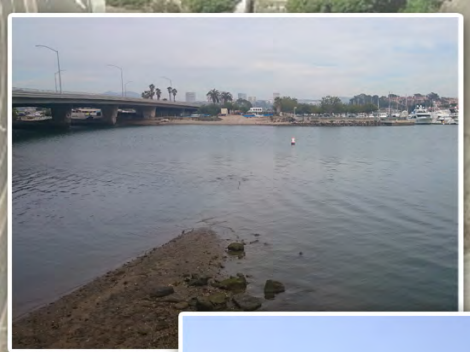
Bay Bridge Pump Station and Force Mains Replacement Project

(Project No. 5-67)

RECIRCULATED ENVIRONMENTAL IMPACT REPORT

PUBLIC REVIEW DRAFT | JULY 2019



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Orange County Sanitation District

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Bay Bridge Pump Station and Force Mains Replacement Project

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July 2019

JN 168975

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1.0 EXECUTIVE SUMMARY

1.1 PROJECT LOCATION

Regionally, the project site is located within the southwestern portion of the City of Newport Beach (City), within the County of Orange (County). Locally, the project site is located at 300 East Coast Highway and is developed with an Orange County Sanitation District (OCSD) sewer pump station and associated improvements. The project also includes sewer force main improvements that would extend from the proposed pump station, proceed westerly beneath the Newport Bay Channel to connect to an existing Orange County Sanitation District (OCSD) valve vault. Two pump station locations and three force main alignments are proposed across the Newport Bay Channel.

1.2 PROJECT SUMMARY

OCSD owns, operates, and maintains the existing Bay Bridge Pump Station and the Newport force mains, which convey wastewater from Newport Beach to the Plant No. 2 wastewater treatment facility in Huntington Beach. The existing Bay Bridge Pump Station is located adjacent to East Coast Highway and is the furthest upstream pump station as part of the Newport force main network.

The Bay Bridge Pump Station is critical to OCSD operations as it conveys approximately 50 to 60 percent of the total Newport Beach flow through these force mains. Because the Bay Bridge Pump Station and associated force mains are critical elements to OCSD's collection backbone, it is imperative the facility be replaced to ensure continuous service to the community and avoid spills for the next design lifespan (an additional 50 years). The proposed project would replace the existing Bay Bridge Pump Station and associated force mains to bring the pump station facility and force mains to current design and reliability standards to ensure continuous service for the Newport Coast service area. Three conceptual site plans are proposed and described below.

ORIGINAL NORTHEAST PUMP STATION

The Original Northeast Pump Station is the original site plan analyzed in the *Bay Bridge Pump Station and Force Mains Replacement Project Draft Environmental Impact Report* (2017 Bay Bridge EIR) (State Clearinghouse No. 2016111031), prepared by Michael Baker International and dated December 2017. This site plan involves relocating the existing facility to the northeast corner of the 31.4-acre Bayside Village Marina, LLC parcel; installing force mains across the Newport Bay Channel north of Bay Bridge; and installing force mains southerly beneath East Coast Highway to connect to the existing force main valve vault.

MODIFIED NORTHEAST PUMP STATION

Similar to the Original Northeast Pump Station, development of the Modified Northeast Pump Station would involve relocating the existing facility to the northeast corner of the Bayside Village Marina, LLC parcel and installing force mains across the Newport Bay Channel. However, the force mains would be installed south of Bay Bridge and would not require crossing beneath West Coast Highway.

SOUTH PUMP STATION

Development of the South Pump Station would involve shifting and expanding the existing pump station facility site approximately 200 feet to the west, constructing a new pump station building, and installing force mains across the Newport Bay Channel south of Bay Bridge.

1.3 GOALS AND OBJECTIVES

As noted above, the Bay Bridge Pump Station is critical to OCSD operations as it conveys approximately 50 to 60 percent of the total Newport Beach flow through these force mains. Because the Bay Bridge Pump Station and associated force mains are critical elements to OCSD's Newport Coast collection backbone, it is imperative the facility be improved to ensure continuous service to the community and avoid spills for the next design lifespan (an additional 50 years).

