including an eelgrass survey would be conducted before and after construction of improvements related to dredging in Mission Bay. Temporary impacts associated with eelgrass planting shall be mitigated at the same ratio as permanent impacts.
- Any construction or dredging project disturbing the substrate in Mission Bay or the Flood Control Channel shall use silt curtains or similar devices around disturbance areas.
- Any wetland impact shall be mitigated at a minimum ratio of 1:1.

BIO-2

Avian Species. To avoid any direct impacts to raptors and/or any upland, native/migratory birds, removal of habitat that may support active nests in the proposed area of disturbance shall occur outside of the breeding season for these species (February 1 to September 15), unless a Qualified Biologist conducts a preconstruction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. Any preconstruction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The results of the preconstruction survey shall be submitted to the City for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines, MSCP Subarea Plan, Land Use Adjacency Guidelines, and applicable State and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that the take of birds or eggs or the disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's Mitigation Monitoring Coordination Section or Resident Engineer shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. The report or mitigation plan shall include the following provisions:

- If an active northern harrier nest is found in the MHPA, construction and grading activities shall remain at least 900 feet from the nest until the chicks have fledged and are independent of the nest.
- If an active Cooper's hawk nest is found in the MHPA, construction and grading activities shall remain at least 300 feet from the nest until the chicks have fledged and are independent of the nest.
- Prior to grading or construction, a preconstruction burrowing owl survey shall be conducted to determine the presence or absence of burrowing owls. If the burrowing owl is absent, then no mitigation is required. If present, the following mitigation shall be implemented.
 - Direct and indirect impacts to burrowing owls located within the MHPA shall be avoided.

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- Outside the MHPA, the following measure shall apply:
 - If the burrowing owl and its habitat can be protected in place on or adjacent to a construction site, then disturbance impacts shall be minimized through the use of buffer zones, visual screens, or other measures (CDFW 2012).
 - Occupied burrows—that is, those shows sign of burrowing owl occupancy within the last three years—shall be avoided during the breeding period from February 1 through August 31 (CDFW 2012).
 - Occupied burrows shall also be avoided during the nonbreeding season. Burrow exclusion is a technique of installing one-way doors in burrow openings during the nonbreeding season to temporarily exclude burrowing owl, or permanently exclude burrowing owl and close burrows after verifying burrows are empty by site monitoring and scoping. Eviction of burrowing owl during the nonbreeding season requires CDFW approval of a Burrowing Owl Exclusion Plan (CDFW 2012).
 - Mitigation for permanent impacts to nesting, occupied, and satellite burrows and/or burrowing owl habitat shall be required such that the habitat acreage and the number of burrows and burrowing owl impacted are replaced based on the burrowing owl life history information provided in “Staff Report on Burrowing Owl Mitigation” (CDFW 2012). A Burrowing Owl Mitigation Plan shall be prepared and submitted to the City and CDFW for each project phase that results in impacts to burrowing owls and/or their habitat.

BIO-3 **Least Tern.** In order to prevent impacts to California least tern and other sensitive nesting shorebirds (e.g., the light-footed clapper rail, Belding’s savannah sparrow, etc.), no clearing, grubbing or grading, or active wetland creation/restoration shall take place within or adjacent to the MHPA, California least tern preserves, and coastal salt marsh habitats during the City’s general avian breeding season of February 1 to September 15. Activities must comply with the City’s Biology Guidelines, MSCP Subarea Plan, Land Use Adjacency Guidelines, and applicable State and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.).

Additionally, the following requirements from the Mission Bay Natural Resource Management Plan and Mission Bay Master Plan for the California least tern shall be met:

1. In-water construction or dredging shall not be permitted in Mission Bay from April 1 through September 15, unless otherwise approved in writing by the City, CDFW, and USFWS. Any exception would have to meet the following criteria to preserve least tern nesting and foraging: use of silt curtains or similar devices around in-water construction activity; use of noise reduction or low noise equipment; and use of timing and location restrictions on activity to avoid interfering with breeding sites or major least tern foraging areas.

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2. Direct impacts to permanently designated least tern nesting sites shall not be permitted.
3. The following buffer zones for each least tern nesting site shall be free of structures with heights over six feet, including fencing, to avoid providing raptors perches from which to prey on least tern chicks.
 - North Subarea – 150 feet
 - Stony Point (Southwest Subarea) – 150 feet
4. There shall be a seasonal buffer (that extends the habitat during the mating and nesting seasons) and fencing between the habitat and the leash-free dog area at Stony Point in the Southwest Subarea.
5. Noise attenuation berms surrounding the Sand Management Facility to prevent any significant noise from reaching the MHPA and the North Island least tern preserve shall remain in accordance with the Mission Bay Natural Resource Management Plan and Mission Bay Master Plan.
6. If perimeter road construction or wetland creation/restoration construction activities take place during the California least tern breeding season, significant impacts may occur to least tern in the MHPA. To avoid significant noise impacts to breeding least terns, construction within 500 feet of the least tern preserves shall take place outside of the least tern breeding season, which ranges from April 1st to September 15th.

BIO-4

San Diego Black-Tailed Jackrabbit. Grading and other ground disturbing activity shall occur outside of the breeding season for the San Diego black-tailed jackrabbit (January – September), unless a Qualified Biologist conducts a preconstruction survey to determine the presence or absence of black-tailed jackrabbits on the proposed area of disturbance. Any preconstruction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The results of the preconstruction survey shall be submitted to the City for review and approval prior to initiating any construction activities. If jackrabbits are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines, MSCP Subarea Plan, Land Use Adjacency Guidelines, and applicable State and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that the disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's Mitigation Monitoring Coordination Section, or Resident Engineer, and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction. The mitigation plan required in BIO-1 shall also include mitigation for potential injury or mortality of individuals during construction activities, as well as mitigation for the loss of habitat.

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- BIO-5 **Marine Mammals and Sea Turtles.** Should pile driving be required as part of the proposed project, the following mitigation measures shall be followed, or similar measures as may be required by the National Marine Fisheries Service:
1. Noise dampening measures, such as the use of a nylon or wooden block, shall be employed between the impact hammer and piles to dampen underwater noise generated by hammer strikes.
 2. All impact pile driving activities shall incorporate a "soft start" approach whereby hammer strikes on each pile begin at low pressure and slowly increase to full hammer strength in order to drive fish away from the piles before the acoustics generated by pile driving approach levels that could result in animal injury. For any cessation of pile driving for greater than one hour, the soft start procedures shall be repeated to reinitiate behavioral relocation of mammals, turtles, or fish from the acoustic impact area. If a marine mammal or green sea turtle is observed in the area during impact pile driving, activities shall be halted until the animal leaves the vicinity beyond 500 feet from the work site.

Level of Significance after Mitigation

Implementation of Mitigation Measures BIO-1 through BIO-5 would reduce impacts associated with development under both Options A and B to a less than significant level.

Impact 5.2-2	Would the proposed project result in a substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the City's Biology Guidelines or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or USFWS? [Threshold BIO-2]
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Impact Analysis:

Impacts to Vegetation Communities/Land Cover Types

Impacts of project development on vegetation communities and land cover types under Options A and B are listed by acreage in Tables 5.2-4 and 5.5-5, respectively. The acreages shown in Tables 5.2-4 and 5.2-5 are estimates based on basic information for the proposed project. The acreages could change as more precise project details are available as part of the General Development Plans. Under Option A, total impacts would be approximately 273.16 acres, consisting of approximately 45.29 acres of temporary impacts and approximately 227.87 acres of permanent impacts. Under Option B, total impacts would be approximately 239.7 acres, consisting of approximately 45.31 acres of temporary impacts and approximately 194.39 acres of permanent impacts. Areas that would be impacted are shown on Figure 5.2-1 for Option A and Figure 5.2-2 for Option B.

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Table 5.2-4 Potential Impacts to Vegetation Communities/Land Cover Types, Option A

Vegetation Community/ Land Cover Type	Tier/ESHA	Impacts						TOTAL
		Permanent			Temporary			
		Outside MHPA	Inside MHPA	Total	Outside MHPA	Inside MHPA	Total	
Wetland Habitats								
Southern coastal salt marsh	NA/ESHA	0.55	--	0.55	0.60	0.05	0.65	1.20
Southern coastal salt marsh disturbed	NA/ESHA	--	--	--	--	--	--	--
Saltpan/Mudflats	NA/ESHA	0.50	--	0.50	1.98	1.05	3.03	3.53
Open water	NA/ESHA	0.04	--	0.04	9.31	0.89	10.20	10.24
Eelgrass beds	NA/ESHA	0.04	<0.01	0.04	9.31	0.89	10.20	10.24
Beach	NA/ESHA	2.07	0.27	2.34	6.84	0.47	7.31	9.65
Subtotal		3.20	0.27	3.47	28.04	3.35	31.39	34.86
Upland Habitats								
Southern foredunes	I/ESHA	0.3	--	0.3	--	--	--	0.3
Diegan coastal sage scrub	II/ESHA	0.6	--	0.6	0.2	--	0.2	0.8
Disturbed land	IV/NA	205.7	0.2	205.9	8.3	5.0	13.3	219.2
Urban/Developed/Ornamental	IV/NA	16.5	1.1	17.6	0.4	<0.1	0.4	18.0
Subtotal		223.1	1.3	224.4	8.9	5	13.9	238.3
Total		226.30	1.57	227.87	36.94	8.35	45.29	273.16

Source: Alden 2017.

Source: Alden 2017.

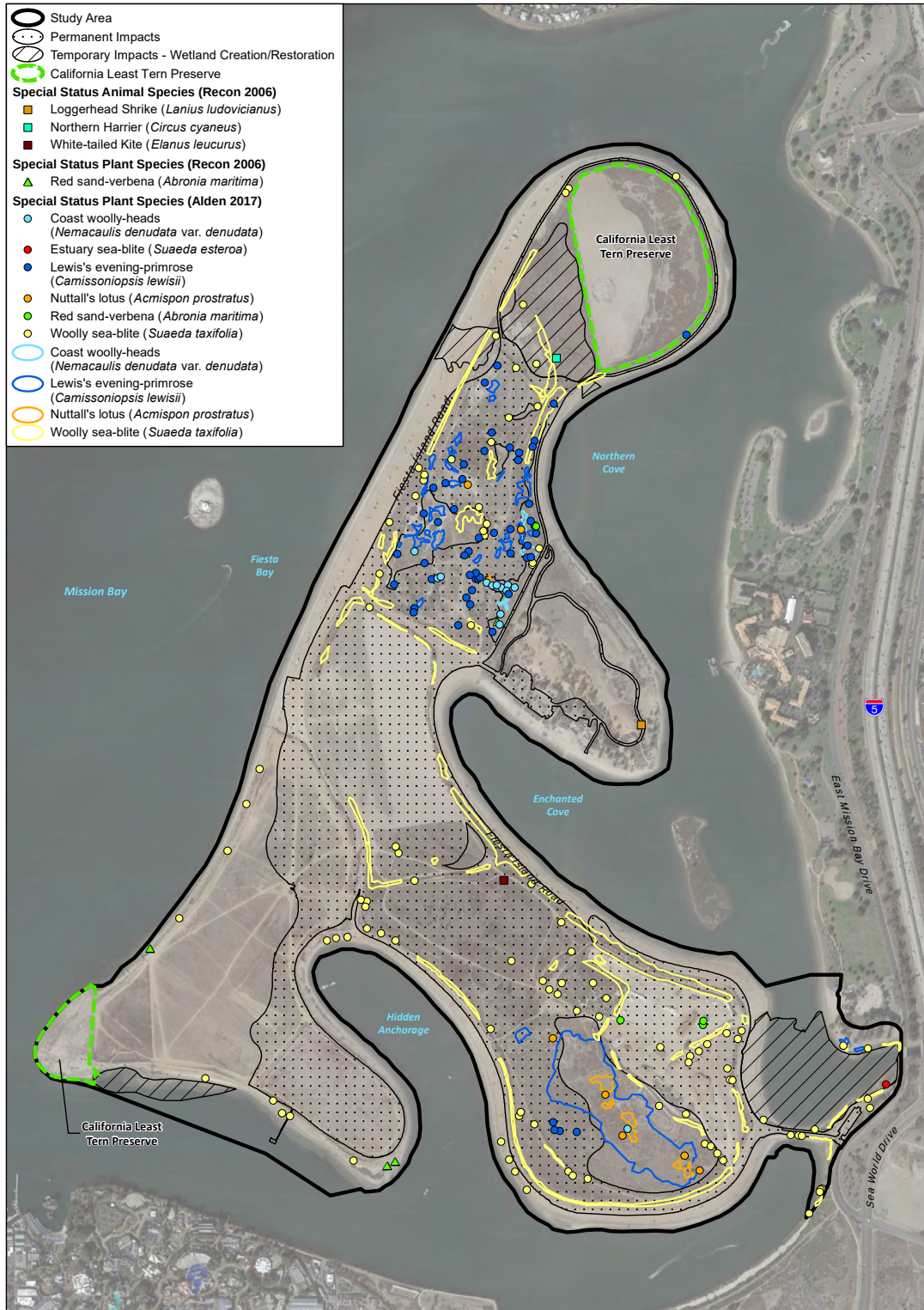
Table 5.2-5 Potential Impacts to Vegetation Communities/Land Cover Types, Option B

Vegetation Community/ Land Cover Type	Tier/ESHA	Impacts						TOTAL
		Permanent			Temporary			
		Outside MHPA	Inside MHPA	Total	Outside MHPA	Inside MHPA	Total	
Wetland Habitats								
Southern coastal salt marsh	NA/ESHA	0.55	--	0.55	0.60	0.05	0.65	1.20
Southern coastal salt marsh disturbed	NA/ESHA	--	--	--	--	--	--	--
Saltpan/Mudflats	NA/ESHA	0.50	--	0.50	1.98	1.05	3.03	3.53
Open water	NA/ESHA	--	--	--	9.32	0.89	10.21	10.21
Eelgrass beds	NA/ESHA	--	--	--	9.32	0.89	10.21	10.21
Beach	NA/ESHA	2.07	0.27	2.34	6.84	0.47	7.31	9.65
	Subtotal	3.12	0.27	3.39	28.06	3.35	31.41	34.8
Upland Habitats								
Southern foredunes	I/ESHA	0.3	--	0.3	--	--	--	0.3
Diegan coastal sage scrub	II/ESHA	0.6	--	0.6	0.2	--	0.2	0.8
Disturbed land	IV/NA	172.4	0.2	172.6	8.3	5.0	13.3	185.9
Urban/Developed/Ornamental	IV/NA	16.4	1.1	17.5	0.4	<0.1	0.4	17.9
	Subtotal	189.7	1.3	191	8.9	5	13.9	204.9
Total		192.82	1.57	194.39	36.96	8.35	45.31	239.7

Source: Alden 2017.

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Figure 5.2-1 Special Status Species/Impacts, Option A



Source: ESRI, SanGIS, Placeworks, Alden Environmental

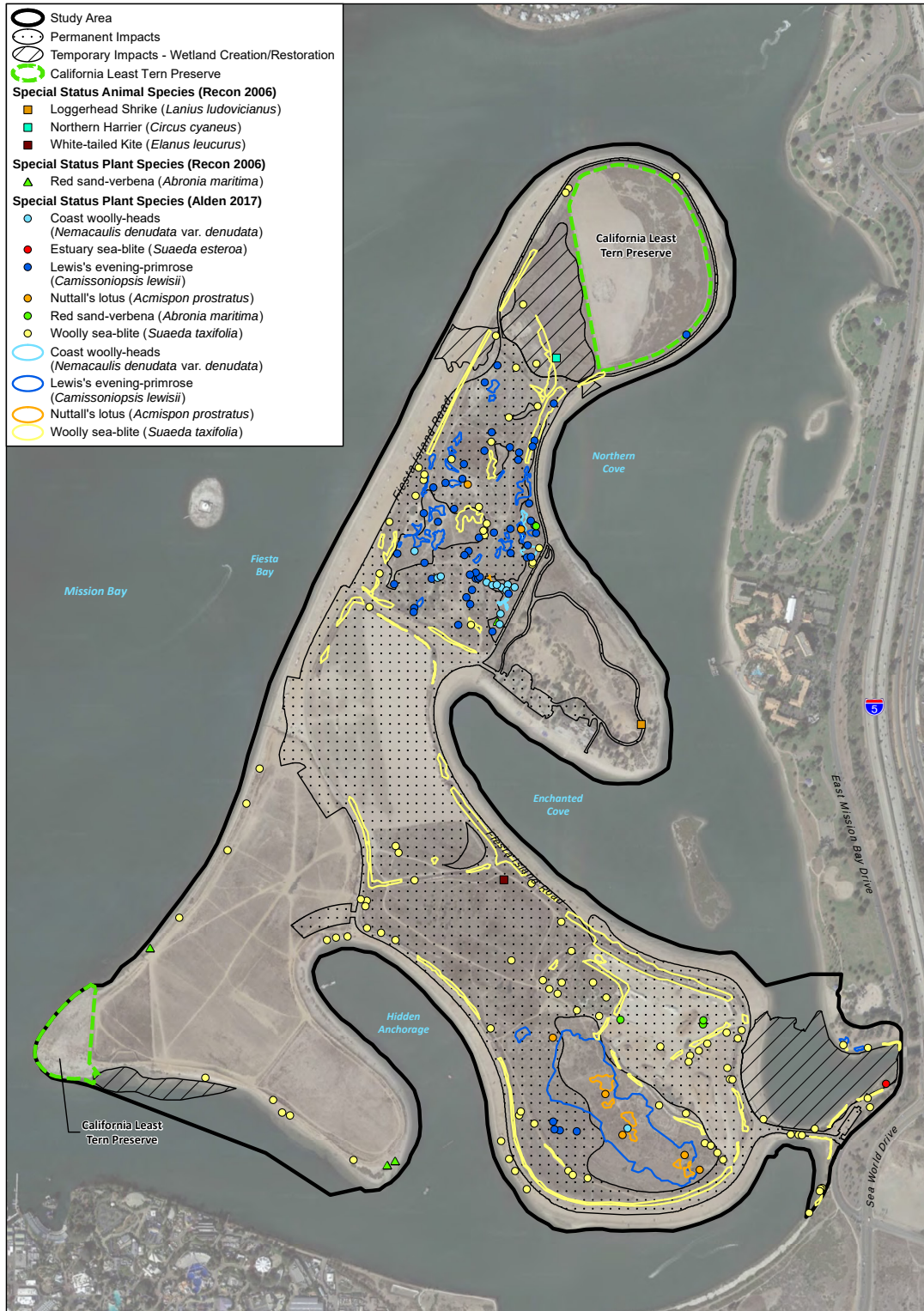
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Figure 5.2-2 Special Status Species/Impacts, Option B



Source: ESRI, SanGIS, Placeworks, Alden Environmental

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Wetland Habitat

Wetland habitat will be expanded to include a mixture of mudflats and lower, mid, and upper salt marsh on the northern end of the island. Dredging and excavation is proposed to create a channel to connect Northern Cove to Fiesta Bay at the narrow section of Fiesta Island near the southern boundary of the California least tern preserve. While the construction will temporarily affect existing wetland and beach areas, the resulting expanded wetlands will support new habitat and improve water circulation and quality in the bay.

The project includes restored dunes and wetlands within the southernmost portion of Tecolote Cove near the entrance causeway. The proposed improvements support the Mission Bay Plan objective of improving water quality by allowing water to flow from the higher quality water areas south of the causeway to lower quality water areas to the north while preventing reverse flow. Temporary impacts will occur to open water and wetlands during wetland habitat creation/restoration (which include impacts to plant, invertebrate, and fish life associated with the eelgrass beds), which would be less than significant because:

- The proposed entrance causeway supports the objective of high-water quality by allowing water to flow from the higher quality water areas south of the causeway to lower quality water areas to the north while preventing reverse flow, which would benefit the eelgrass beds and the plant, invertebrate, and fish life associated with them.
- The project includes the creation of new eelgrass beds along the southwestern shore of the island in the Southwest Subarea.
- The impact is a result of habitat restoration activities, and would be immediately followed by planting; therefore, there would be no significant temporal loss of habitat.

The City's Biology Guidelines do not differentiate between temporary and permanent impacts for mitigation purposes. Temporary impacts to these habitat areas are significant but would be mitigated to below a level of significance with replacement in kind. The precise amount of mitigation (for both permanent and temporary impacts) and the location of mitigation areas will be developed as part of Mitigation Measure BIO-1 and shall be completed prior to any ground disturbance.

Impacts to vegetation communities and land cover types are quantified by habitat type (wetland or upland), and duration (temporary or permanent) above in Tables 5.2-4 (Option A) and 5.2-5 (Option B). As explained under Impact 5.2-1, temporary impacts (except temporary impacts to upland Diegan coastal sage scrub that would be permanently converted to wetland habitat as addressed in Mitigation Measure BIO-1) would be less than significant.

Upland Habitats

Permanent impacts to sensitive southern foredunes (Tier I) and Diegan coastal sage scrub (Tier II) communities from development under Options A and B would be significant. Temporary impacts to Diegan coastal sage scrub due to its permanent conversion to wetland through wetland habitat creation/restoration

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would also be significant. Permanent and temporary impacts to Tier IV upland habitats (disturbed land and urban/developed/ornamental) from Options A and B would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure BIO-1.

Level of Significance after Mitigation

Implementation of Mitigation Measure BIO-1 will result in a project-specific mitigation plan that will be based on detailed information from the General Development Plan or construction drawings submitted for the future project. Ratios of mitigation by habitat type are included in the City's Land Development Manual Biology Guidelines and will be part of the mitigation plan. Also, several agencies must issue permits before any construction activity can occur. Their mitigation ratios will be stipulated in the mitigation plan. Finally, all mitigation will be installed, maintained, and monitored in accordance with a City-approved mitigation plan, and inspected by the City for compliance. With implementation of Mitigation Measure BIO-1, this impact would be less than significant.

Impact 5.2-3	Would the proposed project result in a substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means? [Threshold BIO-3]
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Impact Analysis: Options A and B propose a total of approximately 34 acres of wetland habitat creation/restoration in the project area. Created wetland habitat would total approximately 5 acres inside the MHPA and 8 acres outside the MHPA. Restored wetland habitat would total approximately 2 acres inside the MHPA and 19 acres outside the MHPA (southern coastal salt marsh, saltpan/mudflats, open water, and beach). The proposed acreage of wetland habitat creation/restoration would exceed the mitigation acreage required by the City's Land Development Manual Biology Guidelines. To ensure successful mitigation, the creation/restoration will be implemented, maintained, and monitored following a mitigation plan approved by the City (see Mitigation Measure BIO-1).

Project development could permanently impact wetlands and non-wetland waters regulated by the Corps, RWQCB, CCC, and City. Impacts would come from construction of habitat (including new wetlands), extension of roadways and trails, and widening of the causeway. The estimated acreage of permanent impacts from Option A would be approximately 1.21 acres. The total acreage of permanent impacts from Option B would be approximately 1.12 acres (see Table 5.2-6, *Impacts to Jurisdictional Waters and Wetlands*). The mitigation acreages shown in Table 5.2-7 are included in the acreages shown in Tables 5.2-4 and 5.2-5, not in addition to them. Precise mitigation will be provided in accordance with Mitigation Measure BIO-1. Impacts to jurisdictional resources would require acquisition of the following permits and approvals, or demonstration that such approvals are not required:

- Clean Water Act Section 404 for discharge of dredged or fill material within Waters of the US;
- Rivers & Harbors Act Section 10 for work within navigable Waters of the US;

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- Clean Water Act Section 401 State water quality certification for an action that may result in degradation of Waters of the State;
- Coastal Development Permit issued by the California Coastal Commission; and
- City of San Diego Site Development Permit.

Table 5.2-6 Potential Impacts to Jurisdictional Waters and Wetlands, Acres Option A and B

Habitat	Option A			Option B		
	Permanent	Temporary	Total	Permanent	Temporary	Total
Impacts to Jurisdictional Wetlands						
Southern coastal salt marsh	0.55	0.66	1.21	0.55	0.66	1.21
Impacts to Waters						
Saltpan/mudflats	0.50	3.03	3.53	0.50	3.03	3.53
Open Water	0.04	10.21	10.25	0.00	10.21	10.21
Eelgrass beds	0.04	10.21	10.25	0.00	10.21	10.21
Beach	0.08	5.75	5.83	0.07	5.75	5.82
Total	0.66	29.2	19.61	0.57	29.2	29.77
Total, Jurisdictional Waters and Wetlands	1.21	29.86	29.86	1.12	29.86	30.98

Source: Alden 2017.

Permanent impacts to jurisdictional wetlands and waters would be significant and are regulated by the Corps, RWQCB, and CCC.

Table 5.2-7 Mitigation Potentially Required for Significant Impacts to Wetlands, Options A and B

Wetland Habitat		Permanent Impact, acres	Mitigation Ratio*	Mitigation Required, Acres		
				Creation	Restoration	Total
Southern coastal salt marsh		0.55	4:1	0.55	1.65	2.20
Saltpan/mudflats		0.50	4:1	0.50	1.50	2.00
Beach	Option A	0.08	2:1	0.08	0.08	0.16
	Option B	0.07	2:1	0.07	0.07	0.14
Open Water	Option A only	0.04	1:1	0.04	0.04	0.08
Eelgrass beds	Option A only	0.04	1.38:1	0.04	0.02	0.06
Total	Option A	1.21	---	1.21	3.45	4.66
	Option B	1.12	---	1.12	3.36	4.48

Source: Alden 2017.

* May change based on permit requirements.

Mitigation Measures

BIO-6 Prior to any impacts to wetlands, mitigation will be required in accordance with federal, State, and City “no net-loss” policies. The creation/restoration of habitat as mitigation shall be described in a mitigation plan (see Mitigation Measure BIO-1) following the outline

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provided in the City's Biology Guidelines. The conceptual mitigation plan shall include success criteria that must be met, as well as maintenance and monitoring requirements for typically up to five years following completion of the initial planting program.

Level of Significance after Mitigation

Compliance with the requirements of Mitigation Measure BIO-6 would ensure there is no net loss of wetlands and would reduce the impacts to less than significant.

Impact 5.2-4	Would the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Subarea Plan, or impede the use of native wildlife nursery sites? [Threshold BIO-4]
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Impact Analysis: Eelgrass planting will temporarily affect fish within the bay but will result in the creation of new habitat. As the impacts will be temporary and occur only during the planting, and the resulting habitat will expand the existing habitat within the bay, this is considered a beneficial feature of the project and the temporary impacts during creation are considered less than significant. Mitigation Measure BIO-1 requires a project-specific plan following a survey of eelgrass in the proposed construction area.

Fiesta Island is not a wildlife corridor or part of a wildlife corridor. Development under the proposed project would not impact overland wildlife movement as access to the island is limited to the single causeway. While the creation of a wet channel at the north end of the island will limit land access to the single roadway, the restriction of access is seen as a beneficial feature of the project as it will help protect the existing least tern habitat from land-based mammals.

The proposed project includes the preservation of both existing wildlife habitat conservation areas for the least tern. The existing fencing will keep the off-leash dog area separated from the Stony Point least tern site at the southern end of the island, and the proposed wet channel and gated roadway will restrict access to the northern least tern area. The protection and expansion of other habitats on the island, such as the Diegan Coastal Sage Scrub and southern foredunes, will increase the natural areas available for wildlife.

Impacts to nesting birds protected by the Migratory Bird Treaty Act and State Fish and Game Code could occur if clearing of vegetation or construction occurs during their breeding season (which generally falls between February 1 to September 15). Clearing of vegetation or construction activities could cause the destruction or abandonment of active nests or the mortality of adults, young, or eggs. Impacts to nesting birds would be significant without mitigation.

Mitigation Measures

Implementation of Mitigation Measures BIO-1 through BIO-5.

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Level of Significance after Mitigation

Implementation of Mitigation Measure BIO-1 will ensure that eelgrass planting and creation of wetlands will occur during times when least impactful to existing species. Implementation of mitigation measures BIO-2 and BIO-3 will ensure that migratory birds and the least tern nesting areas are not affected by the project. Implementation of mitigation measures BIO-4 and BIO-5 will ensure that black-tailed jackrabbits, sea turtles, and marine mammals are also not affected by the project. With implementation of these mitigation measures, impacts to migrating wildlife are reduced to less than significant.

Impact 5.2-5 Would the proposed project conflict with the provisions of the City's Multiple Species Conservation Program (MSCP) Subarea Plan, an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or State habitat conservation plan? [Threshold BIO-5]

Impact Analysis:

City of San Diego Multiple Species Conservation Program (MSCP) Subarea Plan

The City of San Diego has an adopted MSCP Subarea Plan with MHPAs identified throughout the City that will eventually make up the final City MSCP preservation area. Approximately 57 acres of MHPA occur in the project area in three areas. Two of those locations support nesting habitat preserve for the federal- and State-endangered (and State fully protected) California least tern: Stony Point and northern least tern. As proposed, the proposed project does not change either least tern area, and results in beneficial impacts to the northern least tern area by limiting vehicular access during the breeding season.

Future development under both Options A and B could result in permanent impacts to approximately 2 acres of the MHPA in the third MHPA area adjacent to Tecolote Creek flow into Mission Bay. Permanent impacts could occur to lands designated beach on both Fiesta Island and the area adjacent to Sea World Drive. On Fiesta Island, the reconfiguration of the northern roadway loop will affect land designated as disturbed, and urban/developed/ornamental in the MHPA. The change in roadway design to drain inward, away from the coast, to promote wetland habitat formation, is compatible with the biological objectives of the MSCP Subarea Plan and is allowed within the MHPA.

Future development under both Options A and B could result in temporary impacts to approximately 8 acres of the MHPA in the North Subarea during the construction of an inlet and wetlands, and at the mouth of Tecolote Creek east of the Southeast Subarea during the construction of improvements to the causeway. The City does not differentiate between temporary and permanent impacts and requires permitting and, if necessary, mitigation, for both temporary and permanent impacts. In this instance, the proposed created wetlands are expected to exceed the required mitigation ratio and meet the requirement of no net loss of wetlands. Furthermore, future development pursuant to the proposed project would have to comply with Mitigation Measure BIO-1, which requires the creation of a mitigation plan prior to any construction or grading activities. Implementation of these mitigation measures would reduce impacts associated with conflicts with the City's MHPA to less than significant.

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MSCP Sub-Area Plan Consistency Analysis

The Project would be required to comply with guidelines from MSCP Subarea Plan Section 1.4.2 regarding Roads and Utilities; Fencing, Lighting, and Signage; and Materials Storage, and with Section 1.4.3 Land Use Adjacency Guidelines. Table 5.2-8 provides a listing of each project-relevant policy from the guidelines, and how the proposed project complies with the policy.

Table 5.2-8 MSCP Consistency Analysis Table

MSCP Policy	Consistency Determination
All proposed utility lines (e.g., sewer, water, etc.) should be designed to avoid or minimize intrusion into the MHPA. These facilities should be routed through developed or developing areas rather than the MHPA, where possible.	Consistent - There are no proposed utility lines to be routed through an MHPA area.
All new development for utilities and facilities within or crossing the MHPA shall be planned, designed, located and constructed to minimize environmental impacts. All such activities must avoid disturbing the habitat of MSCP covered species, and wetlands. If avoidance is infeasible, mitigation will be required.	Consistent - The proposed project will disturb wetland and open water areas during creation of wetlands. Implementation of mitigation measure BIO-1 will ensure that both temporary and permanent impacts would be less than significant.
Temporary construction areas and roads, staging areas, or permanent access roads must not disturb existing habitat unless determined to be unavoidable. All such activities must occur on existing agricultural lands or in other disturbed areas rather than in habitat. If temporary habitat disturbance is unavoidable, then restoration of, and/or mitigation for, the disturbed area after project completion will be required.	Consistent - While the proposed project will avoid most habitat, creation of new roadways may affect existing habitat. Implementation of mitigation measure BIO-1 will ensure that mitigation is provided for both temporary and permanent impacts.
Construction and maintenance activities in wildlife corridors must avoid significant disruption of corridor usage. Environmental documents and mitigation monitoring and reporting programs covering such development must clearly specify how this will be achieved, and construction plans must contain all the pertinent information and be readily available to crews in the field. Training of construction crews and field workers must be conducted to ensure that all conditions are met. A responsible party must be specified.	Consistent - There are no wildlife corridors on the proposed project site. Construction outside of the breeding season is required by mitigation measures BIO-2 and BIO-3.
Roads in the MHPA will be limited to those identified in Community Plan Circulation Elements, collector streets essential for area circulation, and necessary maintenance/emergency access roads. Local streets should not cross the MHPA except where needed to access isolated development areas.	Consistent - No new roadways are proposed within the MHPA. The existing northern island roadway adjacent to the least tern habitat is scheduled for rehabilitation. As part of the proposed project a gate will be installed to limit vehicular access during breeding season.
Where possible, roads within the MHPA should be narrowed from existing design standards to minimize habitat fragmentation and disruption of wildlife movement and breeding areas. Roads must be located in lower quality habitat or disturbed areas to the extent possible.	Consistent - No new roadways are proposed within the MHPA.
Fencing or other barriers will be used where it is determined to be the best method to achieve conservation goals and adjacent to land uses incompatible with the MHPA. For example, use chain link or cattle wire to direct wildlife to appropriate corridor crossings, natural rocks/boulders or split rail fencing to direct public access to appropriate locations, and chain link to provide added protection of certain sensitive species or habitats (e.g., vernal pools).	Consistent - Fencing near the least tern areas is limited to less than six feet in BIO-3. The northern roadway near the least tern habitat will be off-limits to vehicular traffic during breeding season.

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Table 5.2-8 MSCP Consistency Analysis Table

MSCP Policy	Consistency Determination
Lighting shall be designed to avoid intrusion into the MHPA and effects on wildlife. Lighting in areas of wildlife crossings should be of low sodium or similar lighting. Signage will be limited to access and litter control and educational purposes.	Consistent - Any new lighting must comply with the applicable outdoor lighting regulations of the SDMC (§142.0740 et seq. and with the mitigation plan required by mitigation measure BIO-1.
Prohibit storage of materials (e.g., hazardous or toxic, chemicals, equipment, etc.) within the MHPA and ensure appropriate storage per applicable regulations in any areas that may impact the MHPA, especially due to potential leakage.	Consistent - The proposed project will not involve construction staging or the storage of hazardous materials in any MHPA.
Signage will be limited to access and litter control and educational purposes.	Consistent - As described in Chapter 3.0, the proposed project includes wayfinding and informational signs.
No riprap, concrete, or other unnatural material shall be used to stabilize river, creek, tributary, and channel banks within the MHPA. River, stream, and channel banks shall be natural, and stabilized where necessary with willows and other appropriate native plantings. Rock gabions may be used where necessary to dissipate flows and should incorporate design features to ensure wildlife movement.	Consistent - The extent of erosion control at the causeway will be determined when the precise design is prepared. Currently rock is used along the causeway, however future plans may allow for different materials. The proposed project does not include the use of riprap or other unnatural material.
All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.	Consistent - There are no existing or proposed parking lots that would grade into the MHPA on Fiesta Island. The off-island parking area adjacent to the Tecolote Creek discharge point will be developed consistent with the City's MS4 requirements and will not drain to the MHPA.
Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactful to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. Such measures should include drainage/detention basins, swales, or holding areas with non-invasive grasses or wetland-type native vegetation to filter out the toxic materials. Regular maintenance should be provided. Where applicable, this requirement should be incorporated into leases on publicly owned property as leases come up for renewal.	Consistent - Neither the on-island, or Tecolote Creek area improvements will be affected by drainage associated with the proposed project. The roadway adjacent to the northern least tern area will be redesigned to drain toward the island rather than into the bay. This redesign is intended to help reduce erosion of the island and improve the quality of stormwater runoff. The existing roadway drains toward the bay.
Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.	Consistent - The Stony Point least tern MHPA is separated from the active recreation features of the project by the passive off-leash dog park. The dog-park is separated from the nesting area by an existing berm and chain link fence. The off-leash dog park has been in operation for several years with no apparent impact to the nesting area. The northern least tern area is separated from active recreation by the sand management site, a berm and chain link fence. This will continue with the proposed project. During breeding season the roadway will be gated, further reducing the potential for noise in the northern area. The Tecolote Creek inlet area is adjacent to existing recreation areas, as well as the open water of Mission Bay. The proposed project would increase habitat in this area, but not human activity.

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BIOLOGICAL RESOURCES

Table 5.2-8 MSCP Consistency Analysis Table

MSCP Policy	Consistency Determination
New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.	Consistent - There is no new development proposed adjacent to the existing MHPA. The existing barriers in place will remain.
No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.	Consistent - The planting plan has not been determined for the project and will be part of the GDP. Compliance with mitigation measure BIO-1 will ensure that the plant palette is consistent with the MHPA.

Mission Bay Park Natural Resources Management Plan

In addition to the MSCP, the proposed project is also subject to the Mission Bay Park Natural Resources Management Plan. The management plan, adopted in 1990, establishes requirements for projects within Mission Bay. Table 5.2-9 provides a comparison of the proposed project to the Mission Bay Park Natural Resources Management Plan.

Mission Bay Park Natural Resources Management Plan

Table 5.2-9 Mission Bay Park Natural Resources Management Plan Consistency Analysis

Development Guidelines	Analysis
California Least Tern	
1. No in-water construction or dredging will be permitted in Mission Bay or the Flood Control Channel from April 1 through September 15, the least tern breeding season. If in-water construction is required during this time, exceptions are possible, upon approval of the City, California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service. Any exception would have to meet the following criteria to preserve least tern nesting and foraging: use of silt curtains or similar devices around in-water construction activity; use of noise reduction or low noise equipment; and use of timing and location restrictions on activity to avoid interfering with breeding sites or major least tern foraging areas.	Consistent – Dredging is proposed on both the western and eastern side of the island, approximately at the entrance to the North Subarea to support new wetland habitat and improve water circulation by creating a channel that cuts through the island. In accordance with Mitigation Measures BIO-1, BIO-2, and BIO-3, dredging would not occur during the least tern breeding season of April 1 through September 15. For any dredging that occurs during the breeding season, if nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable State and federal law (i.e., appropriate follow-up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that the take of birds or eggs or the disturbance of breeding activities is avoided.
2. No direct impacts to permanently designated least tern nesting sites are permitted. The only exception is the Cloverleaf site, which may be converted in the future to landscaping if no least terns use the site. This land use change would require the approval of a mitigation replacement site by the resource agencies.	Consistent – The project does not propose to directly impact least tern nesting sites. In accordance with Mitigation Measure BIO-3, no direct impacts to permanently designated least tern sites would occur, and there would be a seasonal buffer (that extends the habitat during the breeding and nesting season) and fencing between the habitat and the leash-free dog area at Stony Point. Furthermore, direct impacts to least terns from dredging activities associated with new wetland habitat creation in the North Subarea would not occur during the least tern breeding season of April 1 through September 15 in accordance with Mitigation Measure BIO-3. The project does not propose any improvements to the Cloverleaf site.

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Table 5.2-9 Mission Bay Park Natural Resources Management Plan Consistency Analysis

Development Guidelines	Analysis
3. The following buffer zones for each least tern nesting site will be free of new structures with heights of over six feet, including fencing around the site. This will keep raptors from using a high vantage point to prey on least tern chicks. North Fiesta Island: 150 feet	Consistent – The proposed project would implement Mitigation Measure BIO-3, which would ensure that the buffer-zone fencing would not be over six feet. The project does not propose new structures in the buffer zones that would be over six feet.
Eelgrass Habitat	
1. No net loss of eelgrass meadows is acceptable. A 1:1 replacement ratio of similar density is required for impacts to eelgrass habitat as delineated in the 1988 survey.	Consistent – In accordance with Mitigation Measure BIO-1, a new survey for eelgrass will be constructed in any area proposed for planting. Mitigation will occur at a minimum ratio of 1:1.
2. Mitigation is required in Mission Bay itself if the impact occurs in Mission Bay. Mitigation is required in the Flood Control Channel or Mission Bay if the impact occurs in the Flood Control Channel.	Consistent – The proposed project includes Mitigation Measure BIO-1, which covers the bay and the flood channel.
3. New sand beaches below Mean Lower Low Water (MLLW) should be replanted with eelgrass whenever the slope is changed by maintenance activities and eelgrass beds are impacted.	Consistent – The project does not propose new sand beaches. Eelgrass shall be planted as required in BIO-1.
4. Replanting efforts are best during low energy tides (late summer - early fall).	Consistent – Eelgrass shall be planted as required in BIO-1.
5. Any construction or dredging project in Mission Bay or the Flood Control Channel will buoy off areas from which it is restricted prior to the start of activity. This is to limit the extent of direct impacts to existing eelgrass.	Consistent – During construction and dredging improvements impacting the subsurface substrate, the areas of improvements would be buoyed off to limit the extent of direct impacts to eelgrass.
6. Any construction or dredging project disturbing the substrate in Mission Bay or the Flood Control Channel will use silt curtains or similar devices around disturbance areas. This will limit any adverse impact to water quality to the immediate construction area; thereby, reducing impacts to eelgrass and foraging birds.	Consistent – Implementation of Mitigation Measure BIO-1 would ensure that silt curtains or similar devices would be used during construction and dredging of substrate in Mission Bay to reduce impacts to eelgrass and foraging birds.
7. Eelgrass surveys for a project site will be required before and after construction to determine the extent of impact. Mitigation requirements for eelgrass will be based on the amount of actual loss.	Consistent – As required by mitigation measure BIO-1, an eelgrass survey would be conducted before and after construction of improvements related to dredging in Mission Bay.
8. A mitigation program, including maintenance, would be required for impacts to eelgrass habitat.	Consistent – The proposed project would implement Mitigation Measure BIO-1, which requires an eelgrass survey and planting. As a mitigation measure it will be enforced by a mitigation monitoring and reporting program.
Marine and Terrestrial Habitat	
1. No net loss to any salt marsh, salt pan, coastal strand associated with a sensitive species, or open water habitat will be permitted without replacement of equal or greater habitat value. The healthy salt marsh found in the Northern Wildlife Preserve is the last remnant of the once extensive salt marsh in Mission Bay. The salt marsh in the Southern Wildlife Preserve is also flourishing; however, because of its location in a Flood Control Channel, a high flood event could damage portions of the marsh. Because these salt marsh areas are extremely sensitive to disruptive activities, no direct impact is permitted, unless required for protection or enhancement of the marsh. Should protection or enhancement measures become	Consistent – The proposed project would not result in a direct impact to off-site salt marsh areas within Mission Bay. Implementation of Mitigation Measure BIO-1 reduces impacts to aquatic vegetation and natural communities to a less than significant level. The existing least tern nesting site would remain, along with the existing berm and fencing surrounding it. A wetland habitat area would be expanded adjacent to the least tern nesting site. The wetland habitat would include a mixture of mudflats and lower, mid-, and upper salt marsh.

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BIOLOGICAL RESOURCES

Table 5.2-9 Mission Bay Park Natural Resources Management Plan Consistency Analysis

Development Guidelines	Analysis
necessary, they should be done outside of least tern, clapper rail, and savannah sparrow nesting seasons and incorporate measures to contain and reduce the impact. Any proposed measure for the Northern Wildlife Preserve must be approved by the University of California at San Diego and the City joint management committee as well as appropriate resource agencies. Any measure proposed in the Southern Wildlife Preserve requires City and appropriate agency approvals.	
2. Buffer zones serve a biological function by providing a separation and screening of wildlife habitat from human activity associated with human development. Land use within buffer areas will be limited to bikeways, walkways, and passive recreation, such as nature study, viewing, and picnicking. Buffer areas should be planted with appropriate vegetation native to southern California and compatible with the adjacent habitat. Measures should be taken to keep run-off from entering habitat reserves. Buffer zones around terrestrial habitats in Mission Bay Park which exclude any development are as follows: salt marsh - 100 feet; salt pan - 50 feet; and coastal strand - 50 feet. The only exceptions to buffer zone provisions are signs, buoys, boundary fences, and educational or research-oriented structures with City approval on a project-by-project basis. City approval will include environmental review.	Consistent – The proposed project would continue to implement seasonal closure fencing and buffering for the Stony Point least tern nesting site and the North Subarea by 150 feet, each. The least tern nesting sites would be buffered by berm and coastal landscape; public access would be limited during nonseasonal closure, similar to existing conditions. All terrestrial habitats would be buffered by beach area, and the project would not result in development within 100 feet of salt marsh or 50 feet of saltpan or coastal strand. In addition, in accordance with Mitigation Measure BIO-1, the project would include restoration or creation of salt marsh and saltpan affected by the project.
Dredging	
1. Dredging impacts to marine habitat will require a 1:1 replacement ratio. Impacts from maintenance dredging will require a one-time mitigation for lost resources. Subsequent maintenance dredging for the original location, which has already mitigated the impact, will not require additional mitigation each time it is dredged.	Consistent – Implementation of Mitigation Measure BIO-1 would reduce impacts from dredging to a less than significant level. Mitigation would result in creation of new wetlands to offset impacts of the project at a minimum ratio of 1:1.
2. All dredging activities should comply with permit conditions of the U.S. Army Corps of Engineers, Regional Water Quality Control Board, State Lands Commission, and California Coastal Commission. Permits issued by these agencies may specify additional requirements for timing of in-water construction, spoil disposal methods, and dredge sediment material testing.	Consistent – The City will meet all permit requirements of the regulating agencies.
3. Sand of good quality retrieved in dredging operation will be stockpiled on a non-sensitive, designated site on Fiesta Island upon approval of the City. This sand will be used later in replenishment if it is of the proper grain size for beach stabilization. If room is not available on Fiesta Island, other arrangements for dredge spoil disposal will need to be made and approved by the City and other appropriate resource agencies.	Consistent – The project will retain the sand management area.

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Table 5.2-9 Mission Bay Park Natural Resources Management Plan Consistency Analysis

Development Guidelines	Analysis
4. If the sand is determined by a qualified expert to be unclean, to contain toxic material, or to be of poor quality, it will be transported to a permitted landfill. Sand containing toxic material will be taken only to a landfill qualified to handle toxic material.	Consistent – This policy will remain in effect for the proposed project.
5. Dredging of the Northern Wildlife Preserve outer boundary as defined on the bathymetry map (Appendix A) is permitted if in the future the outer boundary moves further into the Bay. The future dredge line will be outside the minus ten mean sea level (MSL) contour to preserve as much eelgrass and marsh habitat as possible. Spot elevation checks will be done every two years at nine locations along the proposed dredge line, outlined on the bathymetry map. These elevation checks will be the basis for deciding if the boundary needs dredging. Impacts of the dredging operation will be determined and methods used to minimize impacts (e.g., noise reduction, silt curtains, etc.). Timing is especially important to avoid disturbance to nesting birds. Impacts to eelgrass will need to be mitigated the first time the area is dredged but not for subsequent maintenance dredging at the same location.	Consistent – The project does not propose to dredge the Northern Wildlife Preserve. Implementation of mitigation measure BIO-1 and BIO-3 would reduce impacts from dredging (onsite and offsite) on nesting birds and eelgrass.
7. Sand reclamation and beach grooming and recontouring activity in areas adjacent to eelgrass beds will not require mitigation if silt curtains are utilized to avoid the secondary impact of drifting material and reduced water quality.	Consistent – Implementation of Mitigation Measure BIO-1 would ensure that silt curtains would be used to avoid secondary impacts of drifting material and reduced water quality.
Beach Maintenance	
Grooming and cleaning activities (smoothing and removing trash from the sand) in the dry sand above Mean Higher High Water (MHHW) will not require mitigation. Removal of debris washed ashore will not require mitigation if the activity occurs above Mean Lower Low Water (MLLW), removes as little sand as possible, and follows responsible construction practices. Smoothing tidal cuts in intertidal areas will not require mitigation if it is done above MLLW, above eelgrass beds, does not add sand, and follows responsible construction practices. Beach replenishment should be done only to replace sand lost in a storm event or to dress a beach prior to the summer visitor season. The City will not require mitigation for beach replenishment (the adding of sand in depleted areas) if it is done above MLLW, above eelgrass beds, and follows responsible construction practices. Beach replenishment requires an Anny Corps of Engineers permit and a California Coastal Commission permit.	Consistent – Movement of sand and associated grooming and cleaning activities would be conducted within the sand management area; debris removal and any potential future needs for beach replenishment would be conducted in accordance with local and state laws.
Water Quality	
1. All erosion and potential erosion areas should be landscaped, with the exception of the cliffs along Riviera Shores where irrigation runoff would aggravate the problem.	Consistent – The proposed project would reduce erosion near roadways by adhering to the requirements of the City's Drainage Design Manual and Storm Water Standards Manual, which require installation of low-impact development (LID) practices, such as bioretention areas, pervious pavements, cisterns, and/or rain barrels, and which would improve surface drainage conditions or, at a minimum, not exacerbate flooding or cause erosion. The project would not conduct any improvements to Riviera Shores.

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Table 5.2-9 Mission Bay Park Natural Resources Management Plan Consistency Analysis

Development Guidelines	Analysis
2. Irrigation systems should be designed and properly maintained to avoid the creation of erosion.	Consistent – Irrigation would be installed on a case-by-case, as-needed basis. The project does not propose removal or installation of irrigation systems on the site.
3. Dry flow interceptor systems should be maintained and operated to minimize dry weather surface contaminants from entering Mission Bay.	Consistent – The project does not propose dry flow interceptor systems; therefore, this would not apply to the proposed project.
4. Runoff should be directed away from the Bay wherever possible.	Consistent – The proposed project will reconstruct the perimeter roadway to drain inland away from the beach. All new impervious surfaces will comply with water quality requirements.
5. Every effort should continue to be made to improve water quality for preserve areas and the Bay. The University of California Natural Reserve System and City of San Diego joint management of the Northern Wildlife Preserve would include efforts to regularly monitor water quality in the Preserve.	Consistent – Major goals of the project that would improve water quality include reducing erosion along the perimeter roadway, providing hydraulic connectivity under the existing causeway, and enhancing habitat and wetlands.
6. Future changes to stream flows (instream discharge) in the San Diego River Flood Control Channel, Rose Creek, or Tecolote Creek should consider the natural resource management policies in Mission Bay Park.	Consistent – The project includes installation of a controlled hydraulic connection between the north and south sides of the bay bisected by the causeway. The connection will allow water flow to move under the causeway using tidal action. The proposed hydraulic connection considered the natural resource management policies and are addressed in the consistency analysis of this chapter.

Much of the City's MSCP Subarea Plan General Management Directives applies to management of lands preserved under the program, which is the responsibility of the City as set forth under the MSCP implementing agreement. Generally, the department with ownership of MHPA lands preserved under the MSCP has responsibility for management required under the MSCP. For the project area, the land is owned by the City's Department of Parks and Recreation, so management would generally be under their domain. As the MSCP does not include directives regarding mitigation and restoration, the process of determining the ratios of mitigation will be completed during consideration of the GDP in compliance with mitigation measure BIO-1, with construction consistent with BIO-2 through BIO-5. Once the project is in operation the City's Department of Parks and Recreation will monitor activity to ensure compliance with the MSCP.

The Project would not conflict with the preservation goals of the MSCP or other local plans to protect biological resources. The Project would adhere to the City's Biology Guidelines for development within the MHPA. It also would comply with the relevant MSCP Subarea Plan directives including those regarding MHPA Compatible Land Uses, General Planning Policies and Guidelines, MHPA Land Use Adjacency Guidelines, and General Management Directives regarding mitigation and restoration. Therefore, the Project would not conflict with provisions of adopted local plans or policies protecting biological resources. The Project would not introduce land uses within or adjacent to the MHPA that would result in adverse edge effects.

Mitigation Measure:

Mitigation Measures BIO-1 and BIO-5.

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Level of Significance after Mitigation

Implementation of Mitigation Measures BIO-1 and BIO-5 would reduce impacts to a less than significant level and ensure compliance with the City's regulations. The proposed project includes both the avoidance of existing habitat, and creation of new habitat at mitigation ratios that account for temporary and permanent impacts. The proposed project does not change the underlying land use from the recreation and open space emphasis and therefore does not would introduce activities that would conflict with the MSCP and MHPA. Features included in the project description, and required through implementation measures BIO-1 through BIO-5, will ensure separation from the MHPA during both construction and operation. The City has responsibility for review of the GDP prior to construction, oversight during construction, and continued compliance with MSCP policies once the project is in operation. Therefore, impacts of the proposed project are less than significant with mitigation incorporated.

Impact 5.2-6	Would the proposed project introduce land use within an area adjacent to the MHPA that would result in adverse edge effects? [Threshold BIO-6]
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Impact Analysis:

The MHPA has been designed to maximize conservation of sensitive biological resources, including sensitive species. When land is developed adjacent to the MHPA, there is potential for indirect impacts that may degrade habitat or alter animal behavior within the preserve. These indirect effects may include impacts related to drainage and toxics, lighting, noise, public access/barriers, invasive species, brush management, and grading/land development. These impacts could be short-term resulting from construction activities (e.g., construction noise impacts on sensitive species), or long-term (e.g., trampling and removal of plant cover due to hiking, biking, and other human activities).

Implementation of the proposed project may introduce new park uses adjacent to the MHPA such as soft-surface trails, paved multi-use paths, parking areas, grading and landscaping, and other recreational amenities. Future development pursuant to the proposed project could result in potentially significant indirect impacts on adjacent MHPA lands. To address these concerns, the MSCP includes a set of MHPA Land Use Adjacency Guidelines that must be followed in accordance with Mitigation Measures BIO-1 through BIO-3.

Drainage and Toxics

The MHPA Land Use Adjacency Guidelines require that all new parking lots and developed areas in and adjacent to the MHPA not drain directly into the MHPA. As part of the City's MS4 requirements, developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials, and other elements that might degrade or harm the natural environment or ecosystems processes.

The project does not propose any new parking lots or developed areas in or adjacent to the MHPA. No toxic by-products would be emitted by the proposed project near the MHPA. If any herbicide is used in the habitat creation/restoration, it will be approved by the City to prevent adverse impacts to native wildlife or plant species.

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Drainage on the island is affected by existing berms that keep most of the runoff directed toward the center of the island. As proposed, drainage will continue to flow inward to the interior of the island. As the Stony Point least tern area is seaward of the berm, runoff from the adjacent off-leash dog park will not affect the site. The northern least tern area is above the adjacent sand management area, and is also separated by a berm that prevents runoff from affecting the nesting area. The areas seaward of the berm include the perimeter roadway and beach areas. Improvements to the perimeter roadway will be designed for stormwater to flow away from the bay. Runoff from the roadway will be trapped between the berm and the road in the northern area, and cannot reach the least tern site. There is no roadway near the Stony Point nesting area.

Lighting

Night lighting exposes wildlife to an unnatural light regime that may adversely affect foraging patterns, increase predation risk, cause biological clock disruptions, and result in a loss of species diversity. The Land Use Adjacency Guidelines, and the City's Land Development Manual Biology Guidelines, require that all developed areas adjacent to the MHPA direct or shield lighting away from the MHPA. No nighttime activities are proposed, and all lighting proposed for the lighting will be for parking areas and security. No street lighting is proposed and no lighting is proposed to be added within or adjacent to the MHPA.

Noise

Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noise that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.

If perimeter road construction or wetland creation/restoration activities take place during the California least tern breeding season, significant impacts could occur to least tern in the MHPA. However, implementation of Mitigation Measure BIO-3, would reduce these impacts to less than significant.

Operations of the Sand Management Facility could result in an increase of noise approximately 600 feet from the MHPA. A series of soil berms would be created surrounding the Sand Management Facility to prevent any significant noise from reaching the MHPA and the least tern preserve in the North Subarea (see Mitigation Measure BIO-31).

Public Access/Barriers

The Land Use Adjacency Guidelines state that new development adjacent to the MHPA may be required to provide barriers along the MHPA boundaries to direct public access to appropriate locations and to reduce domestic animal predation.

The two California least tern nesting preserves within the MHPA are fenced to prevent public access during the breeding season. Additionally, a gate is proposed to be closed during the breeding season on the

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reconfigured perimeter road around the northern least tern preserve. Outside of the breeding season, the gate will be opened allowing public access to the northern roadway. Access to the MHPA will remain controlled.

Invasive Plant Species

The Land Use Adjacency Guidelines require that no invasive, nonnative plant species be introduced into areas adjacent to the MHPA. Most of the existing vegetation on the island would be replaced with either maintained turf and landscaping, or with native vegetation. The proposed project would follow the SDMC's Landscape Standards and would not use invasive species in landscaping, which would prevent their introduction to the MHPA.

Brush Management

The Land Use Adjacency Guidelines require that new development located adjacent to and topographically above the MHPA (e.g., along canyon edges) be set back from slope edges to incorporate Zone 1 brush management areas on the development pad and outside the existing MHPA, while Zone 2 is considered “impact neutral” within the MHPA. There is no development proposed on Fiesta Island that would be subject to this land use adjacency guideline.

Grading/Land Development

The Land Use Adjacency Guidelines require that manufactured slopes associated with development be included within the development footprint within or adjacent to the MHPA. Dredging and filling would occur to create/restore wetland habitats in the North and Southeast Subareas within and adjacent to the MHPA, and to create new eelgrass beds in the Southwest Subarea. However, no manufactured slopes would be associated with these activities.

As stated in Mitigation Measure BIO-1, each subsequent project must follow the Land Use Adjacency Guidelines during any construction and/or grading activities.

Mitigation Measures

Mitigation Measures BIO-1 and BIO-2.

Level of Significance after Mitigation

Implementation of Mitigation Measures BIO-1 and BIO-2 would reduce impacts to less than significant.

5.2.4 Cumulative Impacts

Impacts to biological resources in the City are managed through the adopted MSCP Subarea Plan, which is incorporated by reference in the City's adopted General Plan, LDC ESL Regulations, and Biology Guidelines. Additional state and federal regulations (e.g., Endangered Species Acts) also address some MHPA and non-MHPA biological resource areas.

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The geographic scope of cumulative impact analysis for this issue would be Mission Bay Park. Cumulative impacts could occur within the project area at buildout of the proposed project due to subsequent projects such as the development of recreational trails and habitat creation, preservation, and restoration activities adjacent to the MHPA in accordance with the proposed project. Subsequent projects implemented in accordance with the proposed project could have the potential to impact sensitive plants and wildlife species directly through the loss of habitat or indirectly by placing recreational facilities adjacent to the MHPA. These projects also have the potential to result in habitat modifications, which in turn may interfere with wildlife nesting, foraging, or movement within sensitive habitats.

Subsequent projects contemplated by the proposed project such as trails, parking areas, restrooms, and other recreational amenities would have the potential to cumulatively result in impacts to loss of sensitive vegetation communities (which provides habitat for sensitive species), as well as indirect impacts to sensitive plant and wildlife species. However, as subsequent projects are implemented by the proposed project, each project would be required to adhere to the mitigation described throughout this section. Subsequent projects would be subject to environmental review to ensure that they are adequately analyzed for potential impacts to sensitive vegetation and wildlife communities. These subsequent projects would be required to mitigate for such impacts in a manner that provides the same habitat quality in kind (as specified by the City's Biology Guidelines, MSCP, etc.)

Therefore, implementation of the proposed project and adherence to the mitigation framework set forth in this section for subsequent projects under the proposed project would serve to reduce potentially cumulative biological resource impacts to less than significant.

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5.3 GEOLOGIC CONDITIONS

This section evaluates the potential for implementation of the proposed project to impact geological and soil resources in the plan area. The analysis in this section is based in part on the following technical report:

- Summary of Geologic/Geotechnical Conditions and Preliminary Geotechnical Input for Fiesta Island Precise Plan, Alternative 5f, San Diego, California, TerraCosta Consulting Group, Inc., dated September 13, 2017.

A complete copy of this study is included as Appendix 5.3-1.

5.3.1 Existing Conditions

The existing environmental setting and regulatory framework are summarized in Chapters 2.0 and 4.0, respectively.

5.3.2 Significance Determination Thresholds

The City of San Diego's CEQA Significance Determination Thresholds (2016) provide guidance to determine the potential significant impacts to geologic conditions. Thresholds are modified from the City's CEQA Significance Determination Thresholds to reflect the programmatic analysis for the proposed project. Based on City's thresholds, impacts to geologic and soil resources would be significant if the proposed project would:

- G-1 Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault,
 - strong seismic ground shaking
 - seismic-related ground failure (including liquefaction), and
 - landslides.
- G-2 Result in a substantial soil erosion or the loss of topsoil.
- G-3 Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

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5.3.3 Environmental Impacts

The following impact analysis addresses the thresholds of significance identified above. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.3-1: Would implementation of the proposed project expose people and structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure (including liquefaction), or landslides? [Threshold G-1]

Impact Analysis:

Surface Rupture of a Fault

The project site is in the Rose Canyon Fault Zone. Numerous fault features have been identified near the project site, including fault traces of the Rose Canyon Fault between about 0.25 mile and one mile east of the project site. The Rose Canyon Fault Zone is considered active; that is, it shows surface expression of displacement within approximately the last 11,700 years. The nearest Alquist-Priolo Earthquake Fault Zone to the site is about 0.25 mile to the north-northwest. Surface rupture of a known active fault is not considered a significant hazard onsite. Implementation of the proposed project would not exacerbate hazards from surface rupture of an active fault; therefore, no impact would occur.

Ground Shaking

The project site is in a seismically active region. Active faults in the region, in addition to the Rose Canyon Fault Zone, include the Coronado Bank Fault offshore about 10 miles to the west, and the San Diego Trough Fault Zone offshore about 23 miles to the west. Strong ground shaking could occur onsite. Geotechnical investigations would be required for projects developed under the proposed project involving the construction of structures or other improvements such as roadways, bridges, or parking lots. Such investigation reports would provide recommendations, including seismic design parameters that must be used in the design of the proposed structures to minimize hazards from ground shaking. Implementation of state and local regulations and recommendations of project-specific geotechnical investigation reports would reduce potential impacts to a less than significant level.

Liquefaction

Project implementation would involve ground disturbances on portions of the project site. Holocene sands and silts under the site are considered susceptible to severe effects from liquefaction, including sand boils, ground cracking, vertical settlement, and lateral displacement. Ground disturbances could exacerbate existing liquefaction hazards. The geological study for the proposed project (see Appendix 5.3-1) provides several preliminary recommendations to reduce hazards from liquefaction, including removal and recompaction of soils under proposed improvements to a depth suitable for the proposed loads, and the use of deep foundations consisting of piles or drilled piers. Geotechnical investigations would be required for projects developed under the proposed project involving the construction of structures or other improvements such

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as roadways, bridges, or parking lots. Such investigation reports would provide recommendations for grading and foundation design to minimize hazards from liquefaction. Implementation of state and local regulations and recommendations of project-specific geotechnical investigation reports would reduce potential impacts to a less than significant level.

Landslides

There are no slopes on Fiesta Island that could generate a landslide. No impact would occur.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

There would be no impacts related to surface rupture of an active fault or to landslides. Impacts related to ground shaking and liquefaction would be less than significant.

Impact 5.3-2: Would implementation of the proposed project cause substantial soil erosion? [Threshold G-2]

Impact Analysis: The hydraulic fill soils onsite could be more susceptible to erosion than many native soils due to their variable consistency (for example, seashells in soils and sand walls separating areas of silt and clay). Development of the proposed project would involve ground disturbances on parts of the project site for the construction of proposed improvements and for the creation and enhancement of habitats. Future development projects implemented under the proposed project will need to prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) pursuant to the Statewide General Construction Permit. The permit will include best management practices (BMP) for erosion control during construction. BMPs could include, but are not limited to:

- **Erosion Controls:** Cover and/or bind the soil surface to prevent soil particles from being detached and transported by water or wind. Examples include mulch, geotextiles, mats, hydroseeding, earth dikes, and swales.
- **Sediment Controls:** Filter out soil particles that have been detached and transported in water. Examples include barriers such as straw bales, sandbags, fiber rolls, and gravel bag berms; desilting basins; and cleaning measures such as street sweeping.
- **Tracking Controls:** Minimize the tracking of soil offsite by vehicles. Examples include stabilized construction roadways and construction entrances/exits, and entrance/outlet tire washes.
- **Non-storm Water Management Controls:** Prohibit the discharge of materials other than stormwater, such as discharges from the cleaning, maintenance, and fueling of vehicles and equipment. Examples

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include BMPs for specifying methods for paving and grinding operations; cleaning, fueling, and maintenance of vehicles and equipment; and concrete curing and finishing.

- **Waste Management and Controls:** Include spill prevention and control, stockpile management, and management of solid wastes and hazardous wastes. (CASQA 2003)

Soil erosion impacts would be less than significant after preparation and implementation of the SWPPPs required for each future project. Once construction is complete, the project site would be covered with landscaping, habitat, pavement, trails, and sand areas all designed to minimize erosion.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.3-3:	Would implementation of the proposed project expose people and structures to substantial hazards from unstable soils, such as collapsible soils and expansive soils? [Threshold G-3]
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Impact Analysis:

Collapsible Soils

Hydraulic fill soils within the upper 10 to 30 feet of depth are prone to wide variations in settlement potential, both vertically and laterally. Project development would involve soil disturbances on parts of the island and could exacerbate existing hazards from collapsible soils. Recommendations in the geological study to minimize hazards from settlement-prone soils include removal and recompaction of soils under proposed improvements and the use of deep foundations consisting of piles or drilled piers. Geotechnical investigations would be required for projects developed under the proposed project involving the construction of structures or other improvements such as roadways and parking lots. Such investigation reports would provide recommendations for grading and foundation design to minimize hazards from soil settlement. Implementation of state and local regulations and recommendations of project-specific geotechnical investigation reports would reduce potential impacts related to collapsible soils to less than significant.

Expansive Soils

Expansive soils contain substantial amounts of clay that swells when wetted and shrinks when dried; the swelling or shrinking can damage structures built on such soils. Soils under the site contain substantial amounts of clay and could be expansive. Geotechnical investigations would be required for projects, developed under the proposed project, which involve the construction of structures or other improvements. Such investigations would evaluate the expansion potential of soils under those project sites and would provide recommendations for grading and foundation design to minimize hazards from expansive soils.

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Implementation of state and local regulations and recommendations of project-specific geotechnical investigation reports would reduce potential impacts from expansive soils to less than significant.

Lateral Spreading

Lateral spreading is the above-mentioned lateral displacement that can result from liquefaction. Holocene sands and silts under the site are considered susceptible to severe effects from liquefaction, including lateral spreading. Implementation of the proposed project would involve ground disturbance and could exacerbate lateral spreading hazards. Such hazards would be evaluated and addressed by future project-specific geotechnical investigations. Implementation of state and local regulations and recommendations of project-specific geotechnical investigation reports would reduce potential lateral spreading impacts to less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

5.3.4 Cumulative Impacts

Similar to the proposed project, future development projects would be required to comply with applicable state and local building regulations. Site-specific geologic hazards would be addressed in each project's geotechnical investigation. Therefore, cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

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5.4 GREENHOUSE GAS EMISSIONS

This section evaluates the potential greenhouse gas (GHG) emissions and impacts associated with the implementation of the proposed project. Because no single project is large enough to result in a measurable increase in global concentrations of GHG emissions, climate change impacts of a project are considered on a cumulative basis. The analysis in this section is based on buildout of the proposed project, as modeled using the California Emissions Estimator Model (CalEEMod) and trip generation provided by STC Traffic, Inc. (see Appendix 5.9-1). The GHG emissions modeling for construction and operational phases are included in Appendix 5.4-1.

5.4.1 Significance Determination Thresholds

Based on the City's CEQA Significance Determination Thresholds (2016), impacts to greenhouse gas emissions would be significant if the proposed project would:

- GHG-1 Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- GHG-2 Conflict with the City's Climate Action Plan (CAP) or another applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The CAP was originally adopted in December 2015, and future implementing actions necessary for the CAP PEIR to serve as a Qualified GHG Reduction Plan under CEQA Guidelines Section 15183.5 were adopted by City Council on July 12, 2016. This section of the CEQA Guidelines permits for discretionary projects under CEQA that are consistent with the CAP, to be able to tier off the GHG analysis set forth in the CAP Final EIR. Analysis within this PEIR directly tiers off of the CAP PEIR for cumulative GHG Emissions under Section 15183.5. As such consistency with the City's CAP is used to evaluate the significance of the project's GHG impact. A consistency analysis of the proposed project with the CAP is evaluated first through a comparison of the land use and transportation assumptions for which the CAP was developed, and secondly through a qualitative analysis of policies associated with the proposed CPU.

5.4.2 Environmental Impacts

5.4.2.1 METHODOLOGY

Annual GHG emissions were calculated for both the adopted Mission Bay Master Plan and the proposed Fiesta Island Amendment at project build-out using California Emissions Estimator Model (CalEEMod) version 2016.3.1. The emissions sources include construction (off-road vehicles), mobile (on-road vehicles), area (firepits, consumer products [cleansers, aerosols, and solvents], landscape maintenance equipment, and architectural coatings), water and wastewater, and solid waste sources. Where project-specific data was not available, model inputs were based on default CalEEMod estimates.

GHG emissions are estimated in terms of metric tons of carbon dioxide equivalent (MT CO₂e). CO₂e emissions are the preferred way to assess combined GHG emissions because they give weight to the global-

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warming potential (GWP) of different gases. The GWP is the potential of a gas to warm the global climate in the same amount as an equivalent amount of emissions of carbon dioxide (CO₂). For example, CO₂ has a GWP of 1, methane (CH₄) has a GWP of 25, and nitrous oxide (N₂O) has a GWP of 298, which means CH₄ and N₂O have 25 and 298 times greater global warming effect than CO₂, respectively (IPCC 2007).