The goals and objectives associated with the proposed project consist of:

1. Increase reliability since the existing Bay Bridge Pump Station is over 50 years old, outdated, and no longer meets structural, electrical, or maintenance standards. In addition, since the existing force mains are located under the Newport Bay Channel, thorough inspection to predict the remaining life span is not possible. Thus, replacement of the force mains would reduce the risk of failure and prevent possible releases of sewage into the Newport Bay Channel;

2. Increase safety for OCSD Operations & Maintenance personnel where safe entry and exit can be made and maintenance crews and drivers can easily access the site. The existing pump station is accessed directly from East Coast Highway, where adjacent traffic creates safety hazards for OCSD vehicles. Maintenance trucks accessing the site require that they back into oncoming traffic; and

3. Improve odor control through a new 620-square foot odor control facility, which houses a vapor-phase odor control scrubbed system that would remove odorous vapors from the incoming waste system as well as two 10-foot diameter tanks to accommodate liquid phase odor control.

1.4 ENVIRONMENTAL ISSUES/MITIGATION SUMMARY

The following summarizes the impacts, mitigation measures, and significant and unavoidable significant impacts identified and analyzed in Section 5.0, *Environmental Analysis*, of this EIR. Refer to the appropriate EIR Section for detailed information.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
5.1 Aesthetics/Light and Glare			
AES-1	**Scenic Views and Vistas** *Project implementation could have a substantial adverse effect on a scenic view or vista.*	No mitigation measures are required for all site plan concepts.	Less Than Significant Impact.
AES-2	**Short-Term Visual Impacts** *Project construction activities could temporarily degrade the visual character/quality of the site and its surroundings.*	The following mitigation measure applies to all site plan concepts: AES-1 Prior to issuance of any grading and/or demolition permits, whichever occurs first, engineering drawings and specifications shall be submitted for review and approval by the Orange County Sanitation District Director of Engineering. These documents shall, at a minimum, indicate the equipment and vehicle staging areas, stockpiling of materials, fencing (i.e., temporary fencing with opaque material), and haul route(s). Staging areas shall be sited to minimize public views and/or screened from public views. Construction haul routes shall minimize impacts to sensitive uses in the project area by avoiding local residential streets.	Less Than Significant Impact With Mitigation Incorporated.
AES-3	**Long-Term Visual Character/Quality** *Within an urbanized area, project implementation could conflict with applicable zoning and other regulations governing scenic quality.*	The following mitigation measure applies to all site plan concepts: AES-2 Prior to construction of the new pump station facility, Orange County Sanitation District shall submit design plans of the proposed pump station to the City of Newport Beach for review and comment, and final approval by the District, to ensure consistency with the Back Bay Landing PCDP design guidelines.	Less Than Significant Impact With Mitigation Incorporated.
AES-4	**Light and Glare** *Implementation of the proposed project could generate additional light and glare beyond existing conditions.*	The following mitigation measures apply to all site plan concepts: AES-3 All construction-related lighting fixtures (including portable fixtures) shall be oriented downward and away from adjacent sensitive areas (including residential and biologically sensitive areas). Lighting shall consist of the minimal wattage necessary to provide safety at the construction site and shall be consistent with all applicable requirements of the CLUP and CDP as determined by the City of Newport Beach. A construction safety lighting plan shall be submitted to the Orange County Sanitation District for review and approval prior to any nighttime construction	Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		activities. The Orange County Sanitation District, or designee, shall implement all requirements identified in the CLUP and CDP approved by the City of Newport Beach. The plan shall also demonstrate that although the minimum wattage necessary to provide safety at the site is being utilized, nighttime construction lighting does not spillover onto adjacent residential properties. AES-4 Prior to construction of the proposed pump station, lighting plans shall be provided to the Orange County Sanitation District for review and approval. The District shall provide the lighting plans to the City of Newport Beach for review and comment, pertaining to consistency with the Back Bay Landing PCDP regulations for lighting. Per these requirements, all outdoor lighting fixtures shall be designed, shielded, aimed, located, and maintained to minimize impacts to adjacent sites and to not produce glare onto adjacent sites or roadways. Final approval of the lighting plans shall be made by the District prior to start of construction of the pump station. The District, or designee, shall verify that the approved plans incorporate all suggested revisions and address all comments received from the City of Newport Beach.	
	Cumulative Impacts ***Scenic Views and Vistas*** *The proposed project, combined with other related cumulative projects, could have an adverse effect on a scenic vista.*	No mitigation measures are required for all site plan concepts.	Less Than Significant Impact.
	Cumulative Impacts ***Short-Term Visual Character/Quality*** *Project construction activities, combined with construction activities for other related cumulative projects, could temporarily degrade the visual character/quality of the development sites and their surroundings.*	Refer to Mitigation Measure AES-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
	Cumulative Impacts ***Long-Term Visual Character/Quality*** *Within an urbanized area, project implementation, combined with other*	Refer to Mitigation Measure AES-2 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
	related cumulative projects, could conflict with applicable zoning and other regulations governing scenic quality.		
	Cumulative Impacts ***Light and Glare*** *Project implementation, combined with other related cumulative projects, could cumulatively contribute to significant light/glare impacts.*	Refer to Mitigation Measures AES-3 and AES-4 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
5.2 Air Quality			