The analysis in this section is based on buildout of the proposed project as modeled primarily using CalEEMod, version 2016.3.1, for the following sectors:

- **Transportation.** Vehicle trips were provided by STC Traffic, Inc. (see Appendix 5.9-1). Annual mobile-source emissions are based on approximately 6,225 average daily weekday trips (ADT) and 7,550 weekend ADTs for the existing conditions and approximately 6,858 weekday ADTs and 8,564 weekend ADTs for the proposed project (Option A and Option B). For the purposes of this analysis, the weekday and weekend ADTs of 13,850 and 19,750 vehicle trips projected for buildout under the proposed project and under the adopted Mission Bay Park Master Plan (Master Plan) are based on the methodology and vehicle trip generation rates as provided in the traffic study prepared by STC Traffic, Inc. Overall, mobile-source emissions for the proposed project utilizes year 2035 emission factors, which are slightly more conservative than year 2038 emission factors and are based on the CalEEMod default fleet mix for the County of San Diego.
- **Energy Use.** Energy use is based on the types of land uses currently existing on and proposed for Fiesta Island, and it is assumed that calculated emissions would primarily be from electricity use. For the purposes of this analysis, it is assumed that parking lots would be lighted and would be the primary electricity demand. Based on the anticipated improvements and the broad-policy plan nature of the proposed project, no new buildings are assumed. Electricity use is based on the rates identified in CalEEMod version 2016.3.1 and the carbon intensity for San Diego Gas & Electric (SDG&E) electricity.
- **Water/Wastewater.** GHG emissions from this sector are associated with the energy used to supply water, treat water, distribute water, and then treat wastewater and fugitive GHG emissions from wastewater treatment. Indirect emissions from water use and wastewater generation are based on the generation rates identified in Section 5.10, *Public Utilities*.
- **Solid Waste Disposal.** Indirect emissions from waste generation are based on the CalEEMod default solid waste generation rate for a City Park.
- **Area Sources.** GHG emissions from this sector are from the use of landscaping equipment for property maintenance and consumer products (e.g., cleaning supplies). Additionally, emissions from wood-burning in the fire rings are based on CARB Smoke Emissions Estimation prescribed emission factors (wood 3+ in) and fire rings usage information (CARB 2008b). Approximately 34 youth campsite fire rings and 43 open beach fire rings are assumed for the existing conditions. For the purposes of this analysis, it is assumed that the proposed Options A and B and the adopted Master Plan would result in a total of 138 fire rings at buildout consisting of the existing 77 fire rings, 30 new primitive campsite fire rings, and 31 new group day-use fire rings.

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- **Construction.** For the purposes of this analysis, it is assumed that development of the proposed project for both Options A and B and the adopted Master Plan would generally occur over seven development phases beginning in 2018 with an assumed overall duration of approximately 20 years to a year 2038 buildout. Furthermore, it is assumed that each development phase would have the same development timeframe of approximately 2.86 years (i.e., 7 phases over 20 years). The total calculated construction emissions are generally based on the anticipated construction activities for Phase 1. Emissions from Phase 1 are assumed for Phases 3 through 7 as these phases are anticipated to result in similar construction activities and processes. As Phase 2 is anticipated to include improvements to the causeway likely requiring a slightly different construction equipment mix compared to the other planned development phases, emissions for this phase is quantified separately and added into the total for construction-related GHG emissions. Lastly, construction emissions also account for emissions generated from the operation of a barge utilized in dredging operations. Emission factors from Offroad2011 for a commercial harbor craft were used to calculate emissions associated with the barge.

Construction assumptions are generally based on CalEEMod defaults such as construction equipment mix and worker, vendor, and haul trips. Haul trips are based on the anticipated roadway demolition debris and import and export earthwork amounts. Construction under Options A and B and the Adopted Plan are assumed to generally require the same construction activities and phasing; thus, the calculated emissions are representative for all three plans. For purposes of this analysis, total emissions are amortized over a 30-year period and included as part of the overall inventory. See Section 5.2.5.1 of Section 5.2, *Air Quality and Odor*, and Appendix 5.1-1 of the PEIR for further details regarding the construction assumptions assumed for this project.

5.4.2.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance identified above. The applicable threshold is identified in brackets after the impact statement.

Impact 5.4-1: Would the proposed project generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment? [Threshold GHG-1]

Impact Analysis: Development under Options A and B of the proposed project would contribute to global climate change through direct and indirect emissions of GHG from land uses under the proposed project. Buildout of the project is not linked to a specific development time frame. For the purpose of this PEIR, buildout is assumed over a 20-year project horizon.

City of San Diego CAP

CEQA Guidelines Section 15064.4 allows lead agencies to rely on a qualitative analysis to describe GHG emissions resulting from a project. CEQA Guidelines Section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of GHGs and describes the required contents of such a plan. The City's CAP identifies that the City would achieve the 2035 target for the City, which is based on a trajectory to achieve the long-term GHG reduction goals in Executive Order S-03-05.

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Accordingly, the City has prepared a CAP which presents a comprehensive assessment of policies, programs, and ordinances that collectively represent San Diego’s qualified GHG reduction strategy in compliance with the CEQA guidelines. The analysis below identifies the increase in GHG emissions as a result of the proposed project and analyzes whether the City’s CAP considers emissions associated with the proposed project as part of the City’s GHG reduction strategy.

Comparison of the Proposed Plan to the Adopted Plan – Options A and B

Based on the methodology summarized above, GHG emissions were calculated for the existing land uses, the build-out of the adopted Master Plan (in Year 2035), and buildout of both Option A and Option B (in Year 2035). Table 5.4-1 summarizes the GHG emissions under each scenario. Appendix 5.4-1 contains additional details.

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Table 5.4-1 Year 2035 Operational Phase GHG Emissions

Sector	2035 GHG Emissions MTCO ₂ e/Year									
	Existing ¹	Adopted Master Plan	Option A	Option B	Option A			Option B		
					Change from Existing ¹	Change from Adopted Master Plan	Exceeds Adopted Plan?	Change from Existing ¹	Change from Adopted Master Plan	Exceeds Adopted Master Plan?
Land Uses										
Area	<1	<1	<1	<1	(<1)	0	NA	(<1)	0	NA
Energy	16	277	137	126	121	(140)	NA	110	(151)	NA
On-Road Transportation ²	6,500	10,050	4,752	4,557	(1,748)	(5,298)	NA	(1,943)	(5,439)	NA
Solid Waste Disposal	16	12	13	13	(3)	1	NA	(3)	1	NA
Water/Wastewater	50	52	52	52	2	<1	NA	2	<1	NA
Fire Rings/Campfires	384	688	688	688	304	0	NA	304	0	NA
Amortized Construction ³	NA	849	549	849	849	0	NA	849	0	NA
Total	6,966	11,928	6,491	6,285	(475)	(5,438)	No	(681)	(5,644)	No

Source: CalEEMod 2016.3.1. Based on IPCC's AR4 GWPs.

Notes: Totals may not add to 100 percent due to rounding.

¹ Shown for informational purposes only and based on year 2017 vehicle emission factors.

² Mobile emissions are based on trip generation data and methodology provided by STC Traffic, Inc. The assumed vehicle fleet mix is based on CalEEMod default values for the County of San Diego.

³ Total construction emissions during the buildout period are amortized over a 30-year project lifetime and incorporated into the operational emissions analysis based on methodology utilized by the South Coast Air Quality Management District.

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As shown in Table 5.4-1, the proposed Options A and B would both result in an overall net decrease in emissions compared to the adopted Master Plan. The emissions reductions would be primarily due to the projected fewer vehicle trips associated with the proposed project compared to the adopted Master Plan. Additionally, both proposed options would result in an overall net decrease in GHG emissions when compared to existing conditions. The reductions would also be attributed to the transportation sector and would be due to the assumed improvements to vehicle emissions control technology resulting from implementation of federal and state regulations (e.g., Advanced Clean Cars Program and the Pavley Standards).

Neither Option A or B of the proposed project would generate GHG emissions greater than emissions that would be generated under full buildout of the adopted Master Plan. Implementation of the proposed project would be within the assumptions of the City's CAP and would not exceed the emissions forecasted for the City. Additionally, the proposed project would result in less emissions onsite compared to existing conditions. Therefore, project-related GHG emissions impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.4-2: Would the proposed project be consistent with the applicable plans to reduce GHG emissions? [Threshold GHG-2]

Impact Analysis: The following evaluates whether the proposed project (Options A and B) is consistent with the City's CAP, SANDAG's RTP/SCS, and CARB's Scoping Plan.

CARB Scoping Plan

Options A and B

The CARB Scoping Plan is applicable to state agencies, but is not directly applicable to cities/counties and individual projects (i.e., the Scoping Plan does not require the City to adopt policies, programs, or regulations to reduce GHG emissions). However, new regulations adopted by the state agencies outlined in the Scoping Plan will result in GHG emissions reductions at the local level. As a result, local jurisdictions benefit from reductions in transportation emissions rates, increases in water efficiency in the building and landscape codes, and other statewide actions that would affect a local jurisdiction's emissions inventory from the top down. Statewide strategies to reduce GHG emissions include the low-carbon fuel standard and changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley California Advanced Clean Cars programs).

The proposed project is required to adhere to the applicable programs and regulations identified by the Scoping Plan and implemented by state, regional, and local agencies. The proposed project would comply

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with these state GHG emissions reduction measures, since they are statewide strategies. For example, any new ancillary structures under the proposed project would meet the applicable CALGreen and Building Energy Efficiency Standards. Furthermore, the Advanced Clean Cars program would be applicable to new vehicles introduced in the state and would contribute to reducing mobile-source GHG emissions which would be a benefit for the proposed project. Therefore, the proposed project would not obstruct implementation of the CARB Scoping Plan.

SANDAG's San Diego Forward: The Regional Plan

Options A and B

In addition to AB 32, the California legislature passed SB 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) in their regional transportation plans to achieve the per capita GHG reduction targets. SANDAG adopted San Diego Forward: The Regional Plan, which is the region's SCS, on October 8, 2015. The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency for governments and developers.

The proposed project under both Options A and B would result in improvements to the existing open space recreational amenities and infrastructure and would also result in improvements to land conservation on Fiesta Island. Thus, Fiesta Island would remain primarily as an open space recreational and conservation area after project implementation under both Options A and B. Subsequently, the proposed project would not interfere with SANDAG's ability to implement the strategies outlined in The Regional Plan. Therefore, the proposed project under both Options A and B would not have the potential to interfere with the State or SANDAG's ability to achieve GHG reduction goals and strategies.

City of San Diego CAP

Options A and B

As discussed in Impact 5.4-2 and as shown in Table 5.4-1, the proposed project would not generate GHG emissions that would exceed emissions that would be generated at buildout under the adopted Master Plan. Thus, implementation of the proposed project under both Options A and B would be within the assumptions that went into the GHG inventory of the City's CAP. Overall, the proposed project would be consistent with the City's CAP.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

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5.4.3 Cumulative Impacts

Project-related GHG emissions are not confined to a particular air basin but are dispersed worldwide. Therefore, impacts under Impact 5.4-1 are not project-specific impacts, but the proposed project's contribution to the cumulative impact of global warming. Implementation of the proposed project would be consistent with the City's CAP, CARB's Scoping Plan, and SANDAG's RTP/SCS. Thus, the proposed project's GHG emissions and contribution to global climate change impacts are not considered cumulatively considerable, and would therefore be less than significant.

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5.5 HYDROLOGY AND WATER QUALITY

Hydrology deals with the distribution and circulation of water, both on land and underground. Water quality deals with the quality of surface- and groundwater. Surface water includes lakes, rivers, streams, and creeks, bays, and estuaries; groundwater is under the earth's surface. This section evaluates the potential impacts of the proposed project to hydrology and water quality conditions in the planning area.

- Priority Development Project (PDP) Storm Water Quality Management Plan (SWQMP) for Fiesta Island – Mission Bay Master Plan Amendment, Nasland Engineering, September 27, 2017. (Appendix 5.5-1)

5.5.1 Existing Conditions

The existing environmental setting and regulatory framework are summarized in Chapters 2.0 and 4.0, respectively.

5.5.1.1 SIGNIFICANCE DETERMINATION THRESHOLDS

A significant hydrology or water quality impact would occur if implementation of the proposed project would result in:

- | | |
|--------|---|
| HYD-1 | A substantial increase in impervious surfaces and associated increased runoff. |
| HYD-2 | Substantial alteration to on- and off-site drainage patterns due to changes in runoff flow rates or volumes. ¹ |
| HYD-3 | Increased flooding on- or off- site. |
| HYD-4 | Decreased aquifer recharge. |
| HYD-5 | Grade, clear, or grub more than 1.0 acre of land, especially into slopes over a 25% grade, and would drain into a sensitive water body or stream. |
| HYD-6 | Violate any water quality standards or waste discharge requirements. |
| HYD-7 | Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. |
| HYD-8 | Otherwise substantially degrade water quality. |
| HYD-9 | Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. |
| HYD-10 | Place within a 100-year flood hazard area structures which would impede or redirect flood flows. |

¹ One of the City's hydrology thresholds, modifications to existing drainage patterns, duplicates HYD-2 and thus here is combined into that threshold.

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HYD-11 Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

HYD-12 Be subject to inundation by seiche, tsunami, or mudflow.

5.5.2 Environmental Impacts

The following impact analysis addresses the thresholds of significance identified above. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.5-1: Would development pursuant to the proposed project increase the amount of impervious surfaces on the site and therefore increase surface water flows into drainage systems within the watershed? Would project development cause increased flooding on- or off-site? [Thresholds HYD-1, HYD-2, HYD-3, HYD-5, and HYD-7]

Impact Analysis:

Fiesta Island is a recreational facility and the majority of the proposed project area is undeveloped. Large areas of pervious surfaces (sand recreation areas and vegetated areas) are mixed with a smaller amount of impervious (roads and paved camping) areas.

Future projects that could occur per the proposed project may result in an increase in impervious areas due to the new buildings (restrooms), new and widened roadways, and parking areas. At buildout, impervious areas on the island would increase from 16.2 acres at present to 28.9 acres with development of Option A; a net increase of 12.7 acres or about 3.5 percent of the site. Full buildout of Option B would increase impervious area to 26.8, a net increase of 10.6 acres or about 2.9 percent of the site (see Appendix 5.5-1).

There are no existing slopes of 25 percent or more grade onsite, as the highest elevation on Fiesta Island is about 25 feet above mean sea level, and the project does not propose creating such slopes. The perimeter road would be re-contoured to alter storm water drainage flows into the island as opposed to allowing the water to flow to the beach and bay. A bioswale of variable width would be created to capture the storm water. If all proposed project features are built out, approximately 355 acres of the 448.9-acre site would be graded in each of the two options – that is, the entire site except for the habitat preserve, upland preserve, and wetlands habitat areas. Improvements to the causeway would include installation of a controlled hydraulic connection between the north and south sides of the bay, which would allow water flow to move under the causeway by tidal action.

All development in the City is subject to drainage regulations through the SDMC, which requires that the existing flows of a property proposed for development are maintained to ensure that the existing structures and systems handling the flows are sufficient. Since future development per the proposed project would be required to adhere to existing drainage regulations, development would not result in alterations to existing drainage patterns in a manner that would result in flooding or erosion on- or off-site. Adherence to the requirements of the City's Drainage Design Manual and Storm Water Standards Manual, which require installation of low-impact development (LID) practices, such as bioretention areas, pervious pavements,

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cisterns, and/or rain barrels, would improve surface drainage conditions or, at a minimum, not exacerbate flooding or cause erosion. Furthermore, future development would be required to comply with NPDES permit requirements, which would result in a reduction in the volume and rate of surface runoff compared to existing conditions. The quantity of runoff reduction would depend on the design of open space, pervious areas runoff retention, and implementation of LID practices. Thus, implementation of the proposed project would result in a less than significant impact related to flooding and drainage patterns.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.5-2: Would development pursuant to the proposed project increase the amount of impervious surfaces on the site and therefore impact opportunities for groundwater recharge? [Threshold HYD-4]

Impact Analysis: The project site is not over a groundwater basin and is not used for intentional groundwater recharge. Project implementation would increase the amount of impervious area onsite by 3.5 percent of total site area (Option A), or 2.9 percent of site area (Option B; see Appendix 5.5-1). The project proposes construction of infiltration basins limiting the peak runoff rate from the site from a 100-year storm to no greater than existing conditions. Therefore, project development would not substantially reduce groundwater recharge, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.5-3: Would the proposed project result in a substantial increase in pollutant discharge to receiving waters and increase discharge of identified pollutants to an already impaired water body? [Thresholds HYD-6, HYD-7, and HYD-8]

Impact Analysis: Future development projects that could occur per the proposed project would have the potential to change pollutant discharges. However, as future development in accordance with the proposed project occurs, applicable NPDES permit requirements would require the retention and/or treatment of storm water through the implementation of BMPs. Future development would be required to demonstrate how pollutants such as various trace metals (e.g., copper, lead, zinc, and mercury), fecal coliform bacteria, low dissolved oxygen, phosphorus, and total dissolved solids that could be associated with future development would be treated to prevent discharge into receiving waters. As mentioned above in Impact 5.5-1, the island's

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perimeter road would be re-contoured to alter storm water drainage flows into the island as opposed to allowing the water to flow to the beach and bay, and a bioswale of variable width would be created to capture the storm water. This proposed feature would decrease pollutant discharge to Mission Bay from Fiesta Island.

Under current storm water regulations in the City, all projects requiring approvals are subject to certain minimum storm water requirements to protect water quality. Types of storm water BMPs required for new developments include site design, source control, and treatment control practices. Storm water BMPs would reduce the amount of pollutants transported from a future proposed development project to receiving waters. Subsequent projects implemented in accordance with the proposed project would be subject to existing regulations in place at the time projects are implemented. Thus, implementation of the proposed project would result in a less than significant impact related to water quality.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.5-4	Would project development place housing, or structures which would impede or redirect flood flows, into a 100-year flood hazard area? [Thresholds HYD-9 and HYD-10]
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Impact Analysis: The shores of Fiesta Island are in a 100-year flood zone (Zone AE) applicable to coastal environments with wave height less than three feet, which is expected in Mission Bay (see Figure 2-14). The boundary between the AE Zone and the X Zone (outside of 100-year flood zones) is about 3.8 feet above mean sea level (msl). The sites of proposed improvements are outside of 100-year flood hazard areas. Project development would not place people or structures within 100-year flood hazard zones, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.5-5:	Would project development expose people or structures to flood hazards due to the failure of a dam or levee? [Threshold HYD-11]
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Impact Analysis: The southeast edge of the island is in the dam inundation zone of El Capitan Dam, on the San Diego River about 24 miles east of the project site. The inundation area extends north about 875 feet from the southeast shore of the island. Proposed uses in the part of the island in the dam inundation zone are habitat preserve and native vegetation. The project does not propose structures for human occupancy, or

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other improvements such as roadways – that could be damaged by flooding – in the dam inundation area. The project site is not in an area mapped as protected from 100-year floods by levees. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.5-6:	Would the proposed project be subject to flooding due to seiche, tsunami, or mudflow?
	[Threshold HYD-12]

Impact Analysis:

Seiche

Fiesta Island, surrounded by Mission Bay, is not subject to flooding from a seiche originating on the mainland, and there are no existing or proposed water bodies on Fiesta Island that could generate substantial flooding due to a seiche. An earthquake in the region could generate a seiche in Mission Bay. Proposed improvements are all above approximately 3.8 feet above msl. The largest seiche ever measured in San Francisco Bay – after the 1906 earthquake – was four inches high.² Thus, project development would not place people or structures at risk of flooding due to a seiche, and impacts would be less than significant.

Mudflow

A mudflow is a landslide composed of saturated rock debris and soil with a consistency of wet cement. A mudflow which entrains rocks, trees, and other objects is called a *debris flow*. The highest elevation on Fiesta Island is about 25 feet above msl; thus, there are no slopes on the island of sufficient grade and length to generate a mudflow that could pose substantial hazards to people or structures. The mainland shores of Mission Bay are developed with urban land uses and lack steep slopes that could generate a mudflow or debris flow. Project development would not exacerbate an existing mudflow or debris flow hazard, and no impact would occur.

Tsunami

The shores of Fiesta Island are in tsunami inundation zones mapped by the California Emergency Management Agency (see Figure 2-15). The height of tsunami inundation on Fiesta Island is estimated at about 10 feet above msl based on ground surface elevations along the tsunami inundation limits. Proposed buildings and other improvements that could be damaged by flooding would be built outside of the tsunami

² US Army Corps of Engineers San Francisco District, Port of Oakland. 2000, January. Oakland Harbor Navigation Improvement (-50 Foot) Project SCH No. 97072051 Final Environmental Impact Statement/Report, May 1998, Updated January 2000.

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inundation zones. Project development would not place people or structures in tsunami inundation zones, and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

5.5.3 Cumulative Impacts

Surface Water, Drainage, and Flood Hazards

The area considered for cumulative impacts is the Mission Bay Watershed Management Area (WMA), much of which is urbanized. Other projects would increase impervious areas in the WMA. Many types of projects would be required to implement LID BMPs, which mimic the natural hydrology of a site to minimize runoff and infiltrate or treat stormwater at the source, pursuant to the City of San Diego's Storm Water Standards Manual. Most of the WMA is outside of 100-year flood zones. Other projects would comply with provisions regulating developments to minimize flood hazards set forth in SDMC Sections 142.0201 et seq. Cumulative impacts would be less than significant and project impacts would not be cumulatively considerable.

Groundwater

The project site is not over a groundwater basin. Thus, project groundwater impacts would not affect a groundwater basin and would not combine with impacts to a basin to cause substantial cumulative impacts. Cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

Water Quality

The area considered for cumulative water quality impacts is the Mission Bay WMA. Other projects would generate increased amounts of pollutants that could contaminate stormwater. Other projects would be mandated to comply with the City's Storm Water Standards Manual. Many types of projects would be required to implement LID BMPs, which seek to minimize runoff and infiltrate or treat stormwater at the source. Most type of projects would be required to implement site design BMPs, source control BMPs, and storm water pollutant control BMPs (that is, engineered facilities designed to retain, biofilter and/or treat runoff). Water quality impacts would be less than significant after compliance with requirements of the City's Storm Water Standards Manual.

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5.6 LAND USE

This section evaluates the potential impacts to land use in the project area from implementation of the proposed project.

Land use impacts can be either direct or indirect. Direct impacts are those that result in land use incompatibilities, division of neighborhoods or communities, or interference with other land use plans, including habitat or wildlife conservation plans. This section focuses on direct land use impacts. Indirect impacts are secondary effects resulting from land use policy implementation, such as an increase in demand for public utilities or services, or increased traffic on roadways. Indirect impacts are addressed in other sections of this PEIR.

5.6.1 Significance Determination Thresholds

The City's CEQA Significance Thresholds provides guidance to determine potential significant impacts related to land use. Thresholds are modified from the City's CEQA Significance Determination Thresholds to reflect a programmatic analysis for the proposed project. Based on City's thresholds (2016), a significant land use impact could occur if implementation of the proposed project would:

- LU-1 Conflict with the environmental goals, objectives, or guidelines of a Community Plan or General Plan or other adopted land use plan or regulation and, as a result, cause an indirect or secondary environmental impact;
- LU-2 Result in the development or conversion of General Plan- or Community Plan-designated Open Space or Prime Farmland to a more intensive land use, resulting in a physical division of the community;
- LU-3 Result in land uses which are not compatible with an adopted Airport Land Use Compatibility Plan (ALUCP); or
- LU-4 Conflict with the provisions of the City's Multiple Species Conservation Program (MSCP) Subarea Plan or other approved local, regional, or State habitat conservation plan.

5.6.2 Environmental Impacts

The following impact analysis addresses thresholds of significance for disclosing potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

Impact 5.6-1: Would implementation of the proposed project conflict with the environmental goals, objectives, or guidelines of a Community Plan or General Plan or other adopted land use plan or regulation and, as a result, cause an indirect or secondary environmental impact? [Threshold LU-1]

Impact Analysis: Chapter 3.0, *Project Description*, of this PEIR describes the development potential of the proposed project, which includes proposed park use changes, mobility improvements, and design guidance.

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The consistency analysis with implementing the proposed project and the stated goals, objectives, and recommendations of applicable land use plans are addressed on a plan-by-plan basis.

California Coastal Act

The California Coastal Act requires projects within the Coastal Overlay Zone to be consistent with standards and policies addressing public access, recreation, marine environment, land resources, development, and industrial development. The proposed project includes a Local Coastal Program (LCP) Land Use Plan that requires approval by the City, and certification by the CCC. Appendix 5.6-1 of this PEIR compared the proposed project to the policies of the LCP Land Use Plan and determined that the proposed project is consistent with the policies.

SANDAG's San Diego Forward: The Regional Plan

Options A and B

The California legislature passed SB 375 to connect regional transportation planning to land use decisions made at a local level. SB 375 requires the metropolitan planning organizations to prepare a Sustainable Communities Strategy (SCS) in their regional transportation plans to achieve the per capita GHG reduction targets. SANDAG adopted San Diego Forward: The Regional Plan (Regional Plan), which is the region's SCS, on October 8, 2015. The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives to governments and developers for consistency with the SCS. Fiesta Island would remain an open space recreational and conservation area after project implementation under both Options A and B. Subsequently, the proposed project would not interfere with SANDAG's ability to implement the regional strategies outlined in The Regional Plan. Therefore, the proposed project under both Options A and B would be consistent with the Regional Plan.

City of San Diego General Plan

Options A and B

The proposed project is intended to implement General Plan policies in the project area through the provision of project-area-specific recommendations that would further citywide goals and policies, address community needs, leverage capital investment in Mission Bay Park, and guide future use and activity on Fiesta Island. The General Plan contains policies to guide future growth and development in sustainable development patterns while emphasizing the diversity of San Diego's unique communities. The Recreation Element's Community Plan Designated Open Space and Parks Map designates Fiesta Island and the greater Mission Bay Park area as a Resource Based Park. The General Plan promotes the provision of an interconnected recreation and natural resources system and states, "Resource based parks are located at, or centered on, notable natural or man-made features (beaches, canyons, habitat systems, lakes, historic sites, and cultural facilities) and are intended to serve the citywide population, as well as visitors." The proposed project is consistent with this definition. Further consistency of the proposed project with the General Plan is described in Table 5.6-1.

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Table 5.6-1 General Plan Consistency Analysis

Element Goal/Objective/Policy	Analysis
C. Urban Design Element	
Goal: Provide a built environment that respects San Diego's natural environment and climate.	Consistent – The proposed project seeks to preserve and maintain the natural environment on Fiesta Island.
Policies-Natural Features: UD-A.2. Use open space and landscape to define and link communities.	Consistent – The proposed project seeks to preserve and maintain the natural environment on Fiesta Island and provide resource-based park uses and recreation opportunities to serve the citywide population.
E. Public Facilities, Services and Safety Element	
Goal: Protection of public health and safety through abated structural hazards and mitigated risks posed by seismic conditions. Development that avoids inappropriate land uses in identified seismic risk areas.	Consistent – As discussed in Section 5.3, <i>Geologic Conditions</i> , any future structures within the project area would be required to comply with all City structural engineering standards and the California Building Code and would not be located within a seismic risk area.
F. Recreation Element	
Goal: Provision of an inter-connected park and open space system that is integrated into and accessible to the community. Preserve, protect, and enrich natural, cultural, and historic resources that serve as recreation facilities.	Consistent – The proposed project would continue the provision of a wide range of recreational opportunities and natural open space on Fiesta Island.
Goal: An open space and resource-based park system that provides for the preservation and management of natural resources, enhancement of outdoor recreation opportunities, and protection of the public health and safety.	Consistent – The proposed project involves no net loss of land designated as open space within the proposed project area and provides for the continuation of a wide range of recreational opportunities and natural open space on Fiesta Island.
G. Conservation Element	
Climate Change and Sustainability	
Goal: To be prepared for, and able to adapt to adverse climate change impacts.	Consistent – The proposed project would improve the natural landform and open space of Fiesta Island. The proposed project is retaining the sand management area for beach replenishment activities and the road infrastructure will be improved to slope inward to address runoff and reduce beach erosion.
Open Space and Landform Preservation	
Goal: Preservation and long-term management of the natural landforms and open spaces that help make San Diego unique.	Consistent – The proposed project would improve the natural landform and open space of Fiesta Island. It would continue to serve as a unique regional amenity for San Diego.
Coastal Resources	
Goal: Coastal resource preservation and enhancement.	Consistent – The proposed project would improve the site's coastal landscape and would revitalize the health of coastal resources including wetlands and eelgrass habitats.
Goal: Clean coastal waters by continuing to improve the quality of ocean outfall discharges.	Consistent – A major goal of the proposed project is to improve water quality by reducing erosion on the perimeter roadway and by providing hydraulic connectivity under the existing causeway.
Goal: Enhanced public access to the shoreline and coast.	Consistent – The project proposes soft-surface and paved multipurpose paths designed to improve linkages to the beach and between different areas of the island.
Urban Runoff Management	
Goal: Protection and restoration of water bodies, including reservoirs, coastal waters, creeks, bays and wetlands.	Consistent – A main goal of the proposed project is to improve water quality and enhance wetlands. Wetland restoration would occur in the water near the outfall of Tecolote Creek, on the north side of the causeway, and would include a portion of the beach on the island.

5. Environmental Analysis

LAND USE

Table 5.6-1 General Plan Consistency Analysis

Element Goal/Objective/Policy	Analysis
Air Quality	
Goal: Regional air quality which meets state and federal standards.	Consistent – As discussed in EIR Sections 5.2 <i>Air Quality and Odor</i> , the proposed project (both Options A and B) results in a net decrease in emissions and the proposed project encourages multimodal connections.
Goal: Reduction in greenhouse gas emissions effecting climate change.	Consistent – As discussed in EIR Sections 5.4 <i>Greenhouse Gas Emissions</i> , the proposed project (both Options A and B) results in a net decrease in emissions compared to the Adopted Plan and furthers the goal of the Climate Action Plan regarding greenhouse gasses by encouraging connection to transit.
Biological Diversity	
Goal: Preservation of healthy, biologically diverse regional ecosystems and conservation of endangered, threatened, and key sensitive species and their habitats.	Consistent – The proposed project will preserve and expand natural and sensitive habitats that currently exist on Fiesta Island. Further, additional fencing, water quality improvements, and compatibility of uses and buffers will provide greater protection of the ecosystem in and around Fiesta Island and the sensitive species and habitats on Fiesta Island.
Wetlands	
Goal: Preservation of San Diego’s rich biodiversity and heritage through the protection and restoration of wetland resources.	Consistent – The proposed project will preserve and expand natural and sensitive habitats that currently exist on Fiesta Island. Additional fencing, water quality improvements, and compatibility of uses and buffers will provide greater protection of the ecosystem in and around Fiesta Island and the sensitive species and habitats on Fiesta Island.
Goal: Preservation of all existing wetland habitat in San Diego through a “no net loss” approach.	Consistent – There is no net loss of wetlands. The project proposes creation of new wetland habitat that will mitigate any potential wetland impacts. See Section 5.2, <i>Biological Resources</i> , of the PEIR for a discussion of impacts to wetland resources.

Mission Bay Park Master Plan

Options A and B

The Mission Bay Park Master Plan, adopted in 1994 and amended in 2002, serves as the guiding planning policy document for Mission Bay Park. The project area is entirely within Mission Bay Park, which is the recognized community planning area. The Mission Bay Park Master Plan, the policy document governing Mission Bay Park, includes goals and recommendations regarding future commercial, recreational, and environmental uses. Policies in the Mission Bay Park Master Plan address water quality, regional recreation, “natural” recreation areas, wildlife habitats, water recreation, and access and circulation. The proposed project’s consistency with the Mission Bay Park Master Plan is described in Table 5.6-2.

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Table 5.6-2 Mission Bay Park Master Plan Consistency Analysis

Goal/Objective	Analysis
Land Use	
Goal 1: An aquatic-oriented park which provides a diversity of public, commercial and natural land uses for the enjoyment and benefit of all the citizens of San Diego and visitors from outside communities.	Consistent – The project site is surrounded by water and would provide primitive and youth camping, areas for supervised swimming, active parkland, multiuse paths, and lease areas for outdoor recreation.
Goal 2: A park in which land uses are located so as to avoid negative impacts on adjacent areas, providing for ease of access, and according to the particular qualities of different parts of the Bay.	Consistent – The proposed project retains the least tern preserves at the edges of the North Subarea and the Southwest Subarea near the bay water and would limit public access during nesting season with closure fencing and natural berm buffers. The project proposes soft-surface and paved multipurpose paths designed to link different areas of the island together. Existing roadway circulation would also be reconfigured to improve access between uses.
Goal 3: A park which enhances the viability and use of other connected open space areas so as to promote the creation of a comprehensive, integrated open space system.	Consistent – The project proposes to preserve least tern habitat, create biological habitat preserves and wetlands, and revitalize coastal landscape and recreation areas. The core of the island includes sand area with multiuse paths connecting the surrounding active recreation, coastal landscape, and lease areas; the entire island is bordered by sandy beach.
Water Use	
Goal 1: A park in which the water areas are allocated and maintained to support the diverse aquatic interests of those visiting Mission Bay.	Consistent – The proposed project maintains the Youth Aquatic Center at Enchanted Cove and beach access around the island. Additionally, in Option A there will be improved shoreline access to bay waters in the Southwest Subarea through the implementation of an on-site, nonmotorized water craft storage area, improved launching area, and convenient parking for vehicles with trailers for nonmotorized watercraft near the launching point.
Goal 2: A park which provides adequate and safe access to the waters of Mission Bay.	Consistent – The project would maintain existing access to the waters of Mission Bay. One of the goals of the proposed project is to improve safety for cyclists and pedestrians by improving the existing roadway and adding both hard surface and soft surface multiuse trails to access different beach and water areas surrounding the island. Additionally, in Option A the proposed project would provide improved shoreline access to bay waters at the Southwest Subarea through the implementation of a road extension and parking lot with nonmotorized water craft storage area, improved launching area.
Goal 3: A park in which the water areas are maintained to assure the maximum enjoyment of aquatic activities consistent with safety, aesthetic, and environmental concerns.	Consistent – The project would maintain existing access to the waters of Mission Bay. The project proposes to improve water quality by providing hydraulic connectivity under the existing causeway and would maintain access to the beach. The sand area and roadways would be improved to reduce erosion impacts. Additionally, in Option A the proposed project would provide improved shoreline access to bay waters at the Southwest Subarea through the implementation of a road extension and parking lot with nonmotorized water craft storage area, improved launching area.
Goal 4: A park in which water areas are maintained to assure continued navigability for designated uses, and in which adequate shoreline access for water use is maintained.	Consistent – The project does not propose improvements that would compromise navigability of Mission Bay waters, and it would improve shoreline water access through improved beach area, launching areas, and conveniently located parking.