AQ-1	**Short-Term (Construction) Air Emissions** *Short-term construction activities associated with the proposed project could result in air pollutant emission impacts*	The following mitigation measures apply to all site plan concepts: AQ-1 Prior to ground disturbance associated with the project, the Orange County Sanitation District shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors: • All active portions of the construction site shall be watered every three hours during daily construction activities when dust is observed migrating from the project site to prevent excessive amounts of dust; • Apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas to reduce the need for watering after dust is observed to be migrating from the site. More frequent watering shall occur if dust is observed migrating from the site during site disturbance; • Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied;	Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		• All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour; • Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area; • Track-out devices such as gravel bed track-out aprons shall be installed to reduce mud/dirt trackout from unpaved truck exit routes. Alternatively, a wheel washer shall be used at truck exit routes; • On-site vehicle speed shall be limited to 15 miles per hour; • All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site; and • Trucks associated with soil-hauling activities shall avoid all residential streets, except Bayside Drive, and utilize City-designated truck routes. AQ-2 The Orange County Sanitation District, or designee, shall require that all trucks that are to haul excavated or graded material off-site shall comply with State Vehicle Code Section 23114 (Spilling Loads on Highways), with special attention to Sections 23114(b)(F) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads. This requirement shall be included in plans and specifications for the proposed project.	
AQ-2	**Long-Term (Operational) Air Emissions** *Implementation of the proposed project would result in increased impacts pertaining to operational air emissions.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
AQ-3	**Localized Emissions** *Implementation of the proposed project could result in localized emissions that may expose sensitive receptors to substantial pollutant concentrations.*	Refer to Mitigation Measures AQ-1 and AQ-2 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
AQ-4	**Consistency with Regional Plans** *Implementation of the proposed project could conflict with or obstruct implementation of the applicable air quality plan.*	Refer to Mitigation Measures AQ-1 and AQ-2 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
AQ-5	**Odor Impacts** *Construction and operation of the proposed project could create objectionable odors affecting a substantial number of people.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
	CUMULATIVE IMPACTS ***Short-Term (Construction) Air Emissions*** *Short-term construction activities associated with the proposed project and other related cumulative projects could result in increased air pollutant emission impacts.*	Refer to Mitigation Measures AQ-1 and AQ-2 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
	CUMULATIVE IMPACTS ***Long-Term (Operational) Air Emissions*** *Proposed project and other related cumulative projects could result in increased impacts pertaining to operational air emissions.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
	CUMULATIVE IMPACTS ***Localized Emissions*** *Implementation of the proposed project could result in localized emissions that would expose sensitive receptors to substantial pollutant concentrations.*	Refer to Mitigation Measures AQ-1 and AQ-2 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
	CUMULATIVE IMPACTS ***Consistency with Applicable Air Quality Plans*** *Development associated with the proposed project could conflict with or obstruct implementation of the applicable air quality plan.*	Refer to Mitigation Measures AQ-1 and AQ-2 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
	CUMULATIVE IMPACTS **Odor Impacts** *Development associated with the proposed project could result in increased impacts pertaining to odors.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
5.3 Biological Resources			
BIO-1	**Special Status Plant and Wildlife Species** *Project implementation could have an adverse effect, either directly or through habitat modifications, on special status plant or wildlife.*	The following mitigation measures apply to each site plan concept as specified: **Original Northeast Pump Station** BIO-1 Should construction activities occur within the nesting season (typically February 15 to August 15), all suitable habitat surrounding the project site shall be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to commencement of site disturbance activities. If an active avian nest is discovered in proximity to the project site during the nesting bird survey, construction activities (those activities that could result in direct or indirect impacts to active nests either through noise, light, or physical contact) shall stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer shall be expanded to 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest in order to ensure that nesting behavior is not adversely affected by construction activities. The buffer area and limitations on construction may be reduced upon approval by the California Department of Fish and Wildlife, and only if the nesting behaviors are not disrupted by construction activities. Once the young have fledged, normal construction activities shall be allowed to occur. **Modified Northeast Pump Station** Refer to Mitigation Measures BIO-1 and HWQ-4, as well as the following: BIO-2 Prior to dredging operations, if conducted, Orange County Sanitation District, or designee, shall retain a qualified marine mammal biologist to conduct contractor awareness training for all personnel working in the marine environment. The purpose of the training is to educate	**Original Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **Modified Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **South Pump Station** Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		contractor personnel on the identification of marine wildlife in the project area and to provide an overview of the wildlife mitigation that will be implemented during the project. Specifically, the training seminar shall include, but not be limited to, the following: • Identification of most common types of marine wildlife likely to be encountered in the project area; • Activities that have the most potential for affecting the animals; • Overview of the Marine Mammal Protection Act (MMPA), the designated Environmental Study Area (ESA), agencies responsible for enforcement of the MMPA and ESA, and penalties associated with violations of the acts; • Procedures to be followed during mobilization/demobilization, and transiting of project vessels, anchoring and throughout waterside construction activities; and • Reporting requirements in the event of an inadvertent collision and/or injury to marine wildlife. **South Pump Station** Refer to Mitigation Measures BIO-1 and BIO-2, as well as HWQ-4.	