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Table 5.6-2 Mission Bay Park Master Plan Consistency Analysis

Goal/Objective	Analysis
Circulation and Access	
Goal 1: A park which promotes and ensures safe and enjoyable access for all park users and minimizes negative transportation-related impacts on surrounding neighborhoods.	Consistent – The proposed project includes modifications and enhancements to access and circulation on Fiesta Island to improve the flow of traffic on, off, and around the island. The proposed project would construct a roundabout at the western end of the causeway, replacing the existing “Y” configuration. Pedestrian and bicycle paths would be routed around the roundabout. Pedestrians and bicyclists would not interact with vehicles at this entry intersection; both Option A and Option B include a separate Class I multiuse path offset from the loop road and a proposed pedestrian/bicycle bridges that would cross over the entry road and at key connections within the island.
Goal 2: A park that addresses the competing parking needs of area residents, employees, and visitors to Mission Beach, Pacific Beach, and Mission Bay Park, provides necessary parking for park users, and utilizes strategies for protecting neighboring areas from adverse parking impacts.	Consistent – The proposed project includes public parking lots in addition to the existing parking along the park roadway edges and beach areas within Fiesta Island. Special event and overflow parking are also identified as part of the proposed project.
Goal 3: A park which provides a complete, clearly defined and safe (Class 1 bike paths) that ties in with the existing bicycle network for adjoining neighborhoods.	Consistent – Pedestrians and bicyclists would not interact with vehicles at the entry intersection; both Option A and Option B include a separate Class I multiuse path offset from the loop road and a proposed pedestrian/bicycle bridge that would cross over the entry road and at other key location on the Island. On-site bicycle paths would continue to connect to off-site bicycle facilities on East Mission Bay Drive.
Goal 4: A park which provides a path system designed and managed to safely accommodate both pedestrian and non-motorized wheeled circulation.	Consistent – A paved multiuse path with a marked centerline is proposed throughout the island to accommodate pedestrians and bicyclists. In addition to the multiuse path, a compacted soil or decomposed granite side trail on each side of the concrete trail is proposed for use by runners and hikers.
Economics	
Goal 1: A park where private enterprise within appropriate designated areas can prosper in order to support and enhance public use, access, and enjoyment of the Mission Bay Park.	Consistent – The project includes private lease areas that would be used for youth and primitive camping. These would be located within the Central and Southeast Subareas of the island and would be near public beach areas.
Goal 2: A park which generates sufficient revenue to the City to cover public operations and maintenance costs associated with the park and helps finance and maintain public improvements within the park.	Consistent – The project would include private lease areas for youth and primitive camping. These facilities would generate revenue to support public operations and maintenance associated with the park.
Goal 3: A park which uses economic approaches to efficiently manage use of public areas.	Consistent – The project would include lease areas for youth and primitive camping. The island would continue to operate programs and special events that are currently held throughout the year; excess revenues from events would be used to support ongoing park operations.
Goal 4: A park which fairly attributes funding responsibility to those who benefit from the facility or services that is funded.	Consistent – The private lease areas would be used by those who benefit from the park; revenue generated by the lease areas would be used to support park facilities.
Goal 5: A park in which information regarding ecologically sustainable design and management practices are assessed and used as appropriate.	Consistent – A variety of informational signage is proposed throughout the island. Signs may be installed to enhance directional/navigational/wayfinding; create identity/branding; communicate regulatory and operational information; promote education and interpretation; and for other purposes.

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Table 5.6-2 Mission Bay Park Master Plan Consistency Analysis

Goal/Objective	Analysis
Environment	
Goal 1: A park in which aquatic wildlife and natural resources are a major recreational attraction for park users.	Consistent – The park would enhance least tern nesting sites, coastal landscape, habitat preserves, and wetlands. It is anticipated that improvements to the quality of habitat and natural resources would result in increases in aquatic wildlife and ecological viability, which would serve as a recreational attraction for park attendees. The coastal landscape includes trails for hiking and walking providing a compatible use and buffer adjacent to sensitive areas.
Goal 2: A park in which biodiversity is sustained and enhanced through the protection of natural resources and the expansion of habitat areas for sensitive species.	Consistent – The project proposes to enhance existing least tern nesting sites, coastal landscape, habitat preserves, and wetlands. The existing least tern nesting site in the North and Southwest Subareas, along with the existing berm and fencing surrounding it would remain. A wetland habitat area would be expanded adjacent to the least tern nesting site in the North Subarea. The coastal landscape includes trails for hiking and walking providing a compatible use and buffer adjacent to sensitive areas.
Goal 3: A park which supports ongoing education and research related to the Bay's natural resources.	Consistent – A variety of informational signage is proposed throughout the island. Signs may be installed to enhance directional/navigational/wayfinding; create identity/branding; communicate regulatory and operational information; promote education and interpretation; and for other purposes. The site would also continue to support youth camping, which provides greater exposure to natural resources and educational information.
Goal 4: A park in which achieving the highest possible water quality is a planning, design, and management priority.	Consistent – A major goal of the project is to improve water quality by reducing erosion on the perimeter roadway and by providing hydraulic connectivity under the existing causeway.
Goal 5: A park in which traffic, noise, and air pollution sources, particularly those that are not directly related to the aquatic resources of the park, are reduced to the greatest extent possible.	Consistent – The project would implement mitigation for air quality, noise, and traffic impacts during construction and operation of the proposed project that would reduce impacts to a less than significant level.
Aesthetics and Design	
Goal 1: A park whose image, as defined by its landscape architecture, and public works manifests and magnifies its unique and distinctive aquatic nature.	Consistent – The defining aesthetic attributes of the project site are its coastal landscape, natural topography, wetlands, and habitat areas. The proposed project would beautify the site with improvements to its natural resources which would enhance its distinctive aquatic nature.
Goal 2: A park comprising an interconnected system of diverse recreational environments, or "parks within a park."	Consistent – The proposed project would provide multiple coastal landscape areas and a sand arena that are separated by multiuse, soft-surface hiking and paved trails. The layout of the trails onsite would create separate recreational environments that would, in effect, create "parks within a park."
Goal 3: A park that extends beyond its boundaries by offering "image bytes" or encapsulated views of its open waters and landscape to surrounding roadways, neighboring streets and distant viewing points.	Consistent – The project site is surrounded by water on all sides and provides expansive views of water and landscape from all sides.

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Table 5.6-2 Mission Bay Park Master Plan Consistency Analysis

Goal/Objective	Analysis
Fiesta Island	
Goal 1: An area which supports a diversity of regional-serving public and nonprofit recreation and natural resource management and enhancement uses.	Consistent – One of the main goals of the project is to utilize and enhance the unique landscape of Fiesta Island by creating a regional recreation area with a number of active and passive uses. The project proposes to enhance and manage habitat, coastal landscape, and wetlands of the site.
Goal 1.1: An Island whose east side provides for citywide and regional-serving passive recreation uses, forming a unit with the North Pacific Passage and the East Shores area of the Park.	Consistent – The project would provide a mix of natural recreational uses along the east coastline of Fiesta Island, including upland native vegetation, dunes, multiuse trails, picnic and restrooms areas, dog walking, and both existing and proposed habitat.
Goal 1.2: An Island whose west side focuses on the wide beach and its relationship to the water uses on Fiesta Bay, allowing for informal public use of the beach and permitting temporary use as a controlled access special-event view area.	Consistent – The proposed project would provide a mix of parkland recreational uses along the west coastline of Fiesta Island that allow for informal public use of the beach, including general beach and RV day use with beach parking, boat launching, fishing, fire rings, road edge parking, and dog walking.
Goal 1.3: An Island where the landscape design of the east and west sides respects their significance in terms of defining the Park's image to passing and through traffic as well as to Park users.	Consistent – One of the main goals of the project is to utilize and enhance the unique landscape of Fiesta Island along the east and west sides and beautify the site with improvements to its natural coastal landscape, wetlands, and habitat areas as well as active beach recreation areas.
Goal 1.4: An Island which provides for the operation of special events both on land and on adjacent water bodies.	Consistent – The proposed project would provide operation of special events on both land and adjacent water bodies, including Over-the-Line, volleyball, and Thunderboat race viewing.
Goal 1.5: An Island whose southern side provides for public recreational uses complementary to the water use in South Pacific Passage and Hidden Anchorage, and the land use at the South Shores area of the Park.	Consistent – One of the main goals for the proposed project would be to provide improved shoreline access to bay waters along the southern side through the implementation of an on-site, nonmotorized water craft storage area, improved launching area, and convenient parking for vehicles with trailers for nonmotorized watercraft near the launching point (Option A only). These uses would complement the existing water use activities in South Pacific Passage, Hidden Anchorage, and South Shores.
Goal 1.6: An Island which includes a substantial new resource enhancement area, located to the southwest facing across the water to SeaWorld, displacing the current sludge drying beds.	Consistent – The project proposes to create substantial new natural habitat resource enhancement areas throughout Fiesta Island. Proposed resource enhancements in the Southwest Subarea include the restoration of eelgrass off the southeast shore of Stony Point. The existing Stony Point least tern nesting and existing seasonal closure fencing and buffer would remain. Existing uses within the Southwest Subarea no longer include sludge drying beds.
Goal 1.7: An Island which provides for bicycles, other non-motorized forms of circulation, pedestrian circulation, and connection to other park areas.	Consistent – The project proposes mobility improvements that will better link Fiesta Island to Mission Bay Park and beyond as well as provide for safe, efficient and enjoyable access and mobility within and around Fiesta Island. Specifically, the project proposes to widen the causeway to provide right-of-way for both a bike lane, and buffered multipurpose pathway (Recommendation 96); change the direction of the loop road around Fiesta Island to place the bike lane on the inward side of the road, a buffered multipurpose pathway (Recommendation 95); a comprehensive, well-connected series of hard surface multipurpose and soft-surface hiking trails; and a number of bike/pedestrian crossings. The project proposes limited paved parking areas within the Southeast and Southwest

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Table 5.6-2 Mission Bay Park Master Plan Consistency Analysis

Goal/Objective	Analysis
	Subareas and allows parallel parking along the roadways and on the beach.
Goal 1.8: An Island on which pedestrian and other non-motorized circulation is prioritized over automobile circulation.	Consistent – The proposed project includes modifications and enhancements to nonmotorized circulation on Fiesta Island, including pedestrian and bicycle improvements at the entry intersection, a paved multiuse path for pedestrians and cyclists with a marked centerline throughout the island, and a multiuse path of compacted soil or decomposed granite side trail on each side of the concrete trail is proposed for use by runners and hikers.
Goal 1.9: An Island on which special emphasis is placed on using natural landscapes within recreational areas.	Consistent – One of the main goals of the proposed project is to utilize and enhance the unique landscape of Fiesta Island by creating a regional recreation area with a number of active and passive uses. The project proposes to enhance and manage coastal landscape within natural recreation areas throughout the project site.
Goal 1.10: An Island on which the land is graded to increase the area with strong visual connection to the water.	Consistent – Portions of the project site will be graded providing greater visual connection to the water. Specifically, the Central Subarea includes mounding to enhance views surrounding Fiesta Island, and the Southeast and Southwest Subareas include grading offering enhanced views to the east and south.
Goal 1.11: An Island to which the access bridge(s) and/or causeway(s) form an appropriate gateway and aesthetic statement.	Consistent – The proposed project includes improvements to the sole entry point from a causeway extending from East Mission Bay Drive to Fiesta Island Road, including a tower entry monument and consolidated entry signage near the entrance to Fiesta Island.

The proposed project does not propose to change the overall diversity or quality of park uses on Fiesta Island. Therefore, the project is consistent with the goals and objectives of the Mission Bay Park Master Plan.

While the project amends specific design recommendations within the Mission Bay Park Master Plan, it is still consistent with the goals and vision of the Plan. Therefore, the proposed project is not in conflict with the Mission Bay Park Master Plan.

Land Development Code

Options A and B

Zoning for property located in the City of San Diego is governed by the City's Land Development Code (LDC). As shown on Figure 2-4, in Chapter 2, *Environmental Setting*, existing zoning within the project area includes Residential. Generally, portions of the Central, Southeast, and Southwest Subareas are zoned RS-1-7, single-family residential, and the southernmost portion of the Southeast Subarea towards the causeway is zoned multifamily residential, RM-4-10. The area of Fiesta Island north of the RS-1-7 zoned land has no identified zoning classification.

Chapter 13, Article 2, Division 04 of the LDC regulates development and intensity of uses within residential zones. Public parks and open space are permitted uses within both RS-1-7 and RM-4-10 zones. As the changes in park use associated with the proposed project would still be considered regional recreation and/or

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natural open space, no changes to zoning are proposed. Therefore, the proposed project would not conflict with the zoning provisions of the LDC.

Environmentally Sensitive Lands Regulations

Sensitive Vegetation Communities

The tiers ranking vegetation communities in Section 5.2, *Biological Resources*, Tables 5.2-6 and 5.2-7, are from the City's Environmentally Sensitive Lands (ESL) Regulations. Mitigation ratios required in that section (see Mitigation Measures BIO-1 and BIO-5) follow the ESL Regulations.

Wetlands (Option A and Option B)

The City's ESL Regulations state that impacts to wetlands shall be avoided and only the uses identified in Section 143.0130(d) of the ESL Regulations shall be permitted; these are limited to aquaculture, nature study projects or similar resource dependent uses, wetland restoration projects, and incidental public service projects. Such impacts to wetlands shall occur only if they are unavoidable, under the least environmentally damaging feasible alternative, and with adequate mitigation. While the concept plans for Options A and B show permanent impacts to City wetlands (southern coastal salt marsh, saltpan/mudflats, beach, open water, and eelgrass beds [the latter two only from Option A]), it is possible that project-specific designs may avoid some or all of these impacts. If not, mitigation would be required, and implementation of Mitigation Measure BIO-6 would ensure that impacts are reduced to less-than-significant levels. Deviations from the ESL Regulations within the Coastal Overlay Zone shall be approved only after the decision maker makes an economically viable use determination and findings pursuant to the City's Municipal Code (SDMC) Section 126.0708(e).

Temporary impacts to City wetlands from wetland creation/restoration would be permitted under the ESL Regulations, and they are considered less than significant because the impacted areas would be immediately followed by planting, and there would be no significant temporal loss of habitat (see the impact analyses for Impacts 5.2-1 and 5.2-4 for more information). Additionally, the temporary impact would result in a permanent, beneficial result with more wetland acreage on the island.

City of San Diego Biology Guidelines

The improvements proposed as part of the project would require an amendment to the existing Mission Bay Park Master Plan. Due to current regulations, findings must be made to reflect the proposed project's potential impacts to biological resources, (including ESL Regulations categories of Multi-Habitat Planning Area [MHPA] and wetlands), and mitigation must be proposed before an amendment can occur.

Temporary impacts to these resources that would be caused by wetland habitat creation/restoration (which includes impacts to plant, invertebrate, and fish life associated with the eelgrass beds) would be less than significant because:

- The proposed entrance causeway supports the objective of high-water quality by allowing water to flow from the higher quality water areas south of the causeway to lower quality water areas to the north while

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preventing reverse flow, which would benefit the eelgrass beds and the plant, invertebrate, and fish life associated with them;

- The proposed project includes the creation of new eelgrass beds along the southwestern shore of the island in the Southwest Subarea; and
- The impact would be immediately followed by planting; therefore, there would be no significant temporal loss of habitat.

The City's Biology Guidelines do not differentiate between temporary and permanent impacts for mitigation purposes. For this project, temporary impacts would be impacts where existing mitigable or immitigable habitat types would be removed and replaced with higher quality habitat and/or increased acreage by the project. Temporary impacts to these habitat areas are significant but mitigated to below a level of significance with replacement in kind. The precise amount of mitigation (for both permanent and temporary impacts) and the location of mitigation areas will be developed as part of Mitigation Measure BIO-1 and must be completed prior to the start of any construction and grading activities.

The creation/restoration of habitat as mitigation shall be described in a mitigation plan (see Mitigation Measure BIO-1 in Section 5.2) following the outline provided in the City's Biology Guidelines. The mitigation plan shall include success criteria which must be met, as well as maintenance and monitoring requirements for typically up to five years following completion of the initial planting program.

Climate Action Plan

Options A and B

One of the five primary strategies identified in the Climate Action Plan (CAP) is to implement bicycling, walking, transit, and land use strategies that promote increased development capacity for transit-supportive residential and employment densities and provide more walking and biking opportunities in Transit Priority Areas (TPAs). Portions of the project area are located within a TPA. Specifically, portions of the eastern edge of the planning area are located within a TPA including a small portion of the North and Southeast Subareas. Mobility improvements associated with the proposed project including implementing a comprehensive system of bicycle and pedestrian trails throughout Fiesta Island and widening the causeway at the entrance to Fiesta Island to provide for both a bike lane and buffered multi-purpose bicycle and pedestrian pathway. These improvements are consistent with CAP land use and mobility strategies.

San Diego River Park Master Plan

Options A and B

The San Diego River Park Master Plan contains policy recommendations that are categorized as either General (for the entire River Park Area) or Specific (for a particular reach such as the Confluence or Upper Valley).

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The General Recommendations are divided into five objective categories: (1) Restore and maintain a healthy river system; (2) Unify fragmented lands and habitats; (3) Create a connected continuum, with a sequence of unique places and experiences; (4) Reveal the river valley history; and (5) Reorient development toward the river to create value and opportunities for people to embrace the river.

As the proposed project is adjacent to the Estuary reach of the San Diego River, the proposed project would comply with the General and Specific Recommendations for the Estuary reach and therefore would be consistent with applicable General and Specific Recommendations.

Conclusion

The proposed project under both Options A and B would result in improvements to the existing open space recreational amenities and infrastructure and would result in improvements to land conservation on Fiesta Island. The proposed project is consistent with the City's overarching policy and regulatory documents, including the General Plan, Mission Bay Park Master Plan, LDC, Biology Guidelines, CAP, and the San Diego River Park Master Plan. Furthermore, the proposed project is also consistent with the California Coastal Act and SANDAG's San Diego Forward: The Regional Plan. Therefore, the proposed project would not conflict with the environmental goals, objectives, or guidelines of a Community Plan (Mission Bay Park Master Plan), General Plan, or other adopted land use plan or regulation and impacts would be less than significant.

Mitigation Measures

No Mitigation Measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.6-2:	Would implementation of the proposed project result in the development or conversion of General Plan– or Community Plan–designated Open Space or Prime Farmland to a more intensive land use, resulting in a physical division of the community? [Threshold LU-2]
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Impact Analysis: Portions of Fiesta Island are designated as Open Space. However, there is no designated Prime Farmland within or adjacent to the project area. The proposed project does not include the development or redesignation of Open Space areas, but rather involves the expansion and enhancement of habitat and Open Space areas. The proposed project would include a number of park improvements which would not result in the physical division of the community. Therefore, impacts associated with the development or conversion of General Plan or community plan-designated Open Space or Prime Farmland to a more intensive land use would be less than significant, and no mitigation is required.

Mitigation Measures

No mitigation measures are required.

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Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.6-3: Would implementation of the proposed project result in land uses which are not compatible with an adopted Airport Land Use Compatibility Plan (ALUCP)? [Threshold LU-3]

Impact Analysis: The planning area is located within the Airport Influence Area - Review Area 2 for the San Diego International Airport (SDIA), which is defined by the combination of airspace protection and overflight boundaries beyond Review Area 1. Only airspace protection and overflight policies and standards apply within Review Area 2. Review by the San Diego County Regional Airport Authority (Airport Authority) is required for land use plans and regulations within Review Area 2 that propose increases in height limits and other projects that may present a hazard, as defined in the ALUCP. Permitted structure heights on Fiesta Island range from about 225 feet above mean sea level (msl) at the southeast edge of the island to 367 feet above msl in the central part of the island. Proposed structures include restrooms, maintenance buildings, playgrounds, a lifeguard tower, and other recreational amenities. Elevations on Fiesta Island range up to about 25 feet above msl. Proposed structures would be one story and would be well below heights permitted under FAA regulations. Development of the proposed project would not result in hazards related to glare, lighting, electromagnetic interference, dust, water vapor, smoke, thermal plumes, and bird attractants.

The proposed project would not develop residential land uses, and thus no overflight notifications would be required.

All future park development would be subject to review and consistency with SDIA's ALUCP's policies and standards. Therefore, the proposed project would not result in land uses that are incompatible with an adopted ALUCP and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.6-4: Would the proposed project conflict with the provisions of the City's Multiple Species Conservation Program (MSCP) Subarea Plan or other approved local, regional, or State habitat conservation plan? [Threshold LU-4]

Impact Analysis: Please see Impact 5.2-5 in Section 5.2, *Biological Resources*, for a discussion of the proposed project's consistency with the City's MSCP Subarea Plan and other approved local, regional, or State habitat conservation plans.

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Mitigation Measures

Please see Impact 5.2-5 in Section 5.2, *Biological Resources*, for a discussion of the proposed project's consistency with the City's MSCP Subarea Plan and other approved local, regional, or State habitat conservation plans.

Level of Significance after Mitigation

Impacts would be less than significant.

5.6.3 Cumulative Impacts

The geographic scope of cumulative impact analysis for this issue would be Mission Bay Park. As a general rule, and as stated in the City's CEQA Significance Determination Thresholds for land use, projects that are consistent and compatible with the surrounding land uses and the applicable adopted plans and regulations should not result in land use impacts. As detailed in this section and Impact 5.2-5 in Section 5.2, the proposed project is consistent with applicable land use and habitat conservation plans such as the General Plan, the Mission Bay Park Master Plan, and the MSCP. The proposed project is also consistent with applicable regulations such as the California Coastal Act and the City's LDC. Subsequent projects implemented under the proposed project could have the potential to result in land use adjacency conflicts with the MHPA; however, the mitigation framework identified throughout this PEIR would ensure each subsequent project would reduce these conflicts to a less than significant level.

As the proposed project would be consistent with the existing land use and would not conflict with existing land use plans for the area, it would not contribute to a cumulative impact related to land use. Cumulative projects in the area would be required to evaluate land use impacts, consider applicable General Plan goals and policies, and mitigate significant land use impacts. For these reasons, cumulative land use impacts would be less than significant.

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5.7 NOISE

This section discusses the potential noise impacts that would result from implementation of the proposed project. This section reviews noise levels at existing receptor locations, evaluates potential noise impacts associated with the proposed project, and provides mitigation to reduce noise impacts at sensitive receptors. This evaluation uses procedures and methodologies as specified by the California Department of Transportation (Caltrans), the Federal Highway Administration (FHWA), and the Federal Transit Administration (FTA) (see Appendix 5.7-1).

5.7.1 Existing Conditions

The existing regional environmental setting and regulatory framework are summarized in Chapters 2.0 and 4.0, respectively. The specific noise conditions for the project area are discussed in the following sections.

5.7.1.1 NOISE MEASUREMENTS

Ambient noise monitoring was conducted by PlaceWorks in August and September of 2017, during weekend periods when recreation on Fiesta Island is expected to be the most active. Long-term (24-hour) measurements were conducted at two locations on the island, from Saturday, August 19th through Sunday, August 20th. Short-term (15-minute) measurements were conducted at six locations around the island on Saturday, September 2nd (see Appendix 5.7-1). The primary noise sources around the project area include boats, jet-skis, RV idling and/or generators, dogs barking, car/portable stereos, aircraft flyovers; and at some locations, distant highway noise. Rustling vegetation and surf noise was also noted throughout the site visit. Meteorological conditions during the measurement periods were favorable for outdoor sound measurements and were noted to be representative of typical conditions for the season. Generally, conditions included clear skies, daytime temperatures from 72 to 87 degrees Fahrenheit (°F), and winds between 2 to 6 miles per hour (mph).

Long-term noise monitoring was performed using a Larson-Davis Model 814 Sound Level Meter and a Larson-Davis Model 820 Sound Level Meter. Short-term noise monitoring was performed using a Larson-Davis Model 820 Sound Level Meter. All sound level meters used for noise monitoring satisfy the American National Standards Institute (ANSI) Standard S1.3 for Type 1 general environmental noise measurement instrumentation. The sound level meters were programmed to acquire noise levels with the “slow” time constant and using the “A” weighting filter network. The meters were field calibrated immediately prior to the first set of readings. The calibration was rechecked immediately after the conclusion of the readings and no notable meter “drift” was noted (i.e. less than ½ dB deviation). For the long-term measurements, the microphone was mounted to street signs approximately 5 feet above the ground. For the short-term samples, the sound level meter and microphone were mounted on a tripod 5 feet above the ground. All sound level meters were equipped with a windscreen during measurements. Noise measurement locations are described below and shown in Figure 5.7-1, *Ambient Noise Measurement Locations*.

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- **Long-Term Location 1 (LT-1):** LT-1 was located near the beach along the north side of Hidden Anchorage Bay. The noise monitor was positioned on the north side of the street and was attached to a street sign. A 24-hour noise measurement was taken beginning at 2:00 PM on Saturday, August 19th, at which time the air temperature was 84°F with 53% relative humidity (RH), and winds were light (1 to 2 mph). The noise environment of this site was characterized primarily by vehicle drive-bys, boat traffic, and people talking on the beach. Aircraft noise also affected the noise environment at this measurement location.
- **Long-Term Location 2 (LT-2):** LT-2 was located along Fiesta Island Road, just north of the bridge connecting the island to the mainland. The noise monitor was attached to a street sign on the west side of the road. A 24-hour noise measurement was taken beginning at 12:31 PM on Saturday, August 19th, at which time the air temperature was 81°F with 57% RH, and winds were calm at about 1.5 mph. The noise environment of this site was characterized primarily by vehicle drive-bys, distant roadway noise from I-5, and by beach activity.
- **Short-Term Location 1 (ST-1):** ST-1 was located at the north side of Enchanted Cove, across the street from the beach. Fifteen minutes of noise measurements were taken beginning at 9:08 AM on Saturday, September 2nd, at which time the air temperature was 79°F with 69% RH, and winds were calm at approximately 1 to 2 mph. The noise environment around this monitoring location was comprised of car stereos, boat traffic, cyclists, and aircraft flyovers.
- **Short-Term Location 2 (ST-2):** ST-2 was located near the southernmost point on the island, on the east side of Hidden Anchorage Bay. Fifteen minutes of noise measurements were taken at 11:59 AM on Saturday, September 2nd, at which time the air temperature was 82°F with 66% RH, and winds were light at approximately 5 to 6 mph. The noise environment of this site was dominated by beach activity (i.e. people talking, and music), vehicle drive-bys, and boat traffic.
- **Short-Term Location 3 (ST-3):** ST-3 was located on the southern part of the island, on the west side of Hidden Anchorage Bay. Fifteen minutes of noise measurements were taken at 11:20 AM on Saturday, September 2nd, at which time the air temperature was 85°F with 72% RH, and winds were light at approximately 5 mph. The noise environment of this site was dominated by beach activity (i.e. people talking, dogs barking, and music), boat traffic, and distant noise from SeaWorld attractions (on the opposite side of the water).
- **Short-Term Location 4 (ST-4):** ST-4 was located on the northwest side of the island on the beach. Fifteen minutes of noise measurements were taken beginning at 9:56 AM on Saturday, September 2nd, at which time the air temperature was 88°F with 66% RH, and winds were calm at about 3 mph. The noise environment of this site was primarily dominated by RV generators, boats, and beach activity (i.e. people talking, dogs barking, and music).

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Figure 5.7-1 Ambient Noise Measurement Locations



Source: Google Earth Pro, 2017

PlaceWorks

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- **Short-Term Location 5 (ST-5):** ST-5 was located in an open space area near the center of the island, setback approximately 550 feet from the beach to the west. Fifteen minutes of noise measurements were taken at 10:20 AM on Saturday, September 2nd, at which time the air temperature was 79°F with 83% RH, and winds were light at approximately 3 to 4 mph. The noise environment of this site was comprised of people talking, dogs barking, and distant boat traffic.
- **Short-Term Location 6 (ST-6):** ST-6 was located near the southern portion of the island's western beach. Fifteen minutes of noise measurements were taken at 10:47 AM on Saturday, September 2nd, at which time the air temperature was 77°F with 81% RH, and winds were light at about 5 to 6 mph. The noise environment of this site was dominated by boat traffic and beach activity (i.e. people talking, dogs barking, and music).

Summary of Ambient Noise Measurement

During the ambient noise survey, the 24-hour, energy-average (L_{eq}) noise levels within the project area, as measured during the long-term noise measurements, ranged from 44 to 66 dBA L_{eq} . The daytime L_{eq} noise levels within the project area, as measured during the short-term noise measurements, ranged from 56 to 62 dBA L_{eq} . The noise measurement results are summarized in Table 5.7-1, *Noise Measurements Summary, dBA*, and are included in Appendix 5.7-1.

Table 5.7-1 Noise Measurements Summary, dBA

Long-term Measurements Summary					
Monitoring Location	Description	CNEL	Lowest L_{eq} 1-hr	L_{eq} 24-hr	Highest L_{eq} 1-hr
LT-1	Hidden Anchorage	65	44	61	66
LT-2	East side of island, north of bridge	63	51	60	63
Short-term Measurements Summary					
Monitoring Location	Description	L_{min}	L_{eq}	L_{max}	
ST-1	Enchanted Cove	46	56	70	
ST-2	Southern part of island, east of Hidden Anchorage	51	57	65	
ST-3	Southern part of island, west of Hidden Anchorage	54	57	63	
ST-4	Northwest beach	51	58	67	
ST-5	Center of island	51	56	68	
ST-6	Southern side of western beach	59	62	75	

Long-term (24-hour) noise measurements were conducted by PlaceWorks staff from August 19-20, 2017; LT-1 used a Larson-Davis 814 Sound Level Meter and LT-2 used a Larson-Davis 820 Sound Level Meter.
Short-term (15-minute) noise measurements were conducted by PlaceWorks staff on September 2, 2017, with a Larson-Davis 820 Sound Level Meter.

The noise environment in the project area is typical for a recreational area. Monitoring locations that experienced higher noise levels were exposed to boat traffic, or distant major transportation noise such as I-5, rail noise, or aircraft flyovers. The time-averaged sound level in the project area ranged from 56 to 62 dBA L_{eq} .

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5.7.1.2 EXISTING VEHICLE TRAFFIC NOISE

Vehicular traffic noise is directly related to traffic volume, speed, and the mix of vehicle types. The most common sources of transportation noise in the project area are from vehicles traveling on I-5 and adjacent roadways including Sea World Drive, Friars Road, and East Mission Bay Drive. Noise levels for existing conditions along analyzed roadways are presented in Table 5.7-2, *Existing Conditions Traffic Noise Levels*.

Table 5.7-2 Existing Conditions Traffic Noise Levels

Roadway	Segment	Daily Traffic Volumes	Noise Level at 50 Feet (dBA CNEL)	Distance to Noise Contour (feet)		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
Sea World Dr.	Mission Bay Pkwy to Friars Rd.	36,178	73.8	90	194	417
Sea World Dr.	Friars Rd to E. Mission Bay Dr.	32,573	73.4	84	181	389
Sea World Dr.	E. Mission Bay Dr. to I-5 Ramps	37,188	73.9	92	197	425
E. Mission Bay Dr.	Sea World Dr. to Fiesta Island Rd.	11,521	68.7	41	88	189
Friars Rd.	East of Sea World Dr.	10,985	68.6	41	87	188
Fiesta Island Rd.	Inbound / Westbound	3,818	59.6	10	22	47
Fiesta Island Rd.	Outbound / Eastbound	3,621	59.4	10	21	46
I-5	Mission Bay Dr. / Sea World Dr.	232,823	86.6	640	1379	2971

Source: FHWA Highway Traffic Noise Prediction Model based on traffic volumes provided by STC Traffic, Inc. (July 2017). Calculations are included in Appendix 5.7-1.

5.7.1.3 EXISTING AIRCRAFT NOISE

San Diego International Airport (SDIA) is located south of the project area and aircrafts departing westbound from SDIA can be heard throughout the project area. Aircraft noise is evaluated based on the noise contours developed by the San Diego County Regional Airport Authority and provided in the ALUCP for SDIA (San Diego County Regional Airport Authority 2014). The project area is located outside of the 60 dB CNEL aircraft noise contour. The projected aircraft noise contours provided in the ALUCP are based on year 2030 forecasted noise exposure. Aircraft noise contours for 2035 are expected to be identical to those shown in the ALUCP, provided that no major changes occur with respect to aircraft types using SDIA, terminal capacities, or FAA flight paths and patterns.

5.7.1.4 EXISTING STATIONARY NOISE

Stationary sources of noise within the project area are typical for a park and recreational land use and include people talking; yelling during high-intensity activities such as sports; parking lot activity; and vehicle travel along roadways. Ambient noise may also include noise from rustling vegetation, birds chirping, or other wildlife noise. Boat activity off the shores of Fiesta Island also generates substantial noise within the project area. Noise generated from these sources is sporadic, highly variable, and spatially distributed throughout the area. Stationary noise sources within the project area are regulated through the SDMC.

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5.7.2 Significance Determination Thresholds

The City's CEQA Significance Determination Thresholds (2016) provide guidance to determine the potential significant impacts related to noise. Thresholds are modified from the City's CEQA Significance Determination Thresholds to reflect a programmatic analysis for the proposed project. Based on the City's thresholds, a significant noise impact would occur if implementation of the proposed project would:

- N-1 Result in or create a significant increase in the existing ambient noise levels;
- N-2 Expose people to significant temporary construction noise;
- N-3 Expose people to noise levels which exceed property line limits established in the Noise Abatement and Control Ordinance of the Municipal Code;
- N-4 Expose people to current or future transportation noise levels which exceed guidelines established in the Noise Element of the General Plan;
- N-5 Result in land uses which are not compatible with aircraft noise levels as defined by an adopted Airport Land Use Compatibility Plan (ALUCP).

5.7.2.1 NOISE

Thresholds used to determine the significance of noise impacts are based on standards in the City's General Plan Noise Element, the Noise Abatement and Control Ordinance (SDMC Section 59.5.0101 et seq.), and the Traffic Noise Significance Thresholds located in the City's CEQA Significance Determination Thresholds as described in Chapter 4, *Regulatory Framework*.

5.7.2.2 VIBRATION AND GROUNDBORNE NOISE

While the City has not established vibration and groundborne noise standards, publications of the Federal Transit Administration (FTA) provides guidance for the analysis of environmental impacts due to groundborne noise and vibration relating to transportation and construction projects. The construction-focused guidelines identify that an impact would occur if construction activities generate vibration that is strong enough to (a) cause undue annoyance at sensitive receptors or (b) physically damage buildings. A significant vibration impact would occur where structures or human receivers would be exposed to the respective damage and annoyance thresholds, measured in VdB and PPV (in inches/second), listed in Table 5.7-3 and Table 5.7-4.

Vibration-Related Human Annoyance

The human reaction to various levels of vibration is highly subjective and varies from person to person. Table 5.7-3 shows the FTA's vibration criteria to evaluate vibration-related annoyance due to resonances of the structural components of a building. These criteria are based on extensive research that suggests humans are sensitive to vibration velocities in the range of 8 to 80 Hz. For construction activities—presumed to occur only during daytime hours—the threshold would be 78 VdB at residential land uses.

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Table 5.7-3 Groundborne Vibration Criteria: Human Annoyance

Land Use Category	Maximum Vibration Level (VdB)	Description
Workshop	90	Distinctly felt vibration. Appropriate to workshops and non-sensitive areas
Office	84	Felt vibration. Appropriate to offices and non-sensitive areas.
Residential – Daytime	78	Barely felt vibration. Adequate for computer equipment.
Residential – Nighttime	72	Vibration not felt, but groundborne noise may be audible inside quiet rooms.

Source: FTA 2006.

Maximum Vibration Level (in VdB) is the RMS velocity level in decibels, as measured in 1/3-octave bands of frequency over the frequency ranges of 8 to 80 Hz. RMS is the abbreviation for root-mean-square.

Vibration-Related Architectural Damage

The level at which groundborne vibration is strong enough to cause architectural damage has not been determined conclusively. However, structures amplify groundborne vibration, and wood-frame buildings such as typical residential structures are more affected by ground vibration than heavier buildings. The most conservative estimates are reflected in the FTA standards, shown in Table 5.7-4.¹

Table 5.7-4 Groundborne Vibration Criteria: Architectural Damage

Building Category	PPV (in/sec)	VdB
I. Reinforced concrete, steel, or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremely susceptible to vibration damage	0.12	90

Source: FTA 2006.

Lv (VdB): Lv is the velocity level in decibels, as measured in 1/3-octave bands of frequency over the frequency ranges of 8 to 80 Hz.