BIO-2	**Sensitive Natural Communities** *Project implementation could have an adverse effect on riparian habitat or other sensitive natural community.*	The following mitigation measures apply to each site plan concept as specified: **Original Northeast Pump Station** No mitigation measures are required. **Modified Northeast Pump Station** BIO-3 The Orange County Sanitation District, or designee, shall retain a qualified marine biologist to conduct a comprehensive pre-construction survey for presence of eelgrass and kelp species within the project site prior to the commencement of in-water construction operations. The pre-construction eelgrass and kelp surveys shall be consistent with current National Marine Fisheries Service (NMFS) California Eelgrass Mitigation Policy (CEMP) survey guidelines. If pre-construction survey results indicate eelgrass or kelp presence within the	**Original Northeast Pump Station** Less Than Significant Impact. **Modified Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **South Pump Station** Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		project site, the qualified marine biologist shall recommend, and OCSD, or designee, shall incorporate, appropriate avoidance measures, protection measures, and/or replacement mitigation (e.g., reseeding for no net loss) to be implemented during construction activities to avoid or reduce impacts to eelgrass or kelp species to the maximum extent practicable. The qualified marine biologist shall coordinate with the appropriate regulatory agencies including the NMFS, U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), California Coastal Commission (CCC), the California Department of Fish and Wildlife (CDFW), and other resource and regulatory agencies, as necessary, and OCSD, or designee, shall implement compensatory mitigation should the project result in the loss of eelgrass and kelp habitat. **South Pump Station** Refer to Mitigation Measure BIO-3.	
BIO-3	**Wetlands** *Project implementation could have an adverse effect on state or federally protected wetlands.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
BIO-4	**Migratory Wildlife Species** *Project implementation could interfere with the movement of a native resident or migratory species.*	Refer to Mitigation Measure BIO-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
BIO-5	**Policies Protecting Biological Resources** *Project implementation could conflict with a City policy protecting biological resources.*	The following mitigation measures apply to each site plan concept as specified: **Original Northeast Pump Station** Refer to Mitigation Measure BIO-1. **Modified Northeast Pump Station** Refer to Mitigation Measures BIO-1 through BIO-3. **South Pump Station** Refer to Mitigation Measures BIO-1 through BIO-3.	**Original Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **Modified Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **South Pump Station** Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
	Cumulative Impacts *Development anticipated by the project combined with cumulative development would not have adverse effects on biological resources or interfere with the movement of migratory wildlife species.*	The following mitigation measures apply to each site plan concept as specified: **Original Northeast Pump Station** Refer to Mitigation Measure BIO-1. **Modified Northeast Pump Station** Refer to Mitigation Measures BIO-1 through BIO-3. **South Pump Station** Refer to Mitigation Measures BIO-1 through BIO-3.	**Original Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **Modified Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **South Pump Station** Less Than Significant Impact With Mitigation Incorporated.
5.4 Cultural Resources			
CUL-1	**Historical Resources** *Development associated with implementation of the proposed project could result in significant impacts to historical resources within the project site boundaries.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
CUL-2	**Archaeological Resources** *Development associated with implementation of the proposed project could impact archaeological resources within the project site boundaries.*	The following mitigation measure applies to all site plan concepts: CUL-1 Prior to ground-disturbing activities, Orange County Sanitation District, or its designee, shall retain a qualified archaeologist to prepare an Archaeological Monitoring Protocol Plan for the project that is consistent with all applicable requirements of the CLUP and CDP as determined by the City of Newport Beach. The Orange County Sanitation District, or designee, shall implement all recommended and required measures identified in the Archaeological Monitoring Protocol Plan approved by the City of Newport Beach. The Archaeological Monitoring Protocol Plan shall require, at minimum, that the archaeologist provide training to a Contractor's Representative regarding the Archaeological Monitoring Protocol Plan and the identification of archaeological resources. The training shall be open to Native American tribal representative(s), to assist the Contractor's Representative in identifying potential tribal cultural resources. The plan shall identify procedures for the	Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		event that potential resources are discovered by the Construction Contractor. If evidence of potential subsurface archaeological resources is found during site disturbance/excavation activities, these activities shall cease within 50 feet of that area and the construction contractor shall contact the Orange County Sanitation District. Construction activities shall be allowed to continue in other areas of the site. The Orange County Sanitation District, or designee, shall then retain a qualified archaeologist to evaluate the discovery prior to resuming grading/construction activities in the immediate vicinity of the find. If warranted based on the archaeologist's evaluation of the find, the archaeologist shall collect the resource, and prepare a test-level report describing the results of the investigation. The test-level report shall evaluate the site including discussion of the significance (depth, nature, condition, and extent of the resource), identify final mitigation measures that OCSD or its designee shall incorporate into future construction plans, and provide cost estimates. If the archaeologist determines that the find is prehistoric or includes Native American materials, affiliated Native American groups shall be invited to contribute to the assessment and recovery of the resource, as applicable. The archaeologist and any applicable Native American contacts shall collect the resource and prepare a test-level report describing the results of the investigation. The test-level report shall evaluate the site including discussion of significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates. Salvage operation requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed. Work within the area of discovery shall resume only after the resource has been appropriately inventoried, documented, and recovered, as applicable.	
	Cumulative Impacts	No mitigation measures are required for any site plan concept.	Less Than Significant Impact.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
	The proposed project, combined with other related cumulative projects, could result in significant cumulative impacts to historical resources.		