5.7.3 Methodology

5.7.3.1 VEHICLE TRAFFIC NOISE

Average daily traffic volumes were based on the existing daily traffic volumes calculated using peak hour intersection movements provided by STC Traffic, Inc. (STC, 2017). The traffic noise levels were estimated using the FHWA Highway Traffic Noise Prediction Model. The FHWA model determines a predicted noise level through a series of adjustments to a reference sound level. These adjustments account for traffic flows, vehicle speeds, car/truck mix, distances from the roadway, length of exposed roadway, road width, and noise shielding. Vehicle speeds on each roadway were assumed to be the posted speed limit, and no reduction in speed was assigned due to congested traffic flows. Current roadway characteristics, such as the number of lanes and speed limits, were determined from field observations and according to roadway classification. The distances to the 70, 65, and 60 CNEL contours for selected roadway segments in the vicinity of the project area are included in Appendix 5.7-1.

¹ Since the potential architectural damage to structures is directly related to the amount of vibrational energy being transmitted through the ground to the receptor structure, this assessment uses the maximum vibration velocity – in terms of the Peak Particle Velocity (PPV) metric [in inches/second].

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5.7.4 Environmental Impacts

The following impact analysis addresses the thresholds of significance identified above. The applicable thresholds are identified in brackets after the impact description statement.

Impact 5.7-1: Would implementation of the proposed project result in or create a significant increase in the existing ambient noise levels? [Threshold N-1]

Impact Analysis: As discussed in Section 5.7.1.1, Noise Measurements, an existing noise measurement survey was conducted in the project area to identify ambient noise conditions (shown in Table 5.7-1 and 5.7-2).

Stationary Noise Sources

For the purposes of this analysis, the differences between plans for Option A and Option B for the Southwest Subarea are minor enough that noise levels produced by stationary sources, such as people talking, radios, yelling during high-intensity activities, dogs barking, and parking lot activity, would not notably differ for this discussion. Improvements and new features associated with implementation of the proposed project could increase the number of park visitors compared to existing conditions. The potential increase in the number of park visitors may result in increased, but localized, noise generation from stationary sources and vehicle travel along roadways. Increased visitation could also increase boat activity within Mission Bay, however, excessive boat noise is controlled by the California Harbors and Navigation Code (HNC) Section 654.06, which limits the noise generation of individual motorized recreational vessels. Noise generated by visitors on Fiesta Island would be sporadic, highly variable, and spatially distributed throughout the project area.

In general, increased visitor activity would not be expected to increase the hourly- or daily- average sound level with respect to current conditions. Special events that would draw large crowds, such as Over-the-Line tournaments, could contribute noticeably to the ambient noise environment. However, special events would be subject to Noise Element Policy NE-H.1 of the General Plan and must comply with the City's Special Events Ordinance. Furthermore, the nearest sensitive receptors are located more than 1,000 feet off the shore of Fiesta Island and, at these distances, it is not expected that they will be exposed to noise generated within the project area.

Given that increased visitor activity would not substantially change hourly or daily average sound levels, special events are required to comply with the City's Special Events Ordinance, and the large distance between the project area and off-site sensitive receptors, impacts related to ambient noise level increases at nearby noise-sensitive receptors would be less than significant.

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Noise Impacts to Sensitive Wildlife

The City's significance thresholds include noise limits in areas that could potentially affect sensitive wildlife. Developments near the MHPA² may require mitigation to reduce noise to less than significant levels. Similarly, developments near areas occupied by the California Gnatcatcher, Least Bell's Vireo, Southern Willow Flycatcher, Least Tern, Cactus Wren, Tricolored Blackbird or the Western Snowy Plover, may also require mitigation to reduce noise to less than significant levels. Noise impacts to the MHPA and sensitive avian species are discussed in greater detail in Section 5.2, *Biological Resources* and mitigation measures are given that section. Impacts would be less than significant.

Traffic Noise

A significant impact would occur if implementation of the proposed project would result in traffic noise levels that exceed the City's Traffic Noise Significance Thresholds. If the studied roadway exceeds the significance thresholds for traffic noise, then an increase attributed to the project of less than 3 dB is not considered significant.

Future development in accordance with the proposed project would increase traffic along local roadways. As there are two alternative plans for the Southwest Subarea, separate analyses have been completed for buildout of the proposed project in accordance with Option A and Option B.

Table 5.7-5, *Existing Year – Traffic Noise Increases with Option A Buildout*, presents the noise level increases on roadways from the existing conditions to the existing plus Option A conditions. Table 5.7-6, *Future (2050) – Traffic Noise Increases with Option A Buildout* presents the noise level increases on roadways from 2050 baseline conditions to 2050 plus Option A conditions (project contribution) and from the existing conditions to 2050 plus Option A conditions (overall increase). The "2050 Plus Option A" traffic noise levels include the effects of future regional ambient growth and growth due to the proposed project if Option A is adopted for the Southwest Subarea (STC Traffic, July 2017).

² San Diego General Plan Conservation Element

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Table 5.7-5 Existing Year – Traffic Noise Increases with Option A Buildout

Roadway	Segment	dBA CNEL at 50 ft. ¹		
		Existing Conditions	Existing plus Option A	Project Contribution
Sea World Drive	Mission Bay Pkwy to Friars Rd	73.8	73.8	0.0
Sea World Drive	Friars Rd to E. Mission Bay Drive	73.4	73.4	0.0
Sea World Drive	E. Mission Bay Drive to I-5 Ramps	73.9	74.0	0.0
E. Mission Bay Drive	Sea World Dr to Fiesta Island Rd	68.7	68.9	0.3
Friars Road	East of Sea World Dr	68.6	68.7	0.1
Fiesta Island Road	Inbound / Westbound	59.6	60.2	0.5
Fiesta Island Road	Outbound / Eastbound	59.4	60.0	0.6

Source: FHWA Highway Traffic Noise Prediction Model based on traffic volumes provided by STC Traffic (July 2017). Calculations in Appendix 5.7-1.
Project contribution is equal to the difference between the existing conditions plus Option A scenario and the existing conditions scenario (i.e. project only increase).

¹ Measured at 50 feet from the centerline of each roadway segment.

Table 5.7-6 Future (2050) – Traffic Noise Increases with Option A Buildout

Roadway	Segment	dBA CNEL at 50 ft. ¹			
		Future (2050) Conditions	2050 Plus Option A	Project Contribution	Overall Increase
Sea World Drive	Mission Bay Pkwy to Friars Rd	75.5	75.5	0.0	1.7
Sea World Drive	Friars Rd to E. Mission Bay Drive	74.6	74.7	0.0	1.3
Sea World Drive	E. Mission Bay Drive to I-5 Ramps	74.2	74.2	0.0	0.3
E. Mission Bay Drive	Sea World Dr to Fiesta Island Rd	69.5	69.7	0.2	1.0
Friars Road	East of Sea World Dr	71.1	71.2	0.0	2.5
Fiesta Island Road	Inbound / Westbound	60.2	60.7	0.5	1.0
Fiesta Island Road	Outbound / Eastbound	59.9	60.4	0.5	1.0

Source: FHWA Highway Traffic Noise Prediction Model based on traffic volumes provided by STC Traffic (July 2017). Calculations in Appendix 5.7-1.

Overall increase is equal to the difference between 2050 plus Option A scenario and the existing conditions scenario.

¹ Measured at 50 feet from the centerline of each roadway segment.

Table 5.7-5 and Table 5.7-6 show that increases due to implementation of the proposed project plus Option A would increase traffic noise levels in the range of 0.0 to 0.5 dBA CNEL; the overall increase between existing conditions and 2050 plus Option A conditions ranges from 0.3 to 2.5 dBA CNEL.

Table 5.7-7, *Existing Year – Traffic Noise Increases with Option B Buildout*, presents the noise level increases on roadways from the existing conditions to the existing plus Option B conditions. Table 5.7-8, *Future (2050) – Traffic Noise Increases with Option B Buildout* presents the noise level increases on roadways from 2050 baseline conditions to 2050 plus Option B conditions (project contribution) and from existing conditions to 2050 plus Option B conditions (overall increase). The “2050 Plus Option B” traffic noise levels include the effects of

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future regional ambient growth and growth due to the proposed project if Option B is adopted for the Southwest Subarea (STC Traffic, July 2017).

Table 5.7-7 Existing Year – Traffic Noise Increases with Option B Buildout

Roadway	Segment	dBA CNEL at 50 ft. ¹		
		Existing Conditions	Existing plus Option B	Project Contribution
Sea World Drive	Mission Bay Pkwy to Friars Rd	73.8	73.8	0.0
Sea World Drive	Friars Rd to E. Mission Bay Drive	73.4	73.4	0.0
Sea World Drive	E. Mission Bay Drive to I-5 Ramps	73.9	74.0	0.0
E. Mission Bay Drive	Sea World Dr to Fiesta Island Rd	68.7	68.8	0.2
Friars Road	East of Sea World Dr	68.6	68.7	0.0
Fiesta Island Road	Inbound / Westbound	59.6	60.0	0.3
Fiesta Island Road	Outbound / Eastbound	59.4	59.7	0.3

Source: FHWA Highway Traffic Noise Prediction Model based on traffic volumes provided by STC Traffic (July 2017). Calculations in Appendix 5.7-1.

Project contribution is equal to the difference between the existing conditions plus Option B scenario and the existing conditions scenario (i.e. project only increase).

¹ Measured at 50 feet from the centerline of each roadway segment.

Table 5.7-8 Future (2050) – Traffic Noise Increases with Option B Buildout

Roadway	Segment	dBA CNEL at 50 ft. ¹			
		Future (2050) Conditions	2050 Plus Option B	Project Contribution	Overall Increase
Sea World Drive	Mission Bay Pkwy to Friars Rd	75.5	75.5	0.0	1.7
Sea World Drive	Friars Rd to E. Mission Bay Drive	74.6	74.6	0.0	1.3
Sea World Drive	E. Mission Bay Drive to I-5 Ramps	74.2	74.2	0.0	0.3
E. Mission Bay Drive	Sea World Dr to Fiesta Island Rd	69.5	69.6	0.1	0.9
Friars Road	East of Sea World Dr	71.1	71.2	0.0	2.5
Fiesta Island Road	Inbound / Westbound	60.2	60.5	0.3	0.8
Fiesta Island Road	Outbound / Eastbound	59.9	60.2	0.3	0.9

Source: FHWA Highway Traffic Noise Prediction Model based on traffic volumes provided by STC Traffic (July 2017). Calculations in Appendix 5.7-1.

Overall increase is equal to the difference between the 2050 plus Option B scenario and the existing conditions scenario.

¹ Measured at 50 feet from the centerline of each roadway segment.

Table 5.7-7 and Table 5.7-8 show that increases due to implementation of the proposed project plus option B would increase traffic noise levels in the range of 0.0 to 0.3 dBA CNEL; the overall increase between the existing conditions and future plus Option B conditions ranges from 0.3 to 2.5 dBA CNEL.

As shown in Tables 5.7-5 through 5.7-8, no segments would experience substantial noise increases greater than 3 dB over the existing conditions due to implementation of the proposed project with either Option A or Option B. Impacts would be less than significant.

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Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.7-2: Would implementation of the proposed project expose people to significant temporary construction noise? [Threshold N-2]

Construction Noise

This section discusses the potential construction-related noise impacts to sensitive land-based receptors resulting from development associated with the proposed project. Sensitivity to construction noise is based on the location of construction equipment relative to sensitive receptors, time of day, and the duration of noise-generating activities. Building construction would be limited to structures such as restrooms, maintenance equipment storage, playgrounds, pavilions, plazas, and other recreational amenities. Utilities may be expanded in the project area to support restrooms and drinking fountains. Other improvements could include extensions to roadways, additional parking, new trails, improvements to the dog park, and seating for sand recreation events. The proposed project would also provide for landscape modifications such as berms for wind protection for visitors, dredging to create a marshland area north of the causeway, a channel in the North Subarea, and other changes to increase parkland and preserved areas. Although specific construction details and equipment for future development projects are not known at this time, the provided information which defines construction zones and general features to be constructed is enough to make a determination regarding potential construction noise impacts. Additionally, the differences between plans for Option A and Option B for the Southwest Subarea are minor enough that they would not substantially change the generalized construction noise analysis in this PEIR.

Temporary construction noise impacts could be related to site preparation, grading, and/or physical construction. Construction would be performed in distinct steps, each with its own mix of equipment and noise characteristics. Table 5.7-9, *Construction Equipment Noise Levels*, lists typical construction equipment noise levels recommended by the FTA for noise-impact assessments, based on a distance of 50 feet between the equipment and noise receptor.

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Table 5.7-9 Construction Equipment Noise Levels

Construction Equipment	Typical Max Noise Level (dBA L _{max}) ¹	Construction Equipment	Typical Max Noise Level (dBA L _{max}) ¹
Air Compressor	81	Pile-Driver (Impact)	101
Backhoe	80	Pile-Driver (Sonic)	96
Ballast Equalizer	82	Pneumatic Tool	85
Ballast Tamper	83	Pump	76
Compactor	82	Rail Saw	90
Concrete Mixer	85	Rock Drill	98
Concrete Pump	71	Roller	74
Concrete Vibrator	76	Saw	76
Crane, Derrick	88	Scarifier	83
Crane, Mobile	83	Scraper	89
Dozer	85	Shovel	82
Generator	81	Spike Driver	77
Grader	85	Tie Cutter	84
Impact Wrench	85	Tie Handler	80
Jack Hammer	88	Tie Inserter	85
Loader	85	Truck	88
Paver	89		

Source: FTA 2006.

¹ Measured at 50 feet from the source.

As shown in Table 5.7-9, construction equipment generates high levels of noise, with maximums ranging from 71 dBA to 101 dBA. Construction of future development projects under the proposed project would temporarily increase the ambient noise environment and would have the potential to affect noise-sensitive receptors in the vicinity of that project. Significant noise impacts may occur from the operation of heavy earthmoving equipment and truck hauling that would occur with construction of individual development projects. Construction noise would be localized and would occur intermittently for varying periods of time.

Bolt Beranek and Newman (BBN) characterize composite construction noise (the aggregate of individual equipment items used in common processes and activities) for residential projects as having a noise level value of 88 dBA L_{eq} at a reference distance of 50 feet (EPA, 1971). Residential projects generally involve more intensive construction activities than would be required for the types of recreational projects associated with the proposed project. Therefore, 88 dBA L_{eq} will be used as a conservative value to represent noise levels generated by construction activities from implementation of the proposed project.

Construction Noise Affecting Sensitive Receptors

Noise-sensitive uses located on the shores around Mission Bay and on Vacation Isle include parks, hotels, and residences. With the exception of Tecolote Shores North Park, each of these receptors are located a minimum of 1,000 feet from Fiesta Island. Using the BBN reference level of 88 dBA L_{eq}, construction noise levels at these receptors would remain below 62 dBA L_{eq} for even the most construction intensive developments associated with the proposed project. Noise levels at the nearest sensitive receptors would not

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exceed the maximum construction noise limit of 75 dBA L_{eq} specified in the City's significance thresholds and consistent with SDMC Section 59.5.0404.

The areas of Tecolote North Shores Park that are designed for recreation lie approximately 750 feet from the boundary of potential construction areas on Fiesta Island, and approximately 200 feet from the edge of potential dredging activity. Using the BBN reference level of 88 dBA L_{eq} , noise levels at this location due to construction activities would remain below 64 dBA L_{eq} for even the most construction intensive developments associated with the proposed project. For noise levels generated by dredging equipment, a conservative comparison can be made between dredging equipment and excavators, which generate 77 dBA L_{eq} at a reference distance of 50 feet (FHWA, 2006). At a distance of 200 feet, noise levels at Tecolote North Shores Park would not be expected to exceed 65 dBA L_{eq} at any time during dredging activities. This would be below the City's construction noise threshold of 75 dBA L_{eq} . Construction-generated noise due to individual development projects under the proposed project would not result in annoyance or disruption to visitors at Tecolote North Shores Park.

Construction of individual development projects associated with the proposed project would temporarily increase the ambient noise environment in the vicinity of each project. However, due to distance attenuation, construction noise levels at sensitive receptors would be reduced to levels that would not result in an annoyance or disruption to people at any time during construction. Additionally, construction noise levels would remain below the City's significance threshold of 75 dBA L_{eq} . Therefore, construction noise impacts associated with implementation of the proposed project would be less than significant.

Construction-Related Vibration Impacts

Construction operations can generate varying degrees of ground vibration and can range from no perceptible effects at the lowest vibration levels to slight structural damage at the highest levels. Vibration from construction activities rarely reaches levels that can damage structures but can be heard and felt in buildings close to the construction site. Table 5.7-10 lists vibration levels for construction equipment.

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Table 5.7-10 Vibration Levels for Construction Equipment

Equipment	Approximate RMS ¹ Velocity Level at 25 Feet (VdB)	Approximate PPV Velocity at 25 Feet (in/sec)
Pile Driver (impact) Upper Range	112	1.518
Pile Driver (impact) Lower Range	104	0.644
Pile Driver (sonic) Upper Range	105	0.734
Pile Driver (sonic) Lower Range	93	0.170
Large Bulldozer	87	0.089
Caisson Drilling	87	0.089
Jackhammer	79	0.035
Small Bulldozer	58	0.003
Loaded Trucks	86	0.076
FTA Criteria: Human Annoyance (Daytime/Nighttime)	78/72	—
FTA Criteria: Structural Damage	—	0.200

Source: FTA 2006.

¹ RMS velocity calculated from vibration level (VdB) using the reference of 1 microinch/second.

As shown in Table 5.7-10, vibration generated by construction equipment has the potential to be substantial, since it could exceed the FTA criteria of 78 VdB for human annoyance and 0.200 in/sec PPV for structural damage. Although construction details and equipment for future development projects are not known at this time, the provided information which defines construction zones is enough to make a determination regarding potential construction-generated vibration impacts.

The only buildings within the project area belong to the San Diego Youth Aquatic Center, located on the eastern side of the Central Subarea. No construction activities would occur within this portion of the Central Subarea, and the nearest construction and grading would occur east of Fiesta Island Road. Since the Aquatic Center is located approximately 550 feet from the construction area, no equipment would operate within the vicinity of buildings within the project area.

The nearest structure located outside of the project area is a restroom building at Tecolote Shores North Park, located east of Fiesta Island. The restroom is located approximately 225 feet from the boundary of the area that would be dredged to create the marshland area north of the causeway, and 750 feet from the boundary of the nearest potential construction activities on Fiesta Island.

For standard construction equipment, the 0.200 in/sec PPV threshold for architectural damage is exceeded if a vibratory roller is operated within 30 feet of a structure, or if a large bulldozer is operated within 15 feet. The 78 VdB threshold for annoyance is exceeded if a vibratory roller is operated within 90 feet of a sensitive receptor, or if a large bulldozer is operated within 50 feet. Given the large distances between construction activities and the nearest buildings (both onsite and offsite), there would be no risk of architectural damage or

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annoyance due to construction-generated vibration. There would be no impacts related to construction-generated vibration.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Construction noise impacts associated with implementation of the proposed project would be less than significant. There would be no impacts related to construction-generated vibration.

Impact 5.7-3	Would implementation of the proposed project expose people to noise levels which exceed property line limits established in the Noise Abatement and Control Ordinance of the Municipal Code? [Threshold N-3]
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Impact Analysis: As a City-owned island there are no adjacent properties that would be affected by park activities. As shown in Figure 2-5, land across the water from the island is designated for non-residential land uses. The external noise limit associated with commercial land use established by the SDMC is 65 dBA until 7:00 PM dropping to 60 dBA until 7:00 AM.

Increased visitor activity would not be expected to increase the hourly- or daily- average sound levels with respect to the existing conditions shown in Table 5.7-2. While special events, such as Over-the-Line tournaments, would draw large crowds that could contribute noticeably to the ambient noise environment, these events already occur on the island and are not expected to increase in frequency because of the proposed project. Special events would be subject to Noise Element Policy NE-H.1 of the General Plan and must comply with the City's Special Events Ordinance. Furthermore, the nearest sensitive receptors are located more than 1,000 feet off the shore of Fiesta Island and, at these distances, it is not expected that they will be exposed to noise generated within the project area.

Similarly, transportation noise increases associated with project traffic are not expected to increase significantly. As shown in Tables 5.7-5 through 5.7-8, traffic noise levels would change by less than 3 dBA, and in most instances, less than 1 dBA. An increase of less than 3 dB is not considered significant.

Furthermore, as analyzed in Impact 5.7-2, impacts associated with construction-generated noise would be less than significant and is estimated not to exceed 65 dBA. The proposed project would not expose people to noise levels in excess of the City's noise ordinance and impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

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Impact 5.7-4	Would implementation of the proposed project expose people to current or future transportation noise levels which exceed guidelines established in the Noise Element of the General Plan? [Threshold N-4]
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Impact Analysis: A significant impact would occur if implementation of the proposed project would result in the exposure of sensitive receivers to current or future vehicle traffic noise levels that exceed standards established in the Noise Element of the General Plan. The General Plan's Land Use – Noise Compatibility Guidelines lists nature preserves, wildlife preserves, parks, and playgrounds as compatible with noise environments up to 65 dBA CNEL.

Transportation noise affecting the project area includes vehicle traffic noise from I-5 and from Sea World Drive, Friars Road, East Mission Bay Drive, and Fiesta Island Road. Some points on the island are as close as 1,100 feet from I-5. As presented in Table 5.7-2, *Existing Conditions Traffic Noise Levels*, traffic noise levels from I-5 could be as high as 65 dBA CNEL³ at the far east side of the island (the point of the island closest to I-5). Other roadway segments to the south and east of the island are not expected to affect the noise environment at the project site.

The entire plan area experiences 24-hour noise levels of 65 dBA CNEL or less, and would continue to experience these noise levels with the proposed project. Therefore, sensitive receptors within the project area would be exposed to noise levels that are compatible with the Nature Preserves/Wildlife Preserves and the Parks/Playgrounds categories of the Land Use – Noise Compatibility Guidelines. Noise compatibility impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.7-5:	Would implementation of the proposed project result in land uses which are not compatible with aircraft noise levels as defined by an adopted Airport Land Use Compatibility Plan (ALUCP)? [Threshold N-5]
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Impact Analysis: Fiesta Island is located approximately 2.5 miles northwest of SDIA. Aircraft noise is evaluated based on the noise contours developed by the San Diego County Regional Airport Authority and provided in the ALUCP for SDIA (2014). A significant impact would occur if implementation of the proposed project would result in land uses that are not compatible with aircraft noise levels as defined by an adopted ALUCP. No portions of the project area are located within any of the forecasted CNEL contours presented in the ALUCP. Although aircraft departures are audible throughout the project area, aircraft noise contributes less than 65 dBA CNEL to the noise environment of the planning area. Neither exterior nor

³ Due to distance attenuation along, ignoring intervening structures or topographical attenuation (calculation uses inverse-square law)

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interior noise compatibility impacts would occur at any of the proposed land uses; thus, the implementation of the proposed project would result in a less than significant impact related to exposure to aircraft noise.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

5.7.5 Cumulative Impacts

Operational Noise

To specifically estimate the proposed project's contribution to traffic noise, existing noise levels were compared to those projected with buildout of the proposed project. As demonstrated above, the proposed project's contribution to increases in ambient noise and vibration levels would be less than significant, even when accounting for traffic increases forecast in the project area.

Construction Noise

Construction of individual development projects associated with the proposed project would temporarily increase the ambient noise environment in the vicinity of each development project. However, due to the types of future developments associated with the proposed project, and the distances to the nearest receptors, construction-generated noise levels would not result in an annoyance or disruption to people at sensitive uses at any time during construction. Cumulative construction noise impacts would be less than significant.

Noise Compatibility

The noise environment around the project area is influenced by recreational boats, traffic noise, and to a small degree, rail noise. According to the ambient noise measurements and the traffic noise analysis conducted for the proposed project, the entire planning area experiences 24-hour noise levels of 65 dBA CNEL or less, which is compatible with the City's Land Use – Noise Compatibility Guidelines. Noise compatibility impacts associated with the proposed project would be less than significant. Further, the entire planning area is located outside of the forecasted CNEL contours presented in the ALUCP for the SDIA. Therefore, noise compatibility impacts associated with the proposed project would be less than significant.

As discussed under Impact 5.7-1, implementation of the proposed project would increase visitor activity to the plan area; however, the increase would not cause an increase in ambient noise levels. Furthermore, special events would have to comply with General Plan policies and the City's Special Events Ordinance regarding noise generation. In both the existing and future conditions, cumulative noise levels in the project area would be consistent with noise compatibility standards.

Construction of individual development projects associated with the proposed project would temporarily increase the ambient noise environment in the vicinity of each development project. However, due to the

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types of future developments associated with the proposed project, and the distances to the nearest receptors, construction-generated noise levels would not result in an annoyance or disruption to people at sensitive uses at any time during construction. Cumulative construction noise impacts would be less than significant.

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5.8 PUBLIC SERVICES AND FACILITIES

Public services and facilities are those functions that serve residents on a community-wide basis. These functions include fire protection and emergency medical services, police protection, schools, libraries, and parks and recreational facilities. This section provides a discussion of fire protection/emergency medical and police protection services as they relate to the proposed project. Because the proposed project is a park and recreational facility and would not introduce any new residents to the project area, no new demand for public services such as schools, libraries, and parks and recreational facilities would occur, and these issues will not be discussed in this PEIR.

5.8.1 Existing Conditions

The existing environmental setting and regulatory framework are summarized in Chapters 2.0 and 4.0, respectively.

5.8.2 Significance Determination Thresholds

The City's CEQA Significance Determination Thresholds (2016) provides guidance to determine the potential significant impacts related to public services and facilities. Thresholds are modified from the City's CEQA Significance Determination Thresholds to reflect the programmatic analysis for the proposed project. Based on the City's thresholds, a significant impact to public services and facilities would occur if implementation of the proposed project would:

- PSF-1 Have an effect upon, or result in a need for new or altered governmental services in any of the following areas:
- Fire/life safety protection
 - Police protection

5.8.3 Environmental Impacts

The following impact analysis addresses the threshold of significance identified above. The threshold is identified in brackets after the impact statement.

Impact 5.8-1: Would implementation of the proposed project cause an increased need for fire/life safety protection facilities and personnel? [Threshold PSF-1]

Impact Analysis: Implementation of the proposed project would not result in an increase in overall population as the proposed project is a park and recreation facility and no residential, commercial, or industrial development is proposed. Population-based performance measures established in the General Plan's Public Facilities Element are used to plan for needed facilities. Although the potential increase in visitors to the project area due to the proposed project and regional growth could increase demands for medical assistance and water rescue, future facilities are planned based on population growth. As the existing fire/life safety protection facilities and staff are able to adequately serve the island, and the proposed project

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would not induce population growth in the project area, impacts related to the expansion/construction of new facilities would be less than significant.

The San Diego Fire-Rescue Department would review future General Development Plans (GDPs) for fire access roads within 150 feet of all portions of the exterior walls of the first story of each structure developed for human occupancy, in accordance with the City's Fire Code (SDMC Sections 55.0101 et seq.). The San Diego Fire-Rescue Department would also review the circulation plans of future GDPs to ensure that adequate turning radii for its firefighting apparatus would be provided. Therefore, implementation of the proposed project would not adversely affect City firefighting resources due to inadequate emergency access. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.8-2: Would implementation of the proposed project cause an increased need for police protection facilities and personnel? [Threshold PSF-1]

Impact Analysis: The increase in the number of visitors will increase demand for police services in the project area. As a City project, the San Diego Police Department (SDPD) is part of the review process and will have input on future developments pursuant to the proposed project. As a regional park, the increase in visitors will be incremental, following the increase in population. It is expected that the need to increase police services to meet the demand of future growth in the City overall will take into account service to all park land, including Fiesta Island. It is not anticipated that any increase in police station building area or other facilities would be necessary to meet the needs on the island. Because the existing police protection facilities and staff are able to effectively serve the island, and the gradual expansion of police services expected as the City grows will take into account the need to provide safety at all parks, impacts to police services would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

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5.8.4 Cumulative Impacts

5.8.4.1 FIRE/LIFE SAFETY PROTECTION

The area considered for cumulative impacts is the City of San Diego, SDFD's service area. As discussed under Impact 5.8-1, implementation of the proposed project would not result in the expansion/construction of new fire/life safety protection services or facilities. As part of the City's normal development review process, impacts to fire/life safety protection services will be evaluated as each improvement on the island is considered. Because the City will evaluate each fire/life safety impact at the time of each proposed improvement, and the proposed project does not generate the need for new fire/life safety protection services or facilities. Cumulative impacts related to fire/life safety protection services would be less than significant at the program level.

5.8.4.2 POLICE PROTECTION

The area considered for cumulative impacts is the City of San Diego, SDPD's service area. As discussed under Impact 5.8-2, implementation of the proposed project would not result in the construction of new or expanded police protection facilities. As part of the City's normal development review process, impacts to police services will be evaluated as each improvement on the island is considered. Because the City will evaluate impacts to police services at the time of each proposed improvement, and the proposed project does not generate the need for new police services or facilities. Cumulative impacts related to police services would be less than significant at the program level.

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5. Environmental Analysis TRANSPORTATION/CIRCULATION

5.9 TRANSPORTATION/CIRCULATION

This section summarizes the Fiesta Island/Mission Bay Master Plan Amendment Mobility Assessment, prepared in January 2018 by Stack Traffic Consultants (STC). The Mobility Assessment discusses the existing conditions, significance determination thresholds, potential impacts of the proposed project on the surrounding transportation system, and recommended mitigation measures. Pedestrian, bicycle, transit, and vehicular modes of transportation are evaluated. This report is included as Appendix 5.9-1 to this PEIR.

5.9.1 Methodology

The analysis of roadway operations performed for this study is based on the methodologies described below.

Level of Service (LOS) Criteria

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment, intersection, or other facility. The concept of LOS is defined as a quantitative measure that represents quality of service for the driver. LOS designations range from A to F, with LOS A representing the best operating conditions from a driver's perspective and LOS F representing the worst.

Intersections

The *2000 Highway Capacity Manual* (HCM) methodology was used to evaluate the peak hour operating conditions of the study area intersections. The HCM methodology calculates delay, which corresponds to a particular LOS, to describe the overall operation of an intersection. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time.

The LOS for signalized intersections is defined in terms of average intersection delay. Specifically, LOS criteria are stated in terms of the average control delay per vehicle for the peak 15-minute period within the hour analyzed. The average control delay includes initial deceleration delay, queue move-up time, and final acceleration time in addition to the stop delay.

The LOS for unsignalized intersections is determined by the computed or measured control delay and is defined for each movement controlled by a stop sign. At a one-way or two-way stop control intersection, the delay reported represents the worst movement, which typically occurs on the stop controlled minor street approach. The criteria for the LOS grade designations are provided in Table 5.9-1. Within City jurisdiction, the acceptable LOS standard for intersections is D or better.

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Table 5.9-1 Level of Service Criteria for Intersections

LOS	Control Delay (sec/veh)		Description
	Signalized Intersections	Unsignalized Intersections	
A	≤ 10	≤ 10	Operations with very low delay and most vehicles do not stop.
B	>10 and ≤ 20	>10 and ≤ 15	Operations with good progression but with some restricted movements.
C	>20 and ≤ 35	>15 and ≤ 25	Operations where a significant number of vehicles are stopping with some backup and light congestion.
D	>35 and ≤ 55	>25 and ≤ 35	Operations where congestion is noticeable, longer delays occur, and many vehicles stop. The proportion of vehicles not stopping declines.
E	>55 and ≤ 80	>35 and ≤ 50	Operations where there is significant delay, extensive queuing, and poor progression.
F	>80	>50	Operations that are unacceptable to most drivers; when the arrival rates exceed the capacity of the intersection.

Source: *Highway Capacity Manual*, Transportation Research Board (2000).
sec/veh = seconds per vehicle

Roadway Segments

The roadway LOS standards and thresholds the City applies within its jurisdiction provide the basis for analyzing roadway segment performance. Roadway segment LOS shown in Table 5.9-2 is a planning estimate based on the general roadway classification, the maximum theoretical capacity, roadway geometrics, and existing or forecasted average daily traffic (ADT) volumes. The segment traffic volumes indicated as LOS E in Table 5.9-2, are considered to be the capacity of the roadway because at LOS E the volume-to-capacity (v/c) ratio is equal to 1.0. This is the theoretical capacity of the roadway; the actual operations of a roadway segment would be affected by the type and frequency of traffic control, driveway density, on-street parking, grade, lane width, percent of heavy vehicles and other factors. The acceptable LOS standard for roadways in the City is D or better.

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Table 5.9-2 City of San Diego Roadway Segment Capacity and Level of Service

Roadway Functional Classification	Level of Service ¹				
	A	B	C	D	E
Expressway (6-Lane)	< 30,000	< 42,000	< 60,000	< 70,000	< 80,000
Prime Arterial (6 Lane)	< 25,000	< 35,000	< 50,000	< 55,000	< 60,000
Major Arterial (6-lane, divided)	< 20,000	< 28,000	< 40,000	< 45,000	< 50,000
Major Arterial (4-lane, divided)	< 15,000	< 21,000	< 30,000	< 35,000	< 40,000
Collector (4-Lane w/ center left-turn lane)	< 10,000	< 14,000	< 20,000	< 25,000	< 30,000
Collector (3-Lane w/ center left-turn lane)	< 7,500	< 10,500	< 15,000	< 18,750	< 22,500
Collector (4-Lane w/o center lane)	< 5,000	< 7,000	< 10,000	< 13,000	< 15,000
Collector (2-Lane w/ center left-turn lane)					
Collector (2-Lane no fronting property)	< 4,000	< 5,500	< 7,500	< 9,000	< 10,000
Collector (2-Lane w/ commercial fronting)	< 2,500	< 3,500	< 5,000	< 6,500	< 8,000
Sub-Collector (2-lane multi-family)	-	-	< 2,200	-	-

Source: City of San Diego Traffic Impact Study Manual, Table 2, Page 8, July 1998. City Planning Department Mobility Staff Input

BOLD numbers indicate the ADT thresholds for acceptable LOS (LOS D or better)

¹ The volumes and the average daily LOS listed above are only intended as a general planning guideline. Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

5.9.2 Existing Conditions

The existing environmental setting and regulatory framework are summarized in Chapters 2.0 and 4.0, respectively, of this PEIR. The following regulatory and setting information is provided to provide context for the analysis in this chapter of the PEIR.

Traffic Volumes

Existing peak hour intersection volumes and daily traffic volumes were collected within the project study area in April 2017 during weeks that coincided with spring break. The weather conditions when the data were collected were typical for spring in San Diego.

Specifically, intersection traffic data collection was performed for morning and evening peak periods on a weekday, as well as mid-day during a Saturday, while daily traffic volume data were collected over a four-day period (Thursday through Sunday) to determine the variations in traffic conditions on a weekday versus weekend condition. Table 5.9-3, *Comparison of Daily Traffic Volumes at Key Study Locations*, shows the total traffic volume by day at key roadway segments.

Volumes used in intersection and roadway segment operations analyses for Existing Conditions are provided in the Mobility Assessment (Appendix 5.9-1 to this PEIR).

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Table 5.9-3 Existing Daily Traffic Volumes at Study Locations

Roadway Segment	Existing Daily Traffic Volume by Day			
	Thursday	Friday	Saturday	Sunday
Sea World Drive				
South Shores Parkway to Friars Road	37,428	37,846	36,178	32,284
Friars Road to Pacific Highway / East Mission Bay Drive	32,163	32,187	32,573	28,720
Pacific Highway / East Mission Bay Drive to I-5 SB Off Ramps	34,270	35,202	37,188	33,734
East Mission Bay Drive				
Sea World Drive to Fiesta Island Road	9,227	9,847	11,521	11,969
Friars Road				
East of Sea World Drive	14,472	14,163	10,985	10,160
Fiesta Island Road				
East Mission Bay Drive to Fiesta Island Loop	4,705	5,227	7,439	7,662

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment (Appendix 5.9-1).