	Cumulative Impacts *The proposed project, combined with other related cumulative development, could result in significant cumulative impacts to archaeological resources.*	Refer to Mitigation Measure CUL-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
5.5 Geology and Soils			
GEO-1	**Strong Seismic Ground Shaking** *The project could be subject to potential substantial adverse effects involving strong seismic ground shaking.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
GEO-2	**Seismic-Related Ground Failure** *The project could expose people or structures to potential substantial adverse effects involving seismic-related ground failure.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
GEO-3	**Soil Erosion** *The project could result in substantial soil erosion or the loss of topsoil.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
GEO-4	**Expansive Soils** *The proposed development could be located on expansive soil creating substantial risks to life or property.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
GEO-5	**Paleontological Resources** *Development associated with the proposed project could impact paleontological resources within the project boundaries.*	The following mitigation measure applies to all site plan concepts: GEO-1 Prior to ground-disturbing activities, a qualified paleontologist shall provide a Monitoring Protocol Plan for the project. The plan shall identify procedures for the event that potential recoverable fossils are discovered by the Construction Contractor. The qualified paleontologist shall have a B.S. or B.A. in geology and/or paleontology with demonstrated competence in research, fieldwork, reporting, and curation. The paleontologist shall provide training to a Contractor's Representative regarding the Monitoring Protocol Plan and the identification of paleontological resources. If a fossil or suspected fossil is encountered during ground disturbing	Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		activities, the following steps shall be taken: • The fossil site shall not be touched, moved, or disturbed in any way. • Work shall stop in the immediate area, and a minimum 50-foot buffer shall be marked with brightly colored flagging. No further disturbance in the flagged area shall occur until the Contractor has cleared the area. • The Contractor's Representative, construction foreman or supervisor and then a qualified paleontologist shall be immediately notified. • The paleontologist shall quickly examine the find and make a determination of significance based on the Monitoring Protocol Plan. If the find is not significant, the foreman shall be informed when it is acceptable to resume work in the area. • Should the paleontologist determine the find is significant, the qualified paleontologist shall develop a plan of mitigation which would likely include salvage excavation and removal of the find, removal of sediment from around the specimen, research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.	
	Cumulative Impacts *The proposed project, combined with other related cumulative projects, could expose people or structures to potential substantial adverse effects involving geology and soils and paleontological resources.*	Refer to Mitigation Measure GEO-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
5.6 Greenhouse Gas Emissions			
GHG-1	**Greenhouse Gas Emissions** *Greenhouse gas emissions generated by the project could have a significant impact on global climate change.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
GHG-2	**Consistency with Applicable GHG Plans, Policies, or Regulations**	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
	Implementation of the proposed project could conflict with an applicable greenhouse gas reduction plan, policy, or regulation.		
	Cumulative Impacts *Greenhouse gas emissions generated by the proposed project and other related cumulative projects could have a significant impact on global climate change.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
5.7 Hazards and Hazardous Materials			
HAZ-1	**Accidental Release and/or Routine Handling of Hazardous Materials** *The proposed project could create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, or accident conditions involving the release of hazardous materials.*	The following mitigation measures apply to all site plan concepts: HAZ-1 Prior to demolition activities, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and California Division of Occupational Safety and Health (Cal/OSHA) certified building inspector to determine the presence or absence of asbestos containing-materials (ACMs). If ACMs are located, abatement of asbestos shall be completed prior to any activities that would disturb ACMs or create an airborne asbestos hazard. Asbestos removal shall be performed by a State certified asbestos containment contractor in accordance with the South Coast Air Quality Management District (SCAQMD) Rule 1403. Contractors performing ACM removal shall provide evidence of abatement activities to the Orange County Sanitation District. HAZ-2 If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste shall be evaluated independently from the building material by a qualified Environmental Professional. If lead-based paint is found, abatement shall be completed by a qualified Lead Specialist prior to any activities that would create lead dust or fume hazard. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint	Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		removal shall provide evidence of abatement activities to the Orange County Sanitation District. HAZ-3 Prior to construction, a Soil Management Plan (SMP) shall be prepared by a qualified environmental professional with Phase II/Site Characterization experience. The SMP shall be incorporated into project plans and specifications to be used by the contractor and the Orange County Sanitation District during construction activities. The SMP shall include guidelines for safety measures and soil management in the event that soils are to be disturbed, and for handling soil during any planned earthwork activities. Additionally, the SMP shall include verification sampling for spoils/dredged material, soil import and export, as well as backfill to confirm no presence of hazardous materials. If hazardous materials are detected, the materials shall be properly disposed of in accordance with Federal and State requirements. The SMP shall also include a decision framework and specific risk management measures for managing soil in a manner protective of human health and consistent with applicable regulatory requirements. HAZ-4 If unknown wastes are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following: • Immediately cease work in the vicinity of the suspected contaminant, and remove workers and the public from the area; • Notify the Orange County Sanitation District; • Secure the area as directed by the Orange County Sanitation District; and • Notify the Orange County Health Care Agency's Hazardous Materials Division's Hazardous Waste/ Materials Coordinator (or other appropriate agency specified by the Director of Engineering). The Hazardous Waste/Materials Coordinator shall advise the	

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		responsible party of further actions that shall be taken, if required.	
HAZ-2	**Interference with an Adopted Emergency Response or Evacuation Plan** *Construction and operations of the project could create a significant hazard to the public or environment through interference with an adopted emergency response or evacuation plan.*	Refer to Mitigation Measure TRA-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
	Cumulative Impacts *The proposed project could create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials, or accident conditions involving the release of hazardous materials.* *The proposed project could create a significant hazard to the public or environment through interference with an adopted emergency response or evacuation plan.*	Refer to Mitigation Measure HAZ-1 through HAZ-4 and TRA-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
5.8 Hydrology and Water Quality			
HWQ-1	**Water Quality – Short-Term Impacts** *Grading, excavation, and construction activities associated with the proposed project could impact water quality.*	The following mitigation measures apply to each site plan concept as specified. **Original Northeast Pump Station** HWQ-1 Prior to site disturbance activities and as part of the project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the State Water Resources Control Board (SWRCB) and the Santa Ana Regional Water Quality Control Board (RWQCB), providing notification and intent to comply with the State of California Construction General Permit and the General Waste Discharge Requirements For Insignificant Threat Discharges to Surface Waters. HWQ-2 The proposed project shall conform to the requirements of an approved Storm Water Pollution Prevention Plan (SWPPP) (to be applied for prior to site disturbance) and the NPDES Permit for General Construction Activities No. CAS000002, Order No. 2009-0009-DWQ (as amended by 2010-014-DWQ and 2012-006-DWQ), including implementation of all	**Original Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **Modified Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **South Pump Station** Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		recommended Best Management Practices (BMPs), as approved by the State Water Resources Control Board (SWRCB). HWQ-3 Upon completion of project construction, the Orange County Sanitation District, or designee, shall submit a Notice of Termination (NOT) to the State Water Resources Control Board (SWRCB) to indicate that construction is completed. **Modified Northeast Pump Station** Refer to Mitigation Measures HWQ-1 through HWQ-3, as well as the following: HWQ-4 In compliance with the Federal Clean Water Act (CWA), the proposed project shall conform to the requirements of a Department of the Army permit (to be applied for prior to site disturbance) from the U.S. Army Corps of Engineers (Corps) Los Angeles District. **South Pump Station** Refer to Mitigation Measures HWQ-1 through HWQ-4.	
HWQ-2	**Long-Term Operational Impacts** *Long-term operations of the proposed project could potentially result in increased runoff amounts and degraded water quality.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
	Cumulative Impacts *Grading, excavation, and construction activities associated with the proposed project and other related cumulative projects could potentially impact water quality.* *Long-term operations of the proposed project and other related cumulative projects could potentially result in increased amounts of runoff and degraded water quality.*	The following mitigation measures apply to each site plan concept as specified: **Original Northeast Pump Station** Refer to Mitigation Measures HWQ-1 through HWQ-3. **Modified Northeast Pump Station** Refer to Mitigation Measures HWQ-1 through HWQ-4. **South Pump Station** Refer to Mitigation Measures HWQ-1 through HWQ-4.	**Original Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **Modified Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **South Pump Station** Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
5.9 Land Use and Relevant Planning			
LU-1	**California Coastal Act** *The proposed project could conflict with the Coastal Act's planning and management policies.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
LU-2	**Local Coastal Program and Coastal Land Use Plan** *The proposed project could conflict with policies provided in the City's local coastal program and coastal land use plan.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
LU-3	**Southern California Association of Governments** *The proposed project may conflict with SCAG's regional planning efforts.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
LU-4	**City of Newport Beach General Plan** *The proposed project may conflict with City of Newport Beach General Plan policies.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
LU-5	**Back Bay Landing Planned Community Development Plan** *The proposed project could conflict with the Back Bay Landing Planned Community Development Plan development standards and design guidelines.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
	Cumulative Impacts *The proposed project could conflict with policies within applicable local and regional plans.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
5.10 Noise			