Existing Intersection LOS and Delay

Traffic operating conditions for intersections and roadway segments were evaluated based on the City's adopted Level of Service (LOS) standards (see Tables 5.9-1 and 5.9-2). The intersection operations analysis evaluates five (5) study intersections during the weekday AM, weekday PM, and weekend midday peak hour conditions. Table 5.9-4 shows the existing LOS for the four signalized and one unsignalized intersections in the study area. Under Existing Conditions, all study intersections operate acceptably at LOS D or better during the analyzed peak hours, except for intersection #1, East Mission Bay Drive and Fiesta Island Road, which operates at an unacceptable LOS E during the weekend midday peak hour.

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Table 5.9-4 Existing Weekday and Weekend Intersection Levels of Service

#	Intersection	Traffic Control	Peak Hour	Existing Conditions	
				Average Delay (sec)	LOS
Unsignalized Intersections					
1.	E. Mission Bay Drive and Fiesta Island Road	OWSC ¹	AM	12.4	B
			PM	24.7	C
			Weekend MID	39.9	E
Signalized Intersections					
2.	Sea World Dr and E. Mission Bay Dr - Pacific Hwy	Signal	AM	36.5	D
			PM	37.2	D
			Weekend MID	23.2	C
3.	Sea World Dr and I-5 SB On/Off Ramps	Signal	AM	19.5	B
			PM	12.3	B
			Weekend MID	13.0	B
4.	Sea World Dr and I-5 NB On/Off Ramps	Signal	AM	27.9	C
			PM	37.9	D
			Weekend MID	48.7	D
5.	Sea World Dr and Friars Rd	Signal	AM	17.6	B
			PM	23.9	C
			Weekend MID	14.8	B

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment (Appendix 5.9-1).

BOLD = LOS Above Threshold, **MID** = Midday Peak

¹ One-Way Stop-Controlled (OWSC) from eastbound approach. The delay and LOS reported for this intersection is for the stop-controlled eastbound approach.

Existing Roadway Segment LOS

The daily roadway segment operations analysis evaluates six (6) study roadway segments during the weekday and weekend conditions. The roadway segment analysis summarized in Table 5.9-5, shows that Sea World Drive from South Shores Parkway to Friars Road operates deficiently at LOS E based on the functional classification both on weekdays and on the weekend. On weekends, Sea World Drive also operates at LOS E from the I-5 Southbound (SB) ramps to East Mission Bay Drive-Pacific Highway.

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Table 5.9-5 Existing Weekday and Weekend Roadway Segment Levels of Service

Roadway Segment	Classification ¹	Maximum Capacity at LOS E ¹	Existing Weekday			Existing Weekend		
			ADT	V/C Ratio	LOS	ADT	V/C Ratio	LOS
Sea World Drive								
S. Shores Park to Friars Rd	4-Lane Major Arterial	40,000	37,428	0.94	E	36,178	0.90	E
Friars Rd to E. Mission Bay Dr	4-Lane Major Arterial	40,000	32,163	0.80	D	32,573	0.81	D
E. Mission Bay Dr to I-5 SB Ramps	4-Lane Major Arterial	40,000	34,270	0.86	D	37,188	0.93	E
E. Mission Bay Drive								
Sea World Dr to Fiesta Island Rd	2-Lane Collector (continuous left-turn lane)	15,000	9,227	0.62	C	11,521	0.77	D
Friars Road								
East of Sea World Dr	4-Lane Major Arterial	40,000	14,472	0.36	A	10,985	0.27	A
Fiesta Island Road								
E. Mission Bay Dr to Fiesta Island Loop	2-Lane Collector (no fronting property)	10,000	4,705	0.47	B	7,439	0.74	C

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment (Appendix 5.9-1).

BOLD = LOS Above Threshold

¹ Based on the City's General Plan Mobility Element and Traffic Impact Study Manual.

5.9.3 Significance Determination Thresholds

Thresholds are modified from the City's CEQA Significance Determination Thresholds to reflect the programmatic analysis of the project. A significant traffic circulation impact could occur if implementation of the proposed project would:

TRANS-1 Result in any intersection or roadway segment affected by a project to operate at LOS E or F, or if already operating at LOS E or F exceed the City's significance thresholds under either direct or cumulative conditions (See Table 5.9-6).

TRANS-2 Conflict with adopted policies, plans, or programs supporting alternative transportation.

The City has developed threshold standards to determine the significance of project impacts to intersections and roadway segments. The Transportation Research Board produced the Highway Capacity Manual (HCM; Transportation Research Board 2000) that establishes procedures to rate traffic volumes and their effect on transportation facilities, including LOS, to provide a qualitative evaluation based on certain quantitative calculations. Along roadway segments, the measure of effectiveness (MOE) is based on allowable increases in

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the volume-to-capacity (v/c) ratio. At intersections, the MOE is based on allowable increases in delay. These thresholds, applicable to the analysis of transportation facilities (TRANS-1) are summarized in Table 5.9-6 and further detailed below.

Table 5.9-6 Significance Impact Criteria for Facilities in Study Area

Level of Service with Project	Significance Threshold ¹	
	Roadway Segments (V/C ratio)	Intersection Delay
E	> 0.02	> 2.0
F	> 0.01	> 1.0

Source: City of San Diego Significance Determination Thresholds 2016; Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment Appendix 6.9-1.

V/C = Volume-to-Capacity ratio

¹ Significance threshold applies only when the type of facility operates at LOS E or F. If a project causes an intersection or roadway segment that was operating at an acceptable LOS (LOS A through D) prior to project implementation to operate at either LOS E or LOS F with the project in place, then the project is considered to cause a significant impact.

For roadway segments that are forecasted to operate at LOS E or F without the project, the allowable increase in v/c ratio with the project is 0.02 at LOS E and 0.01 at LOS F. If vehicle trips from a project cause the v/c ratio to increase by more than this ratio, a significant impact would occur. Also, if the project causes a street segment that was operating at an acceptable LOS (LOS A to D) to operate at LOS E or F, this would be considered a significant impact.

At intersections that are expected to operate at LOS E or F without the project, the allowable increase in delay is two seconds at LOS E and one second at LOS F with the addition of the project. If the addition of project traffic would cause the delay to exceed these thresholds, a significant impact would occur. Also, if the project causes an intersection that was operating at an acceptable LOS to operate at LOS E or F, this change would be considered a significant impact.

5.9.4 Environmental Impacts

5.9.4.1 EXISTING PLUS PROJECT

Impact 5.9-1	Would the project result in any intersection or roadway segment affected to operate at LOS E or F, or if already operating at LOS E or F exceed the City's significance thresholds under either direct or cumulative conditions? [Threshold TRANS-1]
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Impact Analysis:

Projected Traffic Volumes

Details of the trip generation methodology and analysis for Option A and Option B of the proposed project are provided in the Mobility Assessment (Appendix 5.9-1 to this PEIR).

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Existing Plus Project Scenario

The Existing Plus Project scenario is an assessment of the impacts of the entire project measured in relation to existing traffic and roadway conditions.

Roadway Segments

Table 5.9-7, *Weekday Roadway Segment Levels of Service, Existing Plus Project*, and Table 5.9-8, *Weekend Roadway Segment Levels of Service, Existing Plus Project*, summarize the Existing Plus Project results of the roadway segment operations analysis under weekday and weekend conditions, respectively. Results of these roadway segment operations analyses show that the additional trips associated with either Option A or Option B do not result in a change in v/c ratio that exceeds the threshold of significance along any of the study segments. Therefore, the project does not result in any Existing Plus Project roadway segment significant impacts under weekday and weekend conditions.

Intersections

Table 5.9-9, *Weekday and Weekend Intersection Levels of Service, Existing Plus Project*, summarizes the Existing plus Project results of the intersection operations analysis under weekday and weekend conditions. Results of the weekend midday peak hour intersection operations analysis shows that intersection #1, East Mission Bay Drive and Fiesta Island Drive, would experience an increase in delay of 27.2 seconds for Option A and 10.8 seconds for Option B. While Table 5.9-4 shows that this intersection operates at LOS E under existing conditions, the projected increase in delay of the proposed project under Option A or Option B results in a significant impact.

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TRANSPORTATION/CIRCULATION**Table 5.9-7 Weekday Roadway Segment Levels of Service, Existing Plus Project**

Roadway Segment	Classification ¹	Maximum Daily Capacity ¹	Existing Weekday			Existing Plus Option A Weekday				Existing Plus Option B Weekday			
			ADT	V/C	LOS	ADT	V/C	LOS	Δ ²	ADT	V/C	LOS	Δ ²
Sea World Drive													
S. Shores Park to Friars Rd	4-Lane Major Arterial	40,000	37,428	0.94	E	37,523	0.94	E	0.00	37,484	0.94	E	0.00
Friars Rd to E. Mission Bay Dr	4-Lane Major Arterial	40,000	32,163	0.80	D	32,353	0.81	D	0.01	32,276	0.81	D	0.01
E. Mission Bay Dr to I-5 Ramps	4-Lane Major Arterial	40,000	34,270	0.86	D	34,428	0.86	D	0.00	34,364	0.86	D	0.00
E. Mission Bay Drive													
Sea World Dr to Fiesta Island Rd	2-Lane Collector (continuous left-turn lane)	15,000	9,227	0.62	C	9,702	0.65	C	0.03	9,509	0.63	C	0.01
Friars Road													
East of Sea World Dr	4-Lane Major Arterial	40,000	14,472	0.36	A	14,567	0.36	A	0.00	14,528	0.36	A	0.00
Fiesta Island Road													
E. Mission Bay Dr to Fiesta Island Loop	2-Lane Collector (no fronting property)	10,000	4,705	0.47	B	5,339	0.53	B	0.06	5,080	0.51	B	0.04

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment Appendix 5.9-1.

BOLD = Exceeds threshold of significance¹ Based on the City's General Plan Mobility Element and City of San Diego Traffic Impact Study Guidelines.² Change in V/C ratio.

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Table 5.9-8 Weekend Roadway Segment Levels of Service, Existing Plus Project

Roadway Segment	Classification ¹	Maximum Daily Capacity ¹	Existing Weekend			Existing Plus Option A Weekend				Existing Plus Option B Weekend			
			ADT	V/C	LOS	ADT	V/C	LOS	Δ ²	ADT	V/C	LOS	Δ ²
Sea World Drive													
S. Shores Park to Friars Rd	4-Lane Major Arterial	40,000	36,178	0.90	E	36,330	0.91	E	0.01	36,268	0.91	E	0.01
Friars Rd to E. Mission Bay Dr	4-Lane Major Arterial	40,000	32,573	0.81	D	32,877	0.82	D	0.01	32,753	0.82	D	0.01
E. Mission Bay Dr to I-5 Ramps	4-Lane Major Arterial	40,000	37,188	0.93	E	37,442	0.94	E	0.01	37,338	0.93	E	0.00
E. Mission Bay Drive													
Sea World Dr to Fiesta Island Rd	2-Lane Collector (continuous left-turn lane)	15,000	11,521	0.77	D	12,282	0.82	D	0.05	11,971	0.80	D	0.03
Friars Road													
East of Sea World Dr	4-Lane Major Arterial	40,000	10,985	0.27	A	11,137	0.28	A	0.01	11,075	0.28	A	0.01
Fiesta Island Road													
E. Mission Bay Dr to Fiesta Island Loop	2-Lane Collector (no fronting property)	10,000	7,439	0.74	C	8,453	0.85	D	0.11	8,039	0.80	D	0.06

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment Appendix 5.9-1.

BOLD = Exceeds threshold of significance

¹ Based on the City's General Plan Mobility Element and City of San Diego Traffic Impact Study Guidelines.

² Change in V/C ratio.

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Table 5.9-9 Weekday and Weekend Intersection Levels of Service, Existing Plus Project

#	Intersection	Traffic Control	Peak Hour	Existing Conditions		Existing Plus Option A Conditions			Existing Plus Option B Conditions		
				Average Delay (sec)	LOS	Average Delay (sec)	LOS	Δ^1	Average Delay (sec)	LOS	Δ^1
UNSIGNALIZED INTERSECTION											
1	E. Mission Bay Dr and Fiesta Island Rd	OWSC ²	AM	12.4	B	12.8	B	0.4	12.6	B	0.2
			PM	24.7	C	29.6	D	4.9	26.9	D	2.2
			Weekend MID	39.9	E	67.1	F	27.2	50.7	F	10.8
SIGNALIZED INTERSECTIONS											
2	Sea World Dr and E. Mission Bay Dr - Pacific Hwy	Signal	AM	36.5	D	36.8	D	0.3	36.7	D	0.2
			PM	37.2	D	38.4	D	1.2	37.9	D	0.7
			Weekend MID	23.2	C	24.5	C	1.3	23.6	C	0.4
3	Sea World Dr and I-5 SB On/Off Ramps	Signal	AM	19.5	B	19.5	B	0	19.5	B	0.0
			PM	12.3	B	12.3	B	0	12.3	B	0.0
			Weekend MID	13.0	B	13.0	B	0	13.0	B	0.0
4	Sea World Dr and I-5 NB On/Off Ramps	Signal	AM	27.9	C	28.1	C	0.2	28.1	C	0.2
			PM	37.9	D	38.0	D	0.1	37.9	D	0.0
			Weekend MID	48.7	D	49.5	D	0.8	49.1	D	0.4
5	Sea World Dr and Friars Rd	Signal	AM	17.6	B	17.7	B	0.1	17.7	B	0.1
			PM	23.9	C	24.1	C	0.2	24.0	C	0.1
			Weekend MID	14.8	B	14.9	B	0.1	14.9	B	0.1

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment Appendix 5.9-1

BOLD = LOS Above Threshold

¹ Change in Delay

² One-Way Stop Controlled (OWSC) from eastbound approach. In all cases, the delay and LOS reported is for the stop controlled eastbound approach.

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The Mobility Assessment identified and evaluated intersection improvements that could mitigate the intersection impact identified under Existing Plus Project conditions. The Mobility Assessment included, as mitigation for the significant impact at the intersection of E. Mission Bay Drive and Fiesta Island Road, either (a) the installation of an all-way stop by adding signage and restriping or (b) widening the intersection and constructing a roundabout. While roundabout construction does not meet the City’s screening criteria for roundabout selection, after the Mobility Assessment was prepared, an all-way stop control (option ‘a’) was installed at the intersection of E. Mission Bay Drive and Fiesta Island Road. The mitigation for this impact has therefore already been completed.

Mitigation Measures

The mitigation for this impact has already been completed. An all-way stop was added at this intersection. No additional mitigation is required.

Level of Significance

Completion of the all-way stop control at the intersection of E. Mission Bay Drive and Fiesta Island Road improves the intersection operations to LOS C during all the analyzed peak hours. Impacts would be less than significant.

Impact 5.9-2 Would the proposed project conflict with adopted policies, plans, or programs supporting alternative transportation modes? [Threshold TRANS-2]

Impact Analysis: The project would be broadly supportive of policies, plans, and programs supporting alternative transportation modes.

Bicycle Facilities

This project would support existing plans and policies relative to the bicycle network. Bicycle facility improvements proposed for Fiesta Island include multi-use paths and recreation trails, pedestrian and bicycle bridges at key crossings, a bicycle lane along Fiesta Island Road, and the widening of the Fiesta Island Entry Causeway to provide a Class I multi-use path for bicyclists and pedestrians. The proposed improvements would support policies and goals within the Mission Bay Park Master Plan to make biking more comfortable and accessible for people of all ages and abilities by providing better-quality bicycle facilities. The project also includes several bicycle-focused policies that support the provision of bicycle connections between nearby transit centers, the regional bicycle network, and Mission Bay Park. Policies in the proposed plan support increased bicycle comfort and the separation of bicycles and vehicles where feasible within Fiesta Island. Implementation of the project would not conflict with adopted policies, plans, or programs supporting bicycle facilities.

Pedestrian Facilities

There are no major scheduled or funded pedestrian facility improvements for the Fiesta Island study area. However, the proposed project includes a number of policies related to pedestrian amenities within Fiesta Island, including wayfinding signage, dedicated pedestrian pathways, separated pedestrian facilities, and

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marked crossings with high-visibility striping and other enhancements. A number of recommended pedestrian improvements in the study area are detailed in Chapter 6.0 and shown on Figure 6-1 of the Mobility Assessment. Implementation of the project would not restrict or impede connectivity and would not conflict with any adopted policies or plans addressing pedestrian facilities. Thus, impacts would be less than significant.

Transit

There are no proposed transit routes within the study area. Implementation of the project would not restrict or impede transit connectivity and would not conflict with any adopted policies or plans addressing transit facilities.

Mitigation Framework

The project would be consistent with adopted policies, plans, or programs supporting alternative transportation. Additionally, the proposed project would provide facilities and policies that support improvements to pedestrian and bicycle facilities. Thus, the project would have a less than significant impact related to conflicts with adopted policies, plans, or programs supporting alternative transportation, and no mitigation is required.

Level of Significance after Mitigation

Implementation of the proposed project would not restrict or impede connectivity and would not conflict with any adopted policies or plans addressing pedestrian, bicycle, and transit facilities. In addition, the proposed project includes plans for implementation of additional bicycle and pedestrian facilities within Fiesta Island which is consistent with the bicycle and pedestrian plans and policies. Therefore, the project's impact on adopted policies, plans, or programs supporting alternative transportation modes would be less than significant.

5.9.4.2 2050 PLUS PROJECT

Year 2050 No Project

SANDAG Series 12 regional travel demand model volumes were used to calculate Year 2050 daily traffic volumes for the study area. The SANDAG Series 12 data used in this analysis were collected from the Transportation Forecast Information Center website supported by SANDAG. The difference in volume from the forecast year 2008 and forecast year 2050 model results from SANDAG's website was used to calculate a compound annual growth rate. The growth rate was then applied for a period of 33 years to the ground count volumes collected in 2017 to determine the Year 2050 daily traffic volumes.

The Year 2050 peak hour volumes were calculated using the Year 2050 daily volumes in the study area. The existing ratio of peak hour volume to existing daily traffic volume was applied to the Year 2050 ADT volume to determine the future year peak hour intersection volumes for the weekday and weekend peak periods. The Year 2050 peak hour intersection volumes were converted to turning movement volumes using the existing intersection turning movement patterns for each peak period.

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Year 2050 Plus Project Conditions

The Year 2050 plus project volumes were projected by overlaying the forecast traffic associated with Option A and Option B on the Year 2050 peak hour and daily roadway segment volumes. Volumes used in the intersection and roadway segment operations analyses for Year 2050 with and without the project are in the Mobility Assessment (Appendix 5.9-1 to this PEIR). This analysis represents the proposed project's contribution to cumulative mobility impacts.

Roadway Segments

Table 5.9-10, *Weekday Roadway Segment Levels of Service, Year 2050 Plus Project*, summarizes the results of the roadway segment operations analysis for the Year 2050 weekday conditions. Results of this Year 2050 plus Project roadway segment analysis shows that under the weekday conditions, the additional trips associated with either Option A or Option B do not result in a change in v/c ratio that exceeds the threshold of significance along any of the study segments. Therefore, the proposed project would not result in a significant contribution to impacts related to future weekday roadway segments.

Table 5.9-10 Weekday Roadway Segment Levels of Service, Year 2050 Plus Project

Roadway Segment	2050 Weekday			2050 Plus Option A Weekday				2050 Plus Option B Weekday			
	ADT	V/C	LOS	ADT	V/C	LOS	Δ^1	ADT	V/C	LOS	Δ^1
Sea World Drive											
West of Friars Rd	55,351	1.38	F	55,446	1.39	F	0.01 ²	55,407	1.39	F	0.01 ²
Friars Rd to E. Mission Bay Dr	43,001	1.08	F	43,191	1.08	F	0.00	43,114	1.08	F	0.00
E. Mission Bay Dr to I-5 Ramps	36,383	0.91	E	36,541	0.91	E	0.00	36,477	0.91	E	0.00
E. Mission Bay Drive											
Sea World Dr to Fiesta Island Rd	11,077	0.74	D	11,552	0.77	D	0.03	11,359	0.76	D	0.02
Friars Road											
East of Sea World Dr	25,762	0.64	C	25,857	0.65	C	0.01	25,818	0.65	C	0.01
Fiesta Island Road											
E. Mission Bay Drive to Fiesta Island Loop	5,334	0.53	B	5,968	0.60	C	0.07	5,708	0.57	C	0.04

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment Appendix 5.9-1

Bold indicates change exceeds thresholds of significance.

¹ Change in V/C ratio.

² When the V/C ratio is expanded to three decimal places, the net change in V/C is 0.002 (2050 Plus Option A Weekday) and 0.001 (2050 Plus Option B Weekday). Due to rounding, the impact on this segment appears to be significant when only two decimal places are presented. However, the net change in V/C ratio falls below the threshold of significance and is therefore determined to be not significant.

Table 5.9-11, *Weekend Roadway Segment Levels of Service, Year 2050 plus Project*, summarizes the results of the roadway segment operations analysis for the Year 2050 weekend conditions. Implementation of the proposed

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project (Option A or Option B) would result in significant contributions to cumulative impacts on the following roadway segments:

- Proposed project (Option A only): Sea World Drive from Friars Road to E. Mission Bay Drive.
- Proposed project (Option A and Option B): E. Mission Bay Drive from Sea World Drive to Fiesta Island Road.
- Proposed project (Option A and Option B): Fiesta Island Road from E. Mission Bay Drive to Fiesta Island Loop.

Table 5.9-11 Weekend Roadway Segment Levels of Service, Year 2050 Plus Project

Roadway Segment	2050 Weekend			2050 Plus Option A Weekend				2050 Plus Option B Weekend			
	ADT	V/C	LOS	ADT	V/C	LOS	Δ^1	ADT	V/C	LOS	Δ^1
Sea World Drive											
West of Friars Rd	53,502	1.34	F	53,654	1.34	F	0.00	53,592	1.34	F	0.00
Friars Rd to E. Mission Bay Dr	43,549	1.09	F	43,854	1.10	F	0.01	43,729	1.09	F	0.00
E. Mission Bay Dr to I-5 Ramps	39,481	0.99	E	39,735	0.99	E	0.00	39,631	0.99	E	0.00
E. Mission Bay Drive											
Sea World Dr to Fiesta Island Rd	13,831	0.92	E	14,592	0.97	E	0.05	14,281	0.95	E	0.03
Friars Road											
East of Sea World Dr	19,555	0.49	B	19,707	0.49	B	0.00	19,645	0.49	B	0.00
Fiesta Island Road											
E. Mission Bay Dr to Fiesta Island Loop	8,533	0.85	D	9,547	0.95	E	0.10	9,133	0.91	E	0.06

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment Appendix 5.9-1

Bold indicates change exceeds thresholds of significance.

¹ Change in V/C ratio.

Mitigation Framework

Roadway Segments

The Mobility Assessment identified and evaluated roadway segment improvements that could mitigate or reduce roadway segment impacts to a less than significant level if feasible.

TRANS-1: Widen Sea World Drive from Friars Road to E. Mission Bay Drive-Pacific Highway. Specifically, widen and restripe Sea World Drive to provide a third southbound through

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lane that transitions to a trap left-turn lane at the intersection of Sea World Drive and Friars Road.

TRANS-2: Widen E. Mission Bay Drive from Sea World Drive to Fiesta Island Road to include two southbound through lanes. Transition the inside southbound through lane into the existing left-turn lanes at Sea World Drive.

TRANS-3: Widen Fiesta Island Road causeway between E. Mission Bay Drive and the Loop Road from a two-lane collector with no fronting property to a three-lane collector without a two-way left turn lane.

Level of Significance after Mitigation

As indicated by the levels of service shown in Tables 5.9-10 and 5.9-11, development of either Option A or Option B would not result in a significant contribution to significant impacts under weekday conditions, but would significantly contribute to significant impacts to certain segments under weekend conditions. While implementation of Mitigation Measures TRANS-1, TRANS-2, and TRANS-3 would increase capacity of the affected roadways, these measures are not recommended based on the City's need to consider transportation improvements on a comprehensive Citywide basis, which includes a focus toward shifting mode shares to active transportation, consistent with City plans and policies promoting active modes of transportation.

Implementation of Mitigation Measures TRANS-1 and TRANS-2 involve road widening that would create less-favorable conditions for active transportation users. Specifically, Mitigation Measure TRANS-1 would impede on the existing Class II bike lanes and create conflicts with the recommended buffering of these facilities and completion of the sidewalks along Sea World Drive, while Mitigation Measure TRANS-2 would impede on the existing sidewalk used for pedestrian mobility. Both mitigation measures would also require widening on the west side of Sea World Drive where there are likely to be environmental issues due to the proximity to the Bay. Therefore, Mitigation Measures TRANS-1 and TRANS-2 are not recommended, and these impacts would remain unmitigated, significant, and unavoidable.

Additionally, implementation of Mitigation Measure TRANS-3 would conflict with project features proposed along the Fiesta Island Road causeway between E. Mission Bay Drive and the Loop Road. The Mission Bay Park Master Plan – Fiesta Island Amendment will construct a multiuse path along the north side of the causeway providing a separate space for pedestrians and bicyclists. This path will connect with the integrated system of paths and trails on Fiesta Island. In addition, new bicycle lanes will be constructed on the causeway that will connect with the bicycle lanes planned for the loop roads. Therefore, Mitigation Measure TRANS-3 would require widening the causeway beyond what is being proposed in the project. This mitigation is not recommended, and the impact will remain unmitigated, significant, and unavoidable.

Intersections

Table 5.9-12, Weekday and Weekend *Intersection Levels of Service, Year 2050 Plus Project*, summarizes the results of the intersection operations analysis for the Year 2050 weekday and weekend conditions. Results of this Year 2050 plus Project intersection operations analysis shows that the increase in delay associated with either

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Option A or Option B exceeds the threshold of significance during at least one of the analysis peak hours and therefore result in significant contributions to significant cumulative impacts at the following intersections:

- The proposed project (Option A and Option B) would have a traffic impact to the intersection of E. Mission Bay Drive and Fiesta Island Road in the weekday PM and weekend midday peak hours.
- The proposed project (Option A and Option B) would have a traffic impact to the intersection of Sea World Drive and Mission Bay Drive/Pacific Highway in the weekday PM and weekend midday peak hours.

Table 5.9-12 Weekday and Weekend Intersection Levels of Service, Year 2050 Plus Project

#	Intersection	Traffic Control	Peak Hour	2050 No Amendment		2050 with Option A Conditions			2050 with Option B Conditions		
				Avg. Delay (sec)	LOS	Avg Delay (sec)	LOS	Δ^1	Avg Delay (sec)	LOS	Δ^1
Unsignalized Intersection											
1	E. Mission Bay Dr and Fiesta Island Rd	OWSC	AM	14.2	B	14.9	B	0.7	14.6	B	0.4
			PM	98.7	F	141.9	F	43.2	119.1	F	20.4
			Weekend MID	210.7	F	307.8	F	97.1	255.3	F	44.6
Signalized Intersections											
2	Sea World Dr and E. Mission Bay Dr - Pacific Hwy	Signal	AM	74.8	E	75.7	E	0.9	75.7	E	0.9
			PM	105.8	F	108.1	F	2.3	106.9	F	1.1
			Weekend MID	70.0	E	74.2	E	4.2	72.1	E	2.1
3	Sea World Dr and I-5 SB Off Ramps	Signal	AM	86.5	F	86.9	F	0.4	86.8	F	0.3
			PM	17.8	B	17.8	B	0.0	17.8	B	0.0
			Weekend MID	19.9	B	20.0	C	0.1	20.0	B	0.1
4	Sea World Dr and I-5 NB Off Ramps	Signal	AM	85.5	F	86.2	F	0.7	86.0	F	0.5
			PM	86.8	F	87.5	F	0.7	87.2	F	0.4
			Weekend MID	85.3	F	85.6	F	0.3	85.0	F	-0.3
5	Sea World Dr and Friars Rd	Signal	AM	44.7	D	44.9	D	0.2	44.8	D	0.1
			PM	100.3	F	101.0	F	0.7	100.8	F	0.5
			Weekend MID	21.4	C	21.6	C	0.2	21.5	C	0.1

Source: Fiesta Island / Mission Bay Master Plan Amendment: Mobility Assessment Appendix 5.9-1

Bold = Exceeds threshold of significance.

¹ Change in Delay.

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Mitigation Measures

Intersections

The Mobility Assessment identified and evaluated intersection improvements that could mitigate or reduce the intersection impacts to less than significant levels from implementation of Option A or Option B.

- TRANS-4:** At the intersection of E. Mission Bay Drive and Fiesta Island Road, one of the following:
- Install a traffic signal and restripe the intersection with stop bars and crosswalks at Fiesta Island Road/E. Mission Bay Drive; or,
 - Widen the intersection and construct a roundabout.

- TRANS-5:** At the intersection of Sea World Drive and E. Mission Bay Drive-Pacific Highway, widen Sea World Drive north of E. Mission Bay Drive to accommodate a southbound right-turn lane. Restripe the existing southbound right turn to a third southbound through lane. Also modify the traffic signal and optimize signal timing.

Level of Significance after Mitigation

As indicated by the levels of service shown in Tables 5.9-12, implementation of either Option A or Option B would significantly contribute to significant impacts at two study intersections under weekday and weekend conditions. While implementation of Mitigation Measures TRANS-4 option 'b' and TRANS-5 would increase capacity of the affected intersections and mitigate the vehicular impacts, these measures are not recommended based on the City's need to consider transportation improvements on a comprehensive Citywide basis, which includes focus toward shifting mode shares to active transportation, consistent with City plans and policies promoting active modes of transportation.

Implementation of Mitigation Measure TRANS-4 option 'a' (install a traffic signal at intersection of E. Mission Bay Drive and Fiesta Island Road) would fit within the existing right-of-way and signal warrants would be met. The proposed project includes the installation of a traffic signal and restriping of the intersection with stop bars and crosswalks at the intersection of Fiesta Island Road and E. Mission Bay Drive. This improvement would be included within the future General Development Plan for Fiesta Island. Therefore, Mitigation Measure TRANS-4 option 'a' is proposed as part of the project, and the impact would be less than significant.

An alternative mitigation option for E. Mission Bay Drive and Fiesta Island Road would be the implementation of Mitigation Measure TRANS-4 option 'b' (install a roundabout). Mitigation Measure TRANS-4 option 'b' would require intersection widening, which could impede upon existing pedestrian and bicycle facilities, interfere with implementation of future pedestrian and bicycle improvements, as well as pose environmental issues due to the proximity to the Bay. Therefore, Mitigation Measure TRANS-4 option 'b' is not recommended.

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Mitigation Measure TRANS-5 would involve widening of the intersection that would create less-favorable conditions for active transportation users. Specifically, Mitigation Measure TRANS-5 could impede the existing Class II bike lanes, create conflicts with the recommended buffering of these facilities and completion of the sidewalks along Sea World Drive, as well as increase crossing distances for pedestrians. The measure would also require widening on the west side of Sea World Drive where there is a steep slope and would pose potential environmental issues due to proximity to the Bay. Therefore, Mitigation Measure TRANS-5 is not recommended, and this impact would remain unmitigated, significant, and unavoidable.

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5.10 PUBLIC UTILITIES

This section evaluates the potential significant impacts to public utilities due to implementation of the proposed project. Wastewater, water supply and distribution, storm water infrastructure, solid waste facilities, and electrical infrastructure are addressed in separate sections of this chapter. Each section includes a discussion of the potential impacts and cumulative impacts from the implementation of the proposed project.

5.10.1 Existing Conditions

The existing environmental setting and regulatory framework are summarized in Chapters 2.0 and 4.0, respectively.

5.10.2 Significance Determination Thresholds

The City's CEQA Significance Determination Thresholds (2016) provide guidance to determine the potential significant impacts related to public utilities. Thresholds are modified from the City's CEQA Significance Determination Thresholds to reflect the programmatic analysis for the proposed project. Based on City's thresholds, a significant impact to public utilities would occur if implementation of the proposed project would result in:

- U-1 A need for new systems, or require substantial alterations to existing utilities, the construction of which would create a physical effect on the environment.

5.10.3 Methodology

5.10.3.1 WASTEWATER AND WATER SUPPLY AND DISTRIBUTION SYSTEMS

The number of visitors to Fiesta Island can vary dramatically from daily attendance to special events that can draw thousands. Calculating water and wastewater demand can be challenging as there are multiple factors which can contribute to different water consumption and wastewater generation rates, such as visitors bringing their own beverages or using the site for various periods of time. For the purposes of this PEIR, to be conservative, wastewater demand was made equal to potable water demand. Special events currently bring portable restrooms and bottled water to the island and, as this is expected to continue, water and wastewater demand for special events was not included as part of the analysis.

5.10.4 Environmental Impacts

The following impact analysis addresses the threshold of significance identified above. The threshold is identified in brackets after the impact statement.

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5.10.4.1 WASTEWATER SYSTEMS

Impact 5.10-1: Would implementation of the proposed project result in a need for new sewer systems, or require alterations to existing utilities, the construction of which would create a physical impact on the environment? [Threshold U-1]

Impact Analysis: The proposed project includes the construction of new restroom facilities and a campground, which would require sewer connections. The proposed sewer connections would extend from the northern part of the island and connect to the Southeast and Southwest Subareas. Installation of these sewer system improvements would require trenching and would be included in pathways, roadways, or trails as often as possible to ensure ease of maintenance. To maintain access to the sewer pipes, trees or shrubs over three feet high at maturity would not be planted within 10 feet of the sewer pipes.

Once operational, the increase in wastewater generation due to buildout of the proposed project would represent a very small fraction of the remaining wastewater treatment capacity at the Point Loma Wastewater Treatment Plant. Future development per the proposed amendment would be required to comply with the City's Municipal Code regulations regarding sewers and wastewater facilities and would be required to follow the City's Sewer Design Guidelines. Adherence to these requirements would reduce impacts associated with future sewer system improvements to less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

5.10.4.2 WATER SUPPLY AND DISTRIBUTION SYSTEMS

Impact 5.10-2: Would implementation of the proposed project result in a need for new water infrastructure or require alterations to existing utilities, the construction of which would create a physical impact on the environment? [Threshold U-1]

Impact Analysis: The City's water supply is dependent on allocations outside of San Diego County. Due to increased demand in the western states and increased environmental protections involving water sources, measures have been taken to protect and use the water allocation as efficiently as possible to meet the needs of the existing and future population.

The proposed project includes the construction of new restroom facilities and a campground, which would require water connections. The proposed water connections would follow the Fiesta Island Road loop and would connect the northern part of the island to the Southeast and Southwest Subareas. Installation of these water infrastructure improvements would require trenching and would be included in pathways, roadways, or trails as often as possible to reduce maintenance impacts. To maintain access to the water pipes, trees or shrubs over three feet high at maturity will not be planted within 5 feet of the water pipes.

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Impacts related to water conservation would not occur with implementation of the proposed project as other improvements would not include any residential, commercial, or other development associated with high water use. Once operational, the increase in water demand due to buildout of the proposed project would represent a very small fraction of the City's water demand and supplies.