N-1	**Short-Term Construction Noise Impacts** *Grading and construction within the area could result in significant temporary noise impacts to nearby noise sensitive receivers.*	The following mitigation measures apply to each site plan concept as specified: **Original Northeast Pump Station** NOI-1 Prior to the initiation of construction, the Orange County Sanitation District shall confirm that the Grading Plan, Building Plans, and specifications stipulate that: • All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other State required noise attenuation devices.	**Original Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **Modified Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		• he Orange County Sanitation District shall provide a "Noise Disturbance Coordinator." The Disturbance Coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the Disturbance Coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall implement measures to resolve the complaint and comply with the City Noise Ordinance. The construction hotline telephone number shall be clearly posted on-site. • Construction haul routes shall be designed to avoid noise sensitive uses (e.g., residences, schools, hospitals, etc.) to the greatest extent possible. • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • Construction activities that produce noise shall not take place outside of the allowable hours specified by the City of Newport Beach Municipal Code with the exception of the 24 hour per day operation of HDD/microtunneling/dredging (pursuant to Mitigation Measure NOI-2). Alternative work hours may be designated by the City to reduce other impacts, such as traffic. NOI-2 Prior to issuance of Demolition or Building Permits, the Orange County Sanitation District, or designee, shall retain an Acoustical Engineer to prepare a Construction Noise Control Plan. The Construction Noise Control Plan shall identify the types, location, and duration of equipment to be used during project construction. Construction noise levels shall be quantified and estimated at the nearest sensitive uses (i.e., residences, schools, churches, recreation/park facilities, hospitals, libraries, etc.) within 1,000 feet of the project construction area. Based on proposed construction hours and equipment to be used, the	**South Pump Station** Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		Construction Noise Control Plan shall identify noise reduction measures to minimize construction noise levels at off-site sensitive uses, demonstrating compliance with the Newport Beach Municipal Code Chapter 10.26 and 10.28. Noise reduction measures may include the use of sound blankets, sound walls/barriers, noise shrouds, and/or limiting the use of heavy noise-emitting equipment to non-sensitive hours (during daytime work hours and not after 5:00 p.m., etc.). The noise reduction measures shall be included in the project engineering drawings and specifications, and/or contractor shop drawings for review by the City of Newport Beach Planning Division. All noise reduction measures identified in the Construction Noise Control Plan approved by the City of Newport Beach shall be included in all project designs and construction plans for the project. **Modified Northeast Pump Station** Refer to Mitigation Measures NOI-1 and NOI-2. **South Pump Station** Refer to Mitigation Measures NOI-1 and NOI-2.	
N-2	**Vibration Impacts** *Project implementation would not result in significant vibration impacts to nearby sensitive receptors.*	The following mitigation measures apply to each site plan concept as specified: **Original Northeast Pump Station** No mitigation measures are required. **Modified Northeast Pump Station** NOI-3 Prior to initiation of construction, the Orange County Sanitation District shall ensure that construction plans prohibit the use of vibratory roller and sonic pile driver equipment within 26 feet of any structure to minimize vibration impacts. **South Pump Station** Refer to Mitigation Measures NOI-3.	**Original Northeast Pump Station** Less Than Significant Impact. **Modified Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **South Pump Station** Less Than Significant Impact With Mitigation Incorporated.
N-3	**Long-Term (Mobile) Noise Impacts** *Traffic generated by the proposed project would not significantly contribute to existing traffic noise in the area or exceed the City's established standards.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
N-4	**Long-Term (Stationary) Noise Impacts** *The proposed project would not result in a significant increase in long-term stationary ambient noise levels.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
	Cumulative Impacts ***Short-Term Construction Noise Impacts*** *Grading and construction within the area could result in significant short-term noise impacts to nearby noise sensitive receivers.*	Refer to Mitigation Measure NOI-1 and NOI-2 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
	Cumulative Impacts ***Vibration Impacts*** *Project implementation would not result in significant vibration impacts to nearby sensitive receptors.*	The following mitigation measures apply to each site plan concept as specific: **Original Northeast Pump Station** No mitigation measures are required. **Modified Northeast Pump Station** Refer to Mitigation Measure NOI-3. **South Pump Station** Refer to Mitigation Measure NOI-3.	**Original Northeast Pump Station** Less Than Significant Impact. **Modified Northeast Pump Station** Less Than Significant Impact With Mitigation Incorporated. **South Pump Station** Less Than Significant Impact With Mitigation Incorporated.
	Cumulative Impacts ***Long-Term (Mobile) Noise Impacts*** *Traffic generated by the proposed project would not significantly contribute to existing traffic noise in the area or exceed the City's established standards.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
	Cumulative Impacts ***Long-Term (Stationary) Noise Impacts*** *The proposed project would not result in a significant increase in long-term stationary ambient noise levels.*	No mitigation measures are required for any site plan concepts.	Less Than Significant Impact.
5.11 Transportation			
TRA-1	**Roadway, Transit, Bicycle, and Pedestrian Facilities** *Project construction could adversely impact plans related to roadway,*	The following mitigation measure applies to all site plan concepts: TRA-1 Prior to initiation of construction activities, engineering drawings and specifications,	Less Than Significant Impact With Mitigation Incorporated.