Future development would be required to comply with the construction and design criteria outlined the City's Water Design Guidelines, as well as any other applicable City, state and federal regulations. Adherence to these requirements would reduce impacts associated with future water infrastructure improvements to less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

5.10.4.3 STORM WATER DRAINAGE SYSTEMS

Impact 5.10-3: Would implementation of the proposed project result in the need for new storm water drainage facilities or require alterations to existing facilities, the construction of which would create a physical impact on the environment? [Threshold U-1]

Impact Analysis: Proposed improvements include parking areas, playgrounds, plazas, a campground, and other recreational amenities which could require storm water drainage facilities. The proposed project also includes the recontouring of the perimeter road to alter storm water drainage flows inward into the island and into a bioswale to improve water quality and lessen beach erosion. Impacts resulting from the recontouring of the perimeter road and the construction of the bioswale and hydraulic connection would be part of the impacts analyzed throughout this PEIR.

While the details of storm water infrastructure improvements would depend on the actual design of a future project, strict adherence to existing storm water regulations, conformance with General Plan and proposed amendment policies, and adherence to the BMPs outlined in the Storm Water Quality Management Plan (Appendix 5.5-1) would ensure that significant adverse effects to the City's storm water system, as well as significant impacts associated with the installation of new storm water infrastructure, would be less than significant.

Operation of the proposed drainage components of the project would likely have a favorable impact on drainage by reducing runoff into Mission Bay and reducing contamination of the bay carried in runoff. Regardless, individual projects per the proposed amendments would have to demonstrate that they are compliant with the City's storm water regulations. Impacts would be less than significant.

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PUBLIC UTILITIES

5.10.4.4 SOLID WASTE

Impact 5.10-4: Would implementation of the proposed project result in a need for new solid waste facilities or require alterations to existing facilities, the construction of which would create a physical impact on the environment? [Thresholds U-1]

Impact Analysis: The proposed project includes island-wide improvements to recreation facilities, access and circulation, changes to parking, construction of soft-surface trails and paved multi-use paths, habitat improvements, water quality improvements, enhancements to signage, and utilities improvements. The City has established goals in its Zero Waste Plan consistent with and exceeding the State's 75 percent waste diversion target. Future development associated with the proposed project would have to comply with the City's Refuse and Recyclable Materials Storage Regulations, the Recycling Ordinance, and the Construction and Demolition (C&D) Debris Deposit Ordinance, among others. These documents set forth measures to prevent or mitigate any identified significant impacts. Therefore, impacts would be less than significant.

Once operational, solid waste generation would vary based on special events, holidays, and activity. The parkwide improvements proposed as part of the project could increase the number of visitors to the project area, which would increase the amount of trash and recyclables generated and transported to landfills and recycling centers. However, subsequent projects implemented in accordance with the proposed project would not change any existing or planned land uses. As the proposed project would not induce growth in the region, any additional waste and recyclables collected from the project area would not represent an increase in regional solid waste generation associated with new residential or commercial land uses. As a result, the proposed project would not result in a significant increase in demand for the disposal of solid waste that would require an expansion of landfills and recycling centers, the construction of which would create physical impacts. Impacts would be less than significant.

Green Waste

The project area has little maintained landscaping and generates no landscaping waste. Development pursuant to the proposed project could increase landscaping waste. Grading of the land during construction activities could remove existing vegetation onsite. This plant material could be integrated into the soil preparation and could be diverted from landfill disposal, either through onsite use, such as grasscycling, or by transportation to a composting facility such as the Miramar Greenery. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

5. Environmental Analysis PUBLIC UTILITIES

5.10.4.5 ELECTRICAL INFRASTRUCTURE

Impact 5.10-5 Would implementation of the proposed project result in a need for new electrical infrastructure or require alterations to existing utilities, the construction of which would create a physical impact on the environment? [Threshold U-1]

Impact Analysis: The proposed project does not include a lighting plan, and any outdoor lighting that would be installed would be incidental security lighting—for example, exterior building lighting on restrooms. Future GDPs under the proposed project would use solar-powered lighting to the greatest extent possible to minimize extensions of powerlines. Any extension of electrical transmission lines would need to be coordinated and executed by SDG&E and would require a separate environmental review at that time. Implementation of the proposed project would not result in a need for new electrical infrastructure or require alterations to existing utilities and impacts would be less than significant.

5.10.5 Cumulative Impacts

5.10.5.1 WASTEWATER SYSTEMS, STORMWATER DRAINAGE FACILITIES, AND ELECTRICAL INFRASTRUCTURE

As discussed above, implementation of the proposed project would not result in significant impacts related to wastewater systems, storm water drainage facilities, and electrical infrastructure. Implementation of General Plan and Mission Bay Park Master Plan policies, and compliance with federal, State, and local regulations would preclude incremental impacts associated with new construction of or improvements to wastewater systems and storm water drainage facilities. These requirements apply to the development within the project area and to development of cumulative projects within Mission Bay Park and the surrounding communities to ensure that adverse impacts related to the provision of utilities does not occur. Mandatory compliance with City standards for the design, construction, and operation of utilities infrastructure (including environmental review) would preclude significant cumulative effects. Similarly, any extension of electrical transmission lines into the project area would need to be coordinated and executed by SDG&E and would be subject to a separate environmental review at that time. As a result, implementation of the proposed project and associated discretionary actions would result in a less than significant cumulative impact associated with utilities infrastructure.

5.10.5.2 WATER SUPPLY AND DISTRIBUTION SYSTEMS

Water demands associated with buildout of the proposed project would be consistent with the water demand assumptions included in the regional water resource planning documents of the San Diego County Water Authority and the Metropolitan Water District. Implementation of General Plan and Mission Bay Park Master Plan policies, and compliance with federal, State, and local regulations would preclude incremental impacts associated with new construction of or improvements to water systems infrastructure. These requirements apply to development within the project area and to the development of cumulative projects within Mission Bay Park and the surrounding communities to ensure that adverse impacts related to the provision of utilities does not occur. Mandatory compliance with City standards for the design, construction,

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and operation of water infrastructure (including environmental review). Implementation of the proposed project would have a less than significant cumulative impact related to water supply and distribution systems.

5.10.5.3 SOLID WASTE

Future projects would be required to comply with City regulations regarding solid waste, including those intended to divert solid waste from the City landfills to preserve capacity and achieve the waste diversion goals of the City's CAP. Compliance with the City's Municipal Code and consistency with the General Plan, applicable Mission Bay Park Master Plan policies promoting waste diversion, and CAP policies supporting diversion would serve to preserve solid waste capacity. No policy changes have been identified that would prevent achievement of the 75 percent target for waste diversion and recycling. All future discretionary projects generating more than 60 tons of waste are required to develop and implement a WMP demonstrating 75 percent waste diversion prior to issuance of a building permit. The proposed project would not induce growth in the region, and any additional waste and recyclables collected from the project area would not represent an increase in regional solid waste generation associated with new residential or commercial land uses. Therefore, cumulative solid waste impacts would be less than significant.

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5.11 ENERGY USE

This section summarizes the proposed project's anticipated energy use during construction and operation, as well as the associated environmental impacts and relevant mitigation measures. This section covers electrical energy as well as natural gas, gasoline, and diesel.

Appendix F of the CEQA Guidelines requires that an EIR include a discussion of the potential energy impacts of a proposed project, with an emphasis on avoiding or reducing inefficient and wasteful uses of energy. Some of the topics addressed in this section are also discussed elsewhere in this PEIR, including in Chapter 2, *Environmental Setting*; Chapter 3, *Project Description*; Section 5.1 *Air Quality and Odor*; Section 5.4 *Greenhouse Gas Emissions*; and Section 5.9, *Transportation/Circulation*. This section also relies on the results of a CalEEMod analysis prepared for the proposed project. Appendix 5.1-1 contains the results of this analysis.

5.11.1 Significance Determination Thresholds

The City does not include energy use in its CEQA Significance Determination Thresholds, therefore, Appendix F of the CEQA Guidelines is used to evaluate the proposed project. Based on these guidelines, impacts to energy use would be significant if the proposed project would:

- E-1 Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy, or construct new or retrofitted buildings that would have excessive energy requirements for daily operations.

This PEIR analyzes energy use in three district categories, so as to better assess the environmental effects associated with different types of energy use in the proposed project. These categories are:

- Vehicle and equipment energy use from construction of the proposed project.
- Transportation energy use from people traveling to and from the project area during operation.
- Building and facility energy use of the proposed project during operation.

5.11.2 Environmental Impacts

The following impact analysis addresses the threshold of significance identified above. The threshold is identified in brackets after the impact statement.

Impact 5.11-1: Would the construction activities associated with the proposed project result in wasteful, inefficient, and unnecessary use of energy, or have excessive energy requirements? [Threshold E-1]

Impact Analysis: During construction, energy use would occur in two categories: vehicle fuel use from workers commuting to and from the construction site, and fuel use from vehicles and equipment used to carry out construction activities.

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Commute Energy Use

Worker commute activities rely mostly on gasoline-powered vehicles, with a smaller number of diesel or electric vehicles. The energy use from worker commute activities would be temporary, as it would only occur during the construction of the proposed project. Energy use would likely vary daily, depending on the number of workers employed on-site during different construction phases. Table 5.11-1 shows the anticipated energy use from worker commute activities from 2018 to 2020, which are the expected years of construction.

Table 5.11-1 Future Vehicle Fuel Use from Construction Worker Commute by Year

Year	Gasoline		Diesel		Electricity	
	VMT	Gallons	VMT	Gallons	VMT	kWh *
2018	252,841	10,869	1,540	47	1,867	627
2019	191,217	7,996	1,201	36	2,054	688
2020	51,120	2,079	329	10	766	256
Total	495,178	20,944	3,070	93	4,687	1,571

Source: CalEEMod, EMFAC

* CalEEMod and EMFAC do not provide estimates for energy used by electric vehicles. This data was estimated using existing kWh/mile data and estimates of future electric vehicle efficiencies provided by the Federal Highway Administration.

Construction worker commute is projected to use an annual average of approximately 6,980 gallons of gasoline fuel, approximately 30 gallons of diesel fuel, and approximately 520 kWh of electricity over the course of the three construction years. Due to the phasing of construction activities and expected increases in vehicle efficiency, gasoline and diesel use is projected to be highest in the first year of construction. Electricity use is projected to increase in 2019 due to greater adoption of electric vehicles. Gasoline, diesel, and electricity use is expected to fall sharply in 2020 as construction activities conclude.

In the year of greatest fuel use (2018), worker commute activities to and from the project area are expected to use approximately 10,870 gallons of gasoline and approximately 50 gallons of diesel fuel. By contrast, San Diego County is projected to use more than 1.19 trillion gallons of gasoline and over 201 billion gallons of diesel fuel. Therefore, in the year of greatest fuel use, the proposed project would use approximately 0.0009 percent of the gasoline and 0.00002 percent of the diesel fuel in San Diego County used for on-road vehicles.

Construction Equipment Fuel Use

Construction of the proposed project would involve the use of on-road vehicles, such as trucks used to deliver materials and haul away debris, and off-road equipment, including tractors and excavators. Most construction vehicles and equipment use diesel fuel, although some use gasoline. Fuel use would vary each year depending on the type of construction activities being performed and the associated vehicle and equipment needs. Table 5.11-2 shows the projected energy use from on-road vehicles used to carry out construction activities, while Table 5.11-3 shows the anticipated energy use from off-road vehicles and equipment.

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ENERGY USE**Table 5.11-2 Future On-Road Vehicle Fuel Use from Construction Operations by Year**

Year	Gasoline		Diesel	
	VMT	Gallons	VMT	Gallons
2018	20,432	4,097	1,517,935	270,298
2019	7,820	1,347	246,354	41,537
2020	1,513	242	23,148	3,466
Total	29,765	5,686	1,787,437	315,301

Source: CalEEMod, EMFAC

Table 5.11-3 Future Off-Road Vehicle and Equipment Fuel Use from Construction Operations by Year

Year	Gasoline gallons	Diesel gallons
2018	12,336	63,042
2019	12,180	22,704
2020	2,917	5,063
Total	27,433	90,809

Source: CalEEMod, OFFROAD

On-road vehicles used in construction activities are expected to use an annual average of approximately 1,900 gallons of gasoline and approximately 105,100 gallons of diesel fuel over the course of the three construction years. Fuel use would be highest in 2018, as this is the year when grading activities, which require the most on-road vehicle use, are expected to take place. The decline in fuel use in 2019 and 2020 would be due to changes in construction activities and increases in vehicle efficiency. In 2018, gasoline fuel use from on-road vehicles used in construction activities is projected to make up 0.0003 percent of San Diego County's total gasoline use. Diesel use in 2018 is projected to be a larger proportion of regional diesel use (0.1 percent) due to the large amount of grading required by the project but is expected to remain a fraction of a percent of regional usage.

Off-road vehicles and equipment used in construction activities are expected to use an annual average of 9,140 gallons of gasoline fuel and 30,270 gallons of diesel fuel over the course of the three construction years. The greatest amount of off-road fuel use is expected to occur in 2018, due to the phasing of construction activities and the large amount of heavy equipment required during these early activities. In this year, off-road vehicles and equipment in San Diego County is expected to use approximately 56,579,520 gallons of gasoline and approximately 117,300,160 gallons of diesel fuel. Off-road fuel use for the proposed project in 2018 is projected to be 0.02 percent of regional gasoline use and 0.05 percent of regional diesel use.

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Conclusion

The proposed project is not expected to require a significant amount of gasoline, diesel, or electricity during any year of construction activities. The amount of fuel needed for construction activities is expected to be consistent with state and regional requirements for similar types of projects, and within regional projections for fuel use. There is no aspect of the proposed project that would require any particularly fuel-intensive, wasteful, or inefficient activities. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.11-2: Would operation of the proposed project cause a wasteful, inefficient, and unnecessary use of energy? [Threshold E-2]

Impact analysis:

Vehicle Energy Use

Trips by visitors traveling to and from the project area would take place using passenger vehicles or public transit. Passenger vehicles are expected to be mostly powered by gasoline, with some diesel and electrical vehicle use. Public transit vehicles are expected to be powered by diesel and gasoline, and potentially by electricity. Table 5.11-4 shows the anticipated vehicle fuel use for the year 2035 for trips to and from the project area under the existing conditions, adopted plan, and for Options A and B of the proposed project.

Table 5.11-4 Future On-Road Vehicle Fuel Use from Project Operations (2035)

Scenario	Gasoline		Diesel		Electricity		Total		
	VMT	Gallons	VMT	Gallons	VMT	kWh *	VMT	Gallons	kWh
Existing conditions	12,592,220	377,185	992,982	108,105	1,323,134	389,970	14,908,336	485,289	389,970
Adopted plan	28,015,776	839,179	2,209,233	240,517	2,943,772	867,623	33,168,782	1,079,695	867,623
Proposed project (Option A)	13,246,526	396,784	1,044,578	113,722	1,391,886	410,233	15,682,990	510,506	410,233
Proposed project (Option B)	12,703,055	380,505	1,001,722	109,056	1,334,780	393,402	15,039,557	489,561	393,402

Sources: CalEEMod, EMFAC

* CalEEMod and EMFAC do not provide estimates for energy used by electric vehicles. This data was estimated using existing kWh/mile data and estimates of future electric vehicle efficiencies provided by the Federal Highway Administration.

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Both Options A and B would result in a slight increase in vehicle fuel use relative to existing conditions (approximately 5.2 percent for Option A and 0.9 percent for Option B). However, vehicle fuel use under the proposed project would be substantially less compared to the adopted plan. Option A would use approximately 52.7 percent less fuel at buildout compared to the adopted plan, and Option B would use 54.7 percent less fuel. The project area is connected to the City's bicycle network, bus routes run nearby, and a new station on the City's light rail network will be located approximately half a mile from Fiesta Island and is expected to be operational by 2021. The project area is therefore accessible by alternative transit, which will help reduce passenger vehicle fuel use. San Diego County is projected to use approximately 1.05 trillion gallons of on-road vehicle fuel in 2035. Both options of the proposed project would account for less than 0.05 percent of this regional total.

Conclusion

The project area is currently accessible by public transit and alternative transportation, and connectivity to public transit will increase with the Mid-Coast Corridor light rail extension. The project area's proximity to urbanized areas of the City and to the I-5 freeway also makes it easily accessible by car. Vehicle fuel use under both options of the proposed project would be less than half of the vehicle fuel use under the adopted plan. There is no component of the proposed project that would result in unusually high vehicle fuel use during operation. Operation of the proposed project would not create a land use pattern that would result in wasteful, inefficient, or unnecessary use of energy. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.11-3: Will operation of the proposed project create facilities that would have excessive energy requirements? [Threshold E-3]

Impact Analysis: Facilities in the project area will use energy to run lights and any other equipment. The project area does not currently use natural gas and is not expected to do so under any future scenario.

Facility Energy Use

Energy use in the project area (which would be exclusively electricity), is expected to all be used by the parking lots at the property, likely to power lights and any other equipment that may be needed. Most or all energy use is therefore expected to occur during evening, night, and early morning hours. The proposed restrooms are likely to have skylights with possibly solar powered led lighting and will be closed at night except for at the primitive campground. The primitive campground will have minimal power demand as no power will be provided to the individual campsites. Table 5.11-5 shows the expected electricity use for the project area under existing conditions, the adopted plan, and for Options A and B of the proposed project.

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ENERGY USE

Table 5.11-5 Future Electricity Use in Project Area (2035)

Scenario	Electricity (kWh)
Existing conditions	48,175
Adopted plan	844,671
Proposed project (Option A)	416,751
Proposed project (Option B)	383,600

Source: CalEEMod

Both project options would substantially increase electricity use relative to existing conditions, as the proposed project would involve erecting new facilities that will increase energy use at the site. However, the project area would use less electricity under either project option compared to the adopted plan. Option A would use approximately 50.7 percent less electricity compared to the adopted plan, while Option B would use approximately 54.6 percent less electricity. The new development at the site would not have any excessive energy requirements for daily operations, and the proposed project would use energy-efficient lighting and other equipment as necessary that meets or exceeds California’s energy efficiency requirements.

Conclusion

The proposed project would use substantially less electricity compared to the adopted plan. There are no elements of the proposed project that would use excessive amounts of energy or would create unnecessary energy waste during project operation. While it would increase the electricity use compared to existing conditions, the increase is reasonable given the features of the proposed project. Operation of the proposed project therefore would not create facilities with excessive energy requirements. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

5.11.3 Cumulative Impacts

The analysis in this section concludes that the cumulative project-level energy-related impact from the proposed project would be less than significant for two reasons. Firstly, energy use during construction activities would not result in excessive energy use. Secondly, state regulations (e.g. the California Energy Code) and voluntary features would avoid excessive energy use from operations of the proposed project. As a result, construction and long-term operational energy use would not cumulatively reach significant levels.

5. Environmental Analysis

5.12 VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

This section discusses the potential visual effects and neighborhood character impacts that could result from implementation of the proposed project. This section evaluates the proposed project using the City's CEQA Significance Determination Thresholds criteria to address the proposed project's visibility from the surrounding area; the visual similarity of structures to each other and their surrounding environment; the scale, height, and massing of the proposed buildings compared to other structures in the area; and the articulation of surfaces compared to other developments in the area. The natural landscape, topography, and introduced landscaping contribute to the aesthetic environment. Together, the built and natural environments combine to create the overall visual character and quality of the project area.

5.12.1 Existing Conditions

The existing environmental setting and regulatory framework are summarized in Chapters 2.0 and 4.0, respectively.

5.12.2 Significance Determination Thresholds

The City's CEQA Significance Determination Thresholds (2016) provides guidance to determine the potential significant impacts related to visual effects and neighborhood character. Based on the City's thresholds, impacts to visual effects and neighborhood character would be significant if the proposed project would result in:

- | | |
|--------|---|
| VENC-1 | A substantial obstruction of any vista or scenic view from a public viewing area as identified in a community plan; |
| VENC-2 | A substantial adverse alteration (e.g. bulk, scale, materials or style) to the existing or planned (adopted) character of the area; |
| VENC-3 | The loss of any distinctive or landmark tree(s), or stand of mature trees as identified in a community plan; |
| VENC-4 | Substantial change in the existing landform; or |
| VENC-5 | Substantial light or glare which would adversely affect daytime or nighttime views in the area. |

5.12.3 Environmental Impacts

The following impact analysis addresses the thresholds of significance identified above. The applicable thresholds are identified in brackets after the impact statement.

5. Environmental Analysis

VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

Impact 5.12-1: Would implementation of the proposed project result in a substantial obstruction of any vista or scenic view from a public viewing area as identified in a community plan? [Threshold VENC-1]

Impact Analysis: Visual assets on Fiesta Island include sweeping, unobstructed public views of Mission Bay and the surrounding Pacific Beach, Clairemont Mesa, and Linda Vista communities from all points around the island's shoreline. However, the project area does not include any officially designated scenic viewpoints, landmarks or corridors. Public views towards scenic resources from the shoreline are almost entirely unobstructed. Fiesta Island is relatively flat aside from the perimeter berms. Views from the interior of Fiesta Island are obstructed by these berms.

When compared to existing conditions, the proposed project would not alter or block public views from a scenic vista, critical view corridors, designated open space areas, public roads, or public parks. It would not create any substantial obstruction of any roads, parks, vistas or scenic views from any public viewing areas (as identified in the Mission Bay Park Master Plan). Furthermore, the future recreational activity, environmental enhancement, and mobility improvements associated with the proposed project would expand access and use on the island and would provide greater mobility connections within Fiesta Island and to the region. When compared to the adopted Fiesta Island Concept Plan, the proposed project would significantly reduce changes to the natural open space character and landform because the proposed project has less formal developed park and recreation uses. Impacts to public views or access to significant visual landmarks or scenic vistas as a result of the proposed project would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.12-2: Would implementation of the proposed project result in a substantial adverse alteration (e.g. bulk, scale, materials or style) to the existing or planned (adopted) character of the area or result in the loss of a distinctive or landmark tree(s)? [Thresholds VENC-2 and VENC-3]

Impact Analysis: The proposed project would not substantially alter the existing character of Fiesta Island. The proposed project would not add structures that are out of character to the bulk and scale of the area, nor would the proposed project alter the landform substantially. There are no distinctive or landmark tree(s) or any stand of mature trees identified in the current Mission Bay Park Master Plan or within the proposed project area. Although there is limited vegetation present within the project area, no mature trees subject to City Council Policy 900-19, which protects street trees, are present on the island. Therefore, implementation of the proposed project would not substantially change existing landform or result in the loss of any distinctive or landmark trees, or any stand of mature trees, and impacts would be less than significant.

5. Environmental Analysis

VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.12-3: Would implementation of the proposed project result in a substantial change in the existing landform? [Threshold VENC-4]

Impact Analysis: The proposed project includes design features that will alter the perimeter of the island to create new wetlands, expand eel grass plantings, and provide additional buffer for the northern least tern habitat. Most of the island will be graded to meet the needs of the design, alter drainage patterns to protect water quality in Mission Bay, and result in grade-separated bicycle and pedestrian crossings of some island roadways. Areas such as the Stony Point and northern least tern habitat, and the San Diego Youth Aquatic Center will not be affected by the proposed project.

The resulting design will be similar to the existing conditions, with improvements consisting largely of landscaping, trails, and paths. Impacts would be less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact 5.12-4: Would implementation of the proposed project create substantial light or glare which would adversely affect daytime or nighttime views in the area? [Threshold VENC-5]

Impact Analysis: Any future uses associated with implementation of the proposed project would be required to comply with the applicable outdoor lighting regulations of the SDMC (§142.0740 et seq.). The purpose of the City's outdoor lighting regulations is to minimize negative impacts from light pollution including light trespass, glare, and urban sky glow in order to preserve enjoyment of the night sky and minimize conflict caused by unnecessary illumination. Regulation of outdoor lighting is also intended to promote lighting design that provides for public safety and conserves electrical energy. New outdoor lighting fixtures must minimize light trespass in accordance with the Green Building Regulations, where applicable, or otherwise shall direct, shield, and control light to keep it from falling onto surrounding properties.

Therefore, with implementation of the proposed project, General Plan and regulations in the SDMC, lighting and glare impacts would be less than significant.

5. Environmental Analysis

VISUAL EFFECTS AND NEIGHBORHOOD CHARACTER

Mitigation Measures

No mitigation measures are required.

Level of Significance after Mitigation

Impacts would be less than significant.

5.12.4 Cumulative Impacts

Future implementation of the proposed project would not have the potential to cumulatively impact the visual environment through the design and location of future buildings or landform alterations. The few buildings anticipated with the proposed project (e.g., restrooms, boat storage, shade structures, etc.) are of pedestrian scale and will be landscaped consistent with the recreational use of the island. Because the proposed project keeps the recreational land use and design of the island which is similar to the existing conditions, it would not significantly change the visual character or landform, obstruct views, or emit significant new sources of light and glare. Furthermore, improvements associated with the proposed project would be similar in type to activities and uses that currently occur on Fiesta Island.

Cumulative light and glare impacts are addressed through compliance with the SDMC and proposed improvements would not affect day or nighttime views. With compliance with the existing regulations addressing the protection of trees, views, lighting, and landform alteration, cumulative impacts would be less than significant.

6. Significant Unavoidable Environmental Effects/ Irreversible Environmental Changes

6.1 SIGNIFICANT UNAVOIDABLE ENVIRONMENTAL EFFECTS

In accordance with CEQA Guidelines Section 15126.2(b), any significant unavoidable impacts of a project, including those impacts that can be mitigated, but not reduced to below a level of significance despite the applicant's willingness to implement all feasible mitigation measures, must be identified in the PEIR. For the proposed Mission Bay Park Master Plan – Fiesta Island Amendment, impacts related to transportation and circulation (cumulative impacts to roadway segments and intersections) would remain significant and unavoidable impacts (refer to Section 5.9, *Transportation/Circulation*, for further detail). All other significant impacts identified in Chapter 5.0 can be reduced to below a level of significance with implementation of the mitigation framework identified and through compliance with General Plan and Mission Bay Park Master Plan policies.

6.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the CEQA Guidelines requires an evaluation of the significant irreversible environmental changes which would occur should the proposed Mission Bay Park Master Plan – Fiesta Island Amendment and associated discretionary actions be implemented. Irreversible changes typically fall into three categories:

- Primary impacts such as the use of nonrenewable resources (i.e., biological habitat, agricultural land, mineral deposits, water bodies, energy resources, and cultural resources);
- Primary and secondary impacts such as highway improvements which provide access to previously inaccessible areas; and
- Environmental accidents potentially associated with buildout of the proposed Mission Bay Park Master Plan – Fiesta Island Amendment.

Implementation of the proposed project would not result in significant irreversible impacts to agricultural land, biological resources, energy, historical, archaeological, and tribal cultural resources, mineral deposits, or water bodies. Although sensitive biological resources are identified within the proposed project area which could be impacted with future development, direct and indirect impacts can be offset through strict compliance with Master Plan policies, regulatory compliance (e.g., the MSCP and ESL Regulations of the LDC), and the Mitigation Framework identified in Section 5.2 of this PEIR. Future development pursuant to the proposed project would not impact important historical, archaeological, or tribal cultural resources as

6. Significant Unavoidable Environmental Effects/Irreversible Environmental Changes

there are no known or potential historical, archaeological, or tribal cultural resources within the project area. As discussed in Chapter 8, *Effects Found Not to be Significant*, implementation of the proposed project would not result in significant irreversible impacts to agricultural, forestry, or mineral resources.

The plan area is a recreational area that is accessible via regional transportation facilities (e.g. I-5). No new highways or roadways are proposed that would provide access to currently inaccessible areas. In the case of the proposed project, implementation would involve the realignment of Fiesta Island Road within the planning area. Therefore, implementation of the proposed project would not result in a significant impact related to accessibility.

Construction of subsequent projects implemented in accordance with the proposed project would require the irreversible consumption of energy and natural resources. Energy derived from nonrenewable sources, such as fossil fuels, would be consumed during construction activities and as a result of operational lighting, heating, cooling, and transportation uses. Natural resource consumption would include lumber and other forest products, sand and gravel, asphalt, steel, copper, other metals, and water. Building materials, while perhaps recyclable in part at some long-term future date, would for practical purposes be considered permanently consumed. Future construction will require the use of natural materials including lumber, metal, glass, concrete, and asphalt. In some instances, extension of new roadways shown in the proposed project will require the demolition of existing roadways. Even with the City of San Diego construction material diversion requirements, it is likely that some materials will be sent to the landfill.

With respect to environmental accidents potentially associated with buildout of the proposed project, as a park it is not anticipated that there would be the use of hazardous materials or the exposure of hazards to the public. The use of any hazardous materials (e.g. pesticides and insecticides), will follow federal, state, and local requirements for application. Therefore, impacts would be reduced to less than significant through mandatory conformance with applicable regulatory/industry standard and codes.

There are no airports or related APZs located within or adjacent to the project area. The project area is located 1.8 miles from San Diego International Airport, but the project area is not located within the mapped APZs for this airport. Thus, the risk of aircraft-related risks to the visitors within the project area is low.

The island would have minimal development, but will have extensive vegetation, trails, and habitat areas. Due to the amount of natural, unmaintained open space there is a high risk for wildfires. Both management of the island and all site development pursuant to the proposed project would be subject to applicable state and City regulatory requirements related to fire hazards and prevention.

Accidents related to flood hazards would not be significant because the project area does not contain mapped floodplains.

7. Growth Inducement

In accordance with CEQA Guidelines Section 15126.2(d) and the City's CEQA Significance Determination Thresholds (2016), an EIR must include an analysis of the growth inducing impacts of the project. Growth inducement refers to economic or population growth, the construction of additional housing, or removal of obstacles to population growth associated with a proposed project.

Direct Growth

Direct growth inducement may result from the extension of public services and infrastructure such as roadways and utility lines to a previously undeveloped area. These can foster additional growth by reducing development constraints for nearby areas, thereby inducing other property owners in the area to convert their land to other uses. Direct impacts can also result from a development's population placing strain on existing public services, or a development accelerating existing surrounding developments.

Fiesta Island is in use as a regional park and is part of the Mission Bay Park Master Plan that designates the area as parkland. Access to the property is through a single roadway and no new access is proposed. The project does not include land use regulation or policy changes; therefore, the project would not benefit any future development beyond Fiesta Island.

The mobility improvements will improve circulation for visitors to Fiesta Island but would not affect regional transportation. Improving pedestrian and bicycling opportunities affects local residents and reduces the need for vehicle trips, but it is not considered growth inducing.

The proposed project results in a park that is considered a public service. Supporting public services such as police, maintenance, and fire, are evaluated in Section 5.8 of this PEIR. Impacts to these services were determined to be less than significant.

The proposed project would allow for improvements to Fiesta Island that will reduce environmental impacts and improve amenities. The park improvements are consistent with the Mission Bay Park Master Plan and are unique to Fiesta Island. All impacts would be contained on the island and could not cause additional activities that could affect the environment beyond what is evaluated in this PEIR.

Indirect Growth

Indirect impacts may result with implementation of the subsequent projects contemplated by the proposed project. The addition of trails and other recreation amenities contemplated by the proposed project could attract additional visitors to the plan area. However, their presence would be short-term and would not result in a long-term increase in population. Therefore, indirect impacts related to inducing population growth would be less than significant. In addition, improvements associated with Fiesta Island would not extend

7. Growth Inducement

utilities or expand services beyond those planned, or already constructed in the plan area. Implementation of the proposed project would either extend utilities already on the island to meet the needs of future improvements or extend to existing utilities adjacent to the island. These facilities can be accommodated by the existing infrastructure on or adjacent to Fiesta Island. Because subsequent projects contemplated by the proposed project would connect with existing available utilities in the area, growth-inducing impacts would be less than significant. Overall, implementation of the proposed project would not result in either direct or indirect impacts related to inducing population growth. Impacts would be less than significant.

8. Effects Found Not to be Significant

CEQA Guidelines Section 15128 requires that an EIR contain a brief statement disclosing the reasons why various possible significant effects of a project were determined not to be significant and therefore were not discussed in detail in the EIR. The impacts associated with the following environmental issue areas were found to not be significant as a result of the proposed project: Agricultural and Forestry Resources, Health and Safety, Historical and Tribal Cultural Resources, Mineral Resources, and Population and Housing.

8.1 AGRICULTURAL AND FORESTRY RESOURCES

Farmland Mapping and Monitoring Program

Based on the farmland maps prepared by the California Department of Conservation (2016), the project site is not identified as containing Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. The project site is in an urbanized region and there are no existing agricultural lands or agricultural uses. Therefore, no impacts to Prime Farmland, Unique Farmland, or Farmland of Statewide Importance would occur.

Agricultural Zoning/Williamson Act

The project site is not zoned for agriculture and there are no lands under a Williamson Act contract. Therefore, no impact would occur.

Forest, Timberland, and Timberland Production Zone

The project site is within an urbanized area. There are no existing forest lands, timberlands, or timberlands zoned Timberland Production either within the project site or in the immediate vicinity that would conflict with the existing zoning. Therefore, no impact would occur.

Loss of Forest Land

The project site is within an urbanized area with no existing forest lands on the project site or in the immediate vicinity. Implementation of the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use; therefore, no impact would occur.

8. Effects Found Not to be Significant

8.2 HEALTH AND SAFETY

Hazardous Materials

Existing Hazardous Materials Onsite

The following five databases were searched for hazardous materials sites on and within 2,000 feet of Fiesta Island on March 14, 2018:

- GeoTracker, State Water Resources Control Board;
- EnviroStor, Department of Toxic Substances Control;
- EnviroMapper, U.S. Environmental Protection Agency;
- EJScreen, U.S. Environmental Protection Agency; and
- Solid Waste Information System (SWIS), California Department of Resource Recovery and Recycling (CalRecycle).

Per the City's CEQA Significance Determination Thresholds, the search used a buffer of 2,000 feet from the island for Superfund sites, State Response sites, and corrective action sites; and a 1,000-foot buffer for other types of hazardous materials sites such as voluntary cleanup, school cleanup, evaluation, and military evaluation. Three hazardous materials sites were identified: two on Fiesta Island and two on the mainland to the south. Cases for two of the three sites are closed; the third is a formerly used defense site that is known to the Department of Toxic Substances Control and the U.S. Department of Defense. None of the four sites are considered environmental concerns for the proposed project. The site was not formerly in agricultural use and no pesticide or herbicide residues from past agricultural use are present (see the note on site history above). Therefore, there would be no impact related to hazardous materials sites.

Table 8-1 Hazardous Materials Sites

Site Address Distance and Direction from Project Site	Database Reason for Listing Regulatory Status
San Diego City Water site 1000 Fiesta Island Rd Fiesta Island	GeoTracker Part of Fiesta Island was formerly used for drying domestic sludge from Point Loma Wastewater Treatment Facility. Dry sludge was disposed of off-site in 1997 and the area capped with 5 to 7 feet of clean imported soil. Case closed 2000.
Sea World Marina 1660 South Shores Rd 1,000 feet south	Diesel release; media affected unspecified; case closed 1987.
San Diego River & Mission Bay IDI (Military Item Disposal Instruction) Fiesta Island	EnviroStor Formerly Used Defense Site (FUDS). Contaminants of concern unexploded ordinance (UXO), munitions of concern (MEC); media affected unspecified.

8. Effects Found Not to be Significant

Table 8-1 Hazardous Materials Sites

Site Address Distance and Direction from Project Site	Database Reason for Listing Regulatory Status
	Inactive; needs evaluation 2005.
Mission Bay Landfill #1 Sea World Drive 1,320 feet south	Solid Waste Information System Landfill; Closed 1988. GeoTracker: Landfill operation 1952-1959; received dredging fill 1959-1969 and 1980. Contaminants of concern chlorinated hydrocarbons, other petroleum; affected groundwater other than drinking water; case closed 2014; ongoing groundwater and landfill gas monitoring.

Sources: SWRCB 2018; DTSC 2018; CalRecycle 2018

Hazardous Emission and Materials

Project construction would use hazardous materials including fuels; oil, greases, and other lubricants; pesticides; paints; fertilizers; and solvents and other cleansers. Hazardous materials would be transported, used, stored, and disposed of per several regulations, including the Hazardous Materials Transportation Act, the Resource Conservation and Recovery Act, the California Hazardous Waste Control Act, and the California Accidental Release Prevention Program. The construction contractor would maintain equipment and supplies for containing and cleaning up small hazardous materials spills and would train workers in such containment and cleanup. The contractor would notify the San Diego Fire-Rescue Department immediately in the event of a hazardous materials release of amount and/or toxicity that could not be safely contained and cleaned up by onsite construction workers.

Project operation would use small amounts of hazardous materials for cleaning and maintenance purposes. Such hazardous materials would be used in compliance with the aforementioned laws and regulations.

There are no schools within 0.25 mile of Fiesta Island, and project implementation would not emit or handle hazardous substances within 0.25 mile of a school.

Through implementation of existing regulations, there would be no impacts related to hazardous emissions and materials.

Wildland Fires

No Very High Fire Hazard Severity Zones (Zone) are mapped by the California Department of Forestry and Fire Prevention (CAL FIRE) on or next to Fiesta Island, and the nearest such Zone is about 0.7 mile to the east (CAL FIRE 2009).¹ Project implementation would not expose people or structures to substantial wildfire hazards, and no impact would occur.

¹ California Department of Forestry and Fire Prevention (CAL FIRE). 2009, June 12. Very High Fire Hazard Severity Zones In LRA: San Diego County. http://frap.fire.ca.gov/webdata/maps/san_diego/fhszl_map.37.pdf.

8. Effects Found Not to be Significant

Airport-Related Hazards

Fiesta Island is not in Safety Compatibility Zones for San Diego International Airport (SDIA) where land uses are regulated to minimize aviation-related hazards to people on the ground.² The south half of Fiesta Island is in the area surrounding SDIA where structure heights are regulated under Federal Aviation Administration (FAA) Regulations to prevent obstructions to air navigation. Permitted structure heights on Fiesta Island range from about 225 feet above mean sea level (AMSL) at the south end of the island to 367 feet AMSL in the middle of the island. Proposed structures include restrooms, maintenance buildings, playgrounds, a lifeguard tower, and other park amenities. Elevations on Fiesta Island range up to about 29 feet AMSL. Proposed structures would be one story and would be well below heights permitted under FAA regulations. No airport-related hazards would occur.

Emergency Response Planning

The City is a member agency of the Unified San Diego County Emergency Services Organization. The emergency response plan in effect in the City is the Unified San Diego County Emergency Services Organization and County of San Diego Operational Area Emergency Operations Plan (OA-EOP) adopted in 2014. The OA-EOP establishes an emergency organization and defines responsibilities for all agencies and individuals (public and private) having roles in emergency preparedness, response, recovery, and/or mitigation in the San Diego County Operational Area, which consists of the County and the cities and special districts therein. The San Diego Fire-Rescue Department is responsible for emergency management for the City of San Diego.

Additionally, the County of San Diego's Multi-Jurisdictional Hazard Mitigation Plan, revised in 2017, provides methods to help minimize damage caused by natural and man-made disasters. The City and the Office of Emergency Services of San Diego County continue to coordinate to update the MHMP as hazards, threats, population and land use, or other factors change to ensure impacts to emergency response plans are less than significant.

Fiesta Island occasionally hosts large assemblies of people for special events. The proposed circulation, bicycle, pedestrian, and parking improvements would improve emergency vehicle access and evacuation efforts on the island. Therefore, there would be no impact related to emergency response planning.

² San Diego County Regional Airport Authority (SDCRAA). 2014, May 1. San Diego International Airport Airport Land Use Compatibility Plan.
[http://www.san.org/Portals/0/Documents/Land%20Use%20Compatibility/SDIA/SDIA%20ALUCP%20Ch%201-6%20\(May%202014\).pdf](http://www.san.org/Portals/0/Documents/Land%20Use%20Compatibility/SDIA/SDIA%20ALUCP%20Ch%201-6%20(May%202014).pdf).

8. Effects Found Not to be Significant

8.3 HISTORICAL AND TRIBAL CULTURAL RESOURCES

Historical Resources

Section 15064.5 of the CEQA Guidelines defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered “historically significant” if it meets one of the following criteria:

- i) It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- ii) It is associated with the lives of persons important in our past.
- iii) It embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- iv) It has yielded, or may be likely to yield, information important in prehistory or history.

Existing structures on the project site are not listed in, nor determined to be eligible for listing in local, state, or federal historical registers. There are no outstanding designs or architectural features; none of the onsite structures are historically significant; and none of the facilities embody a distinct type, period, region, or method of construction that has potential to yield important historical information. Therefore, no impact would occur to historical resources.

Archaeological Resources

Archaeological resources include prehistoric and historic locations or sites where human actions have resulted in detectable changes to the area. This can include changes in the soil, as well as the presence of physical cultural remains. Archaeological resources can have a surface component, a subsurface component, or both. Historic archaeological resources are those originating after European contact. These resources may include subsurface features such as wells, cisterns, or privies. Other historic archaeological remains include artifact concentrations, building foundations, or remnants of structures.

The project site consists of a man-made island created from hydraulic fill dredged from the bottom of present-day Mission Bay. Although archaeological sites have been identified within a 0.25 to 1 mile radius of Fiesta Island, based on a review of recent records search results, there are no archaeological sites recorded within the project site and none are expected to be encountered during future project implementation. This determination is supported by a field survey conducted by qualified City staff, original dredging to create the island, and historical use of the project site for recreational purposes, all of which have contributed to the disturbed nature of the island. Therefore, the potential for impacting and/or encountering archaeological resources during future project implementation is low and there would be no impact to archaeological resources.

8. Effects Found Not to be Significant

Human Remains

There are no known human remains on the project site. California Health and Safety Code Section 7050.5 requires that if human remains are discovered on a project site, disturbance of the site shall halt until the coroner has conducted an investigation into the circumstances, manner, and cause of any death, and has made recommendations concerning their treatment and disposition to the person responsible for the excavation, or to his or her authorized representative. If the coroner determines that the remains are not subject to his or her authority and has reason to believe they are Native American, he or she shall contact the Native American Heritage Commission (NAHC) by telephone within 24 hours and a Most Likely Descendant (MLD) would be identified to ensure remains are treated with dignity and respect in accordance with the California Health and Safety Code and the Public Resources Code. Therefore, no impact to human remains would occur.

Tribal Cultural Resources

Native American Kumeyaay villages and campsites were generally located in areas where water was readily available, preferably on a year-round basis. The project area is within the traditional territory of the Kumeyaay people in San Diego County from Agua Hedionda Lagoon in Carlsbad south into Baja California and from the Pacific Ocean east to the Salton Sea. The San Diego River, which is located south of the project area, provided an important resource not only as a reliable source of water, but as a major transportation corridor through the region for the ethnohistoric village of *Kosti/Cosoy/Kosaii/Kosa'aay* which has been described as being near the mouth of the San Diego River and also in the vicinity of Presidio Hill and Old Town. Remains of the ethnohistoric village site known as La Rinconada de Jamo is located on the north end of Mission Bay Park in the community of Pacific Beach and generally follows the water course of Rose Creek into present day Mission Bay Park.

Although much research has been conducted within and in proximity to both ethnohistoric villages, the project area is within a portion of Mission Bay Park that was dredged to create the landform now known as Fiesta Island using hydrologic fill from the old False Bay bottom. The project area in its current form consists of dredged fill and sand dunes which now support recreational land uses and Least Tern nesting sites. Based on a review of relevant source information obtained during records searches of the California Historical Resources Information System (CHRIS) and the Sacred Lands File maintained by the NAHC, Native American cultural resources that could be listed in or eligible for listing in the California Register of Historical Resources, or listed in a local register of historical resources were not identified within the project area, and no known human remains have been encountered within the project site. Additionally, California Native American tribes culturally affiliated with the project area were notified of the proposed project in accordance with both SB 18 and AB 52 and, as of the date of this document, no formal requests for consultation have been received on this project.

Therefore, given that this area has been heavily disturbed during hydraulic dredging and land creation, and a records search turned up negative results, implementation of the proposed project would not result in an impact to tribal cultural resources.

8. Effects Found Not to be Significant

8.4 MINERAL RESOURCES

According to the California Geological Survey Open File Report 96-04, areas mapped as Mineral Resource Zone 1, 2, 3, and 4 (MRZ-1 through MRZ-4) have been mapped for the City of San Diego. The project site is designated with a Mineral Land Classification of MRZ-1 according to the California Department of Conservation (CDC), Division of Mines and Geology. The MRZ-1 classification is defined as areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. Based on a review of referenced data, the project site is in an urban area where the potential for loss of mineral deposits due to further development is considered low (CDC, 2010). There are no identified mineral resources on the project site, and the site is not currently used for mineral extraction. Therefore, there would be no impact to mineral resources.

8.5 PALEONTOLOGICAL RESOURCES

Surface exposures in the project area include late Quaternary-age (geologically recent) fluvial, beach, and embayment deposits, most of which have been transported and placed at least once during several phases of hydraulic dredging. These unconsolidated silts, sands, and clays technically are classified and mapped as artificial fill material. Therefore, the potential for discovery of paleontological resources in the project area is negligible and no impact would occur.

8.6 POPULATION AND HOUSING

The proposed project would not result in a direct or indirect increase in population at the project site, or in the vicinity of the site. There is no housing on Fiesta Island, and implementation of the proposed project would not result in the construction of new housing, or the removal of housing at the site or in the site's vicinity. Residents of the City would not be displaced due to the proposed project. Therefore, no impact is identified for this issue area.

8. Effects Found Not to be Significant

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9. Alternatives to the Proposed Project

9.1 INTRODUCTION

CEQA Guidelines Section 15126.6 requires that an EIR include a discussion of a reasonable range of project alternatives that would “feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any significant effects of the project, and evaluate the comparative merits of the alternatives.” This chapter identifies potential alternatives to the proposed project and evaluates them, as required by CEQA.

For each development alternative, this analysis:

- Describes the alternative,
- Analyzes the impact of the alternative as compared to the proposed project,
- Identifies the impacts of the project that would be avoided or lessened by the alternative,
- Assesses whether the alternative would meet most of the basic project objectives, and
- Evaluates the comparative merits of the alternative and the project.

Per the CEQA Guidelines Section 15126.6(d), additional significant effects of the alternatives are discussed in less detail than the significant effects of the proposed project.

9.2 PROJECT OBJECTIVES

As described in Chapter 3, *Project Description*, the following objectives have been established for the proposed project and will aid decision makers in their review of the proposed project, proposed project alternatives, and associated environmental impacts:

- Create a focused long-range concept plan for Fiesta Island as part of the Mission Bay Park Master Plan.
- Improve water quality by reducing erosion along the perimeter roadway.
- Improve water quality by providing hydraulic connectivity under the existing causeway.
- Improve beach quality throughout Mission Bay Park by maintaining and enhancing the sand management and kelp drying areas on Fiesta Island.
- Utilize and enhance the unique landscape of Fiesta Island by creating a regional recreation area with a number of active and passive uses.

9. Alternatives to the Proposed Project

- Enhance the buffer to the existing habitat areas for the least tern.
- Maintain the dog friendly nature of the island by improving the existing fenced off-leash dog park.
- Improve safety for cyclists and pedestrians by improving the existing roadway and adding both hard surface and soft surface multi-use trails.
- Provide improved access to bay waters through the implementation of an on-site non-motorized water craft storage area, improved launching area, and convenient parking for vehicles with trailers for non-motorized watercrafts near the launching point (Option A only).

9.3 ALTERNATIVES CONSIDERED AND REJECTED DURING THE SCOPING/PROJECT PLANNING PROCESS

The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this draft PEIR.

- **Alternative Location.** Fiesta Island is a unique feature of Mission Bay. There are no other man-made islands of sufficient size, scope, and opportunity to meet the recreation goals of the Mission Bay Park Master Plan (Master Plan). Therefore, an alternative site was not considered for the proposed project.

9.4 ALTERNATIVES SELECTED FOR FURTHER ANALYSIS

The following alternatives have been determined to represent a reasonable range of alternatives which have the potential to feasibly attain most of the basic objectives of the proposed project, but which may avoid or substantially lessen any of the significant effects of the proposed project. These alternatives are analyzed in detail in the following sections.

- No Project Alternative
- Existing Conditions Alternative
- Northern Subarea Reconfiguration Alternative

An EIR must identify an “environmentally superior” alternative and, where the No Project Alternative is identified as the environmentally superior alternative, the EIR is then required to identify an alternative from among the others evaluated as the environmentally superior alternative. Each alternative's environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral, or inferior. However, only those impacts found significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. Only the impact involving traffic was found to be significant and unavoidable. Section 9.8 identifies the environmentally superior alternative.

9. Alternatives to the Proposed Project

9.5 NO PROJECT ALTERNATIVE

The No Project (existing Mission Bay Park Master Plan) Alternative would not amend the Master Plan to provide a new Concept Plan for Fiesta Island. None of the improvements such as the roadway regrading, expanded causeway, bicycle, pedestrian trails, or fenced dog park would be made part of the Master Plan. The recreation amenities envisioned by the current Master Plan would be developed, and the island would resemble the existing Concept Plan as shown in Figure 2-3.

Table 9-1 Comparison of the Existing Uses and the Adopted Plan Uses to the Proposed Project

Uses	Existing	Adopted	Option A	Option B
Land Uses				
Youth Camping – Lease Area	24	22	22	22
Primitive Camping – Lease Area	0	15	7	7
Circulation / Parking / Multi-Use Paths	18	17	31	29
Sand Management Area	20	0	7	7
Habitat Preserves	0	17	34	34
Least Tern Preserves	35	35	35	35
Active Recreation	0	68	30	20
Sand Arena	31	36	36	36
Beach	54	54	51	51
Coastal Landscape	264	183	184	193
Wetlands Habitat	3	2	15	15
Subtotal	449	454	454	454
Water Uses				
Wetlands Habitat	0	0	12	12
Eelgrass Habitat	0	5	5	5
Undesignated ¹	17	12	0	0
Subtotal	17	17	17	17
Total	466	466	466	466

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Aesthetics

Both the proposed project and the existing Master Plan envision a park setting for the island with trails, amenities, formal parking areas, and habitat protection. While the development of active recreation areas in the existing Master Plan exceeds the development of active recreation in the proposed project, the overall expectation is that all park facilities would be constructed in accordance with existing park standards. Since both the current Master Plan and the proposed project would result in active park land, the impact to aesthetics would be less than significant and similar to the proposed project.

Air Quality

The existing Master Plan envisioned a more intensely developed parkland setting, with formal active recreation fields and parking areas. The additional active recreation areas would be anticipated to draw additional traffic which would increase air quality impacts. The amount of grading associated with construction would be similar, although the proposed project has more habitat restoration area and less active recreation. Because the existing Master Plan is more intensive, the air quality impacts would be less than significant and slightly greater than the proposed project.

Biological Impacts

Both the proposed project and the existing Master Plan include habitat restoration areas. The existing Master Plan calls for dredging of the western shoreline to form a mile-long crescent. The intent of the dredging is to increase the water buffer between the spectators and the speed boats. Planting of eel grass and protection of least tern habitat is consistent in both the Master Plan and the proposed project. Unlike the existing Master Plan, the proposed project will create more of a buffer area and wetland habitat in the northern part of Fiesta Island to protect the existing least tern habitat. The biological impacts of the proposed project are reduced to less than significant through incorporation of mitigation measures. However, because of the dredging associated with the western shoreline, and the greater amount of habitat restoration associated with the proposed project, the biological impacts of this alternative are considered greater than those of the proposed project.

Geology and Soils

Both the existing Master Plan and the proposed project will require grading for planting or replacement to support the planned improvements. However, under the existing Master Plan Fiesta Island Road would continue to drain toward the bay, resulting in either additional erosion or increasing maintenance after each rain or wind storm affects the island. This impact is considered greater than the less than significant impact of the proposed project.

Greenhouse Gas Emissions

Greenhouse gas (GHG) emissions, like air quality, are impacted by vehicle trips, the use of construction equipment, and types of building materials. Grading and construction of features of the Master Plan are considered similar to the less than significant impacts of the proposed project. As the increased intensity of

9. Alternatives to the Proposed Project

the existing Master Plan could be expected to increase the number of vehicle trips, the impact on operational GHG is considered greater than the less than significant impact of the proposed project.

Hydrology and Water Quality

The existing Master Plan does not include plans for regrading Fiesta Island Road to force drainage into the interior of the island. While this situation may be remedied through maintenance over time, the existing Master Plan does not include specific details intended to address this issue. Both the existing Master Plan and the proposed project include provisions to include a hydraulic connection under the causeway leading to the island to help address water quality and flow issues in Mission Bay. Current water quality permits would regulate construction activities and require best management practices to ensure runoff does not enter the bay. Because the existing Master Plan does not include specific measures to adjust the drainage of the roadway to reduce island erosion into the bay, the water quality impacts of this alternative are considered worse than the less than significant impacts of the proposed project.

Land Use and Planning

No changes to the Mission Bay Park Master Plan would be required to implement this alternative. While the current Master Plan does not include recognition of a fenced dog park, both the Master Plan and the proposed project continue the public recreation focus for activity on the island. Land use impacts of this alternative would be less than significant and are considered similar to the proposed project.

Noise

The recreation facilities in the Mission Bay Park Master Plan are similar to those analyzed for the proposed project. Thus, impacts related to noise would be less than significant and would be similar to the proposed project.

Public Services

The increased intensity of the existing Master Plan amenities could result in more visitors to the island. Increased visitation is likely to increase the demand for services; however, the overall demand is considered less than significant and similar to that of the proposed project.

Transportation and Traffic

The existing Master Plan includes more active park uses than the proposed project, which would likely increase visitation to the island. Increased visitation would result in additional traffic that would worsen impacts at the study area intersections and roadway segments. The Mobility Assessment for the proposed project identified roadway segment and intersection improvements that could mitigate or reduce traffic impacts. However, as discussed in Section 5.9, Transportation/Circulation, these mitigation measures are infeasible at this time, and thus, the impact would be significant and unavoidable. As traffic would likely be greater under the existing Master Plan, this alternative would result in significant and unavoidable off-site impacts similar to those of the proposed project.

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The proposed project would result in two roundabouts, one on either side of the causeway leading onto the island. The roundabouts ensure that future traffic can flow onto and off of the island without undue delay at intersections by creating continuous right-turns and eliminating the need for a traffic signal. By reducing the potential for vehicle turning movement delays, traffic will move more efficiently with the proposed project than the existing Master Plan.

The proposed project will also reverse the existing vehicle circulation flow from counterclockwise to clockwise. This operational change, coupled with a new connector road from the entrance to the dog park area, would increase vehicular, pedestrian, and bicycle mobility on the island. Without these changes, the island would be closed to the general public several times a year for special events. With the circulation change of the proposed project, much of the island could remain accessible during special events.

Because the more intense development envisioned by the existing Master Plan would generate more traffic, and does not address off site impacts, impacts to transportation associated with this alternative are considered greater than those of the proposed project.

Utilities and Service Systems

The existing Master Plan would result in a more intensive park environment that is likely to both draw more visitors and require more utilities and service systems. The increase in the amount of maintenance space will require additional personnel for grounds maintenance, as well as an increase in buildings for on-site storage of equipment and materials. While the proposed project results in a less than significant determination for utilities and service systems, as this alternative is more intensive, it would generate more visitors, and result in the need for more maintenance. Therefore, this impact is considered greater than that of the proposed project.

Conclusion

The proposed project refines the existing Master Plan, incorporates the existing fenced dog park, and provides more detail on pedestrian, bicycle, and roadway improvements. The No Project Alternative is more intensive and could result in more traffic, worse air quality, and increased GHG emissions. The increased visitors are likely to require more water and wastewater services, and the larger amount of irrigated landscaping would require more water and maintenance personnel.

9.6 EXISTING CONDITIONS ALTERNATIVE

During the public scoping meeting, many attendees requested that the island be left “as-is” with no development or improvement at all. While the no project alternative would implement the existing Mission Bay Park Master Plan, this alternative would result in no physical improvements to the island. This alternative assumes that maintenance of existing roadways and habitat areas and eel grass replanting would occur.

Aesthetics

This alternative would not result in a regrading or replanting in the interior of the island; however, maintenance of the roadways and off-shore planting of eel grass would occur. The existing vegetation would

9. Alternatives to the Proposed Project

remain and there would be no change in the current view onto, or from the island. As the proposed project also continues the existing recreational use of the island, the impact on aesthetics from this alternative is less than significant and considered similar to the proposed project.

Air Quality

Since new amenities such as campgrounds, volleyball courts, active recreation, and day use areas would not be developed, the number of visitors to the island would be less than the proposed project. While the proposed project has a less than significant impact on air quality, fewer visitors would result in less traffic and a corresponding reduction in air quality impacts when compared to the proposed project. As no construction other than routine maintenance would occur, the associated air quality impacts would also be less when compared to the proposed project.

Biological Impacts

Fiesta Island has two habitat preservation areas for the least tern, Stony Point and the Northern Subarea. Both the proposed project and the existing Plan call for more habitat areas, including eel grass planting, to occur as the island is developed. As this alternative would have no change on the interior of the island, the resulting island-habitat areas would not be expanded. While the impacts of the proposed project are less than significant with mitigation incorporated, the lack of habitat restoration and creation within the island would result in fewer beneficial impacts than those of the proposed project.

Geology and Soils

Since no construction would occur, the impacts associated with grading would be less than the proposed project. However, Fiesta Island Road would continue to drain toward the bay resulting in either additional erosion or increasing maintenance after each rain or wind storm affects the island. This impact is considered greater than the less than significant impact of the proposed project.

Greenhouse Gas Emissions

While the proposed project results in a less than significant impact for greenhouse gasses, a reduction in traffic would reduce the amount of vehicle emissions and therefore greenhouse gases. Construction and operational GHG emissions would be less than those of the proposed project.

Hydrology and Water Quality

This alternative would fail to address the erosion and water quality issues of Fiesta Island Road. Lack of construction would affect the causeway leading onto the island which means the planned hydraulic relief between the north and south bay areas would not occur. The proposed project hydrology and water quality impacts are considered less than significant, and the water quality impacts of this alternative would be worse than those of the proposed project.

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Land Use and Planning

Without the planned recreation improvements on Fiesta Island, much of the anticipated regional recreational needs of the City would go unmet. The proposed trails, fenced dog park, camping, and day use amenities would not be built on the island, and it is uncertain if there are other areas in the Mission Bay Park area where they could be constructed. However, as the alternative assumes a preservation of the existing recreational uses similar to those of the proposed project and the Master Plan, the land use impacts would be less than significant and are considered similar to the proposed project.

Noise

This alternative is less intensive than either the current Master Plan or the proposed project. Fewer visitors results in less noise. The lack of construction would also reduce the potential for noise impacts. This impact would be less than significant and would be less than that of the proposed project.

Public Services

While the proposed project was determined to have a less than significant impact on public services, this less intensive alternative, and corresponding reduction in visitors, would result in less demand for public services when compared to the proposed project.

Transportation and Traffic

This alternative would result in fewer visitors to the island and therefore would decrease off-site traffic impacts. As shown in Section 5.9 Transportation/Circulation, many of the study area intersections and roadways will operate at a deficient LOS as a result of area-wide growth. Because improvements may not occur, the proposed project impacts are considered significant and unavoidable.

The proposed project would result in two roundabouts, one on either side of the causeway leading onto the island. The roundabouts ensure that future traffic can flow onto and off of the island without causing undue delay at intersections, as they will create continuous right-turns and eliminate the need for a traffic signal. By reducing the potential for vehicle turning movement delays, traffic will move more efficiently with the proposed project than with the existing Master Plan.

The proposed project will also reverse the existing vehicle circulation flow from counterclockwise to clockwise. This operational change, coupled with a new connector road from the entrance to the dog park area, would increase vehicular, pedestrian, and bicycle mobility on the island. Without these changes, the island would be closed to the general public several times a year for special events. With the circulation change of the proposed project, much of the island could remain accessible during special events.

While this alternative does not address onsite circulation, the reduction in off-site impacts due to fewer visitors would result in impacts that are less than those of the proposed project.

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Utilities and Service Systems

This alternative assumes that the existing utilities and service systems would remain. Although the proposed project would result in less than significant impacts, as there would be no increase in demand, this impact is considered less than that of the proposed project.

Conclusion

The Existing Conditions Alternative would result in greater impact on water quality due to erosion, and it would fail to meet the intended recreational uses included in the existing Master Plan. As this alternative would not include improvements that would draw additional visitors to the park, impacts on traffic, air quality, and greenhouse gasses would be less than those of the proposed project.

9.7 NORTHERN SUBAREA RECONFIGURATION ALTERNATIVE

During the public comment period for the NOP, the California Department of Fish and Wildlife recommended analyzing a revised concept plan that would reconfigure the northern subarea of the Fiesta Island so that the least tern nesting site would be adjacent to bay water. The least tern site is currently surrounded by uplands that support tern-nest predators (such as snakes and rats), and it is separated from the bay water by a road. This alternative would remove or reroute public road access currently allowed in the northern subarea to the south of the nest site, and would restore intertidal habitats, including mudflat and coastal salt marsh, between the nest site and bay water. Furthermore, this alternative would establish an additional least tern nesting site on the western shore of the island, opposite of FAA island. While this alternative would remove the road for public access in the northern subarea, some form of vehicular access would be made available for maintenance of the northern subarea of the island. This alternative assumes all other improvements proposed by the project would occur.

Aesthetics

This alternative would continue to implement the proposed vegetation and replanting improvements as proposed by the project, and there would be an increase in habitat restoration within the northern subarea and along the western shore. This alternative would reduce accessibility to the northern subarea of the island and would reduce the area of viewshed from the island. As this alternative continues the existing recreational use of the island, the impact on aesthetics would be less than significant and considered similar to the proposed project.

Air Quality

While this alternative would not change the number of visitors to the site, this alternative would remove public access from the northern subarea of Fiesta Island and would reduce the vehicle miles traveled and emissions produced by vehicles. Shorter roadways on the site would reduce vehicle impacts to air quality, but would result in a negligible difference over the life of the project. Therefore, this alternative would result in less than significant impacts to air quality, similar to the proposed project.

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Biological Impacts

Fiesta Island has two habitat preservation areas for the least tern, Stony Point and the Northern Subarea. Both the proposed project and the existing Plan call for more habitat areas, including eel grass planting, to occur as the island is developed. This alternative would result in an increase in habitat within the northern subarea, and additional least tern habitat would be established on the western portion of the site. While the impacts of the proposed project are less than significant with mitigation incorporated, this alternative would result in an expansion of habitat, and would restrict access to the area which further limits the potential for impacts. This alternative would have less of an impact than the proposed project.

Geology and Soils

Because this alternative would result in reduced roadway improvements, impacts associated with grading would be less than the proposed project. Fiesta Island Road would continue to drain toward the bay, resulting in either additional erosion or increasing maintenance after each rain or wind storm affects the island. This impact is considered similar to the less than significant impact of the proposed project.

Greenhouse Gas Emissions

A reduction in vehicular travel distance on project site roadways would reduce the amount of vehicle emissions and, therefore, greenhouse gases. However, this alternative would not result in a change in trips to the site, and over the life of the project the reduced vehicular travel distance would result in similar impacts to greenhouse gas emissions. Therefore, this alternative would be considered to have a less than significant impact, similar to the proposed project.

Hydrology and Water Quality

The alternative would reduce erosion and water quality issues associated with Fiesta Island Road. Removal of the roadway within the northern subarea would increase potential for water quality issues during construction; however, best-management practices would be implemented, similar to the proposed project. The proposed project hydrology and water quality impacts are considered less than significant, and the water quality impacts of this alternative would be similar to those of the proposed project.

Land Use and Planning

This alternative assumes the same land use as the proposed project, except there would be reduced roadway access, reduced beach area, and increased least tern habitat. Land use impacts of this alternative would be less than significant and are considered similar to the proposed project.

Noise

This alternative could result in increased noise if improvements are made to the existing roadway on the northern subarea. Operational noise impacts from this alternative would be less than the proposed project due to removal of public vehicular access in the North Subarea. Although this alternative could increase noise

9. Alternatives to the Proposed Project

impacts during construction, operational noise impacts would be less than that of the proposed project. Nonetheless, noise impacts would continue to be less than significant.

Public Services

This alternative would generate a similar need for public services as the proposed project, and public services would not be impacted such that new or expanded governmental facilities would be required. Therefore, this alternative would result in a similar demand for public services when compared to the proposed project.

Transportation and Traffic

This alternative would not change the frequency of visitor trips. While this alternative would reduce the length of roadway on the island and remove public access to the northern subarea, this would not constitute a traffic-related environmental impact. Traffic that would normally travel around the boundary of the northern subarea would be diverted to the proposed east-west roadway separating the northern subarea from the central subarea, as proposed by the project. The increase in traffic along this roadway could create moments of congestion, such as during a special event; however, this increase would not result in greater traffic impacts than could occur within other areas of the park.

As shown in Section 5.9 Transportation/Circulation, many of the study area intersections and roadways will operate at a deficient LOS as a result of area-wide growth; therefore, the proposed alternative (similar to the proposed project) would result in significant unavoidable impacts. This alternative would result in similar impacts to transportation and traffic as the proposed project.

Utilities and Service Systems

This alternative assumes the utilities and service systems proposed for the project would occur. Construction may result in an increase in water demand and wastewater generation, for improvements to the roadway in the northern subarea and establishment of habitat on the western portion of the island. Operation of the site would result in a similar need for utilities as the proposed project. Therefore, the project would result in a greater impact to utilities and services systems than the proposed project, but would result in a less than significant impact.

Conclusion

The Northern Subarea Reconfiguration Alternative would result in a lesser impact to biological resources due to expansion of least tern habitat. All other impact areas would be similar to the proposed project.

9.8 ENVIRONMENTALLY SUPERIOR CEQA ALTERNATIVE

CEQA requires a lead agency to identify the “environmentally superior alternative” and, in cases where the “No Project” Alternative is environmentally superior to the proposed project, the environmentally superior development alternative must be identified.

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Table 9-2 compares the impacts of each alternative to the impacts of the proposed project. Each alternative is compared against the environmental topic to determine if implementation of the alternative would be similar to, greater than, or less than the impacts identified in this PEIR.

Table 9-2 Comparison of Alternatives

Environmental Issue	Proposed Project	No Project	Existing Condition	Northern Subarea Reconfiguration
Aesthetics	LS	=	=	=
Air Quality	LSM	+	-	=
Biological Impacts	LSM	+	+	-
Geology and Soils	LS	+	+	=
Greenhouse Gas Emissions	LS	+	-	=
Hydrology and Water Quality	LS	+	+	=
Land Use and Planning	LS	=	=	=
Noise	LS	=	-	=
Public Services	LS	+	-	=
Transportation and Traffic	SU	+	-	=
Utilities and Service Systems	LS	+	-	=
Overall		+	-	+

LS – Less than Significant
LSM – Less than Significant with Mitigation Measures
SU – Significant and Unavoidable
+ – Greater Than
= – Similar To
- – Less Than

The proposed project identifies a significant and unavoidable impact in transportation, because the recommended mitigation measures are not feasible at this time. Neither the No Project Alternative, the Existing Conditions Alternative, or the Northern Subarea Reconfiguration Alternative would provide mitigation for offsite impacts. The proposed project provides a less-intensive public recreation area than envisioned in the existing Master Plan, results in greater habitat restoration opportunity, and includes a more refined trail and path network. Neither of the alternatives recognize and incorporate the fenced dog park area shown in the proposed project.

Another factor in determining the environmentally superior alternative is whether the alternative can meet most of the basic project objectives. Table 9-3 compares the intent of alternatives in meeting the basic project objectives.

9. Alternatives to the Proposed Project

Table 9-3 Comparison of Alternatives to Project Objectives

Project Objectives	No Project	Alternative 1	Northern Subarea Reconfiguration
Improve water quality by reducing erosion along the perimeter roadway.	No	No	Yes
Improve water quality by providing hydraulic connectivity under the existing causeway.	Yes	No	Yes
Improve beach quality throughout Mission Bay Park by maintaining and enhancing the Sand Management and Kelp Drying areas on Fiesta Island.	Yes	No	Yes
Utilize and enhance the unique landscape of Fiesta Island by creating a regional recreation area with a number of active and passive uses.	Yes	No	Yes
Enhance the buffer to the existing habitat areas for the Least Tern.	Yes	No	Yes
Maintain the dog friendly nature of the island by improving the existing fenced off-leash dog park.	No	Yes	Yes
Improve safety for cyclists and pedestrians by improving the existing roadway and adding both hard surface and soft surface multi-use trails.	Yes	No	Yes
Provide improved access to bay waters through the implementation of an on-site non-motorized water craft storage area, improved launching area, and convenient parking for vehicles with trailers for non-motorized watercraft near the launching point (Option A only).	Yes	No	N/A

The No Project Alternative implements the existing Master Plan, which includes many of the components of the proposed project. The Existing Conditions Alternative does not meet most of the basic project objectives. The Northern Subarea Reconfiguration Alternative can meet all of the project objectives, including either Option A or Option B as analyzed in this PEIR, as this alternative only affects the northern least tern area of the island. While the alternative would shorten the roadway and trail network on the island, but majority of the improvements envisioned by the proposed project could still occur, therefore this alternative meets all of the proposed project objectives and is considered the “environmentally superior” alternative.

9.9 OPTION A VS. OPTION B

While Option A is the proposed project, both project alternatives were analyzed equally in this PEIR to enable either design to be selected. Although there are environmental differences between the two options, none of the differences change the level of impact. For example, the trip generation assumptions for Option A assume more visitors attracted to the additional park and swim beach, as these are considered developed park uses. Developed parks have a higher traffic generation factor than undeveloped parks. Option B, by having a different configuration and eliminating the swim area and access road, has less developed park and therefore would generate less traffic. The resulting differences are reflected in slightly lower air quality, greenhouse gas, and traffic impacts. The differences would be significant if one of the options resulted in less mitigation, or substantially lessened impacts. In this case, the mitigation measures included in this PEIR affect Option A and Option B equally, and result in the same environmental effect.

The design difference between the two options results in Option B having less impact to wetlands, and therefore requiring less mitigation. The difference is approximately 0.05 of an acre, or approximately 2,200

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square feet. The difference between the two options represents approximately 3 percent of the 1.84 acres of U.S. Army Corps jurisdictional wetlands on the island. Habitat restoration has always been part of Fiesta Island, and it is part of both design options for the proposed project. Because the City manages the proposed project and both design options provide for habitat restoration, the difference between Option A and Option B is not environmentally significant.

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This document has been completed by the City of San Diego's Planning Department and is based on independent analysis and determinations made pursuant to the San Diego Municipal Code Section 128.0103. The following individuals contributed to the fieldwork and/or preparation of this report.

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