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
	transit, bicycle, and pedestrian facilities.	and/or contractor shop drawings shall be submitted for review and approval by the Orange County Sanitation District, California Department of Transportation, and the City Public Works Department. These documents shall, at a minimum, address the following: • Traffic control for any lane closure, detour, or other disruption to traffic circulation, including bicycle and pedestrian trails. Bicycle and pedestrian trails shall remain open, to the greatest extent possible, during construction or re-routed to ensure continued connectivity. • Bus stop access impacts shall be coordinated with, and approved by, the Orange County Transportation Authority. • At least three business days before any construction activities that would affect travel on nearby roadways, the construction contractor shall notify the City of Newport Beach Public Works Department of construction activities that could impede movement (such as lane closures) along roadways, to allow for uninterrupted emergency access. Surrounding property owners shall also be notified of project activities through advanced mailings. • Identify construction vehicle haul routes for the delivery of construction materials (i.e., lumber, tiles, piping, windows, etc.) to the site; necessary traffic controls and detours; and a construction phasing plan for the project. • Identify any off-site construction staging or material storage sites. • Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets. • Require the Contractor to keep all haul routes clean and free of debris, including but not limited, to gravel and dirt resulting from its operations. The Contractor shall clean adjacent streets, as directed by the Orange County Sanitation District, of any	

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		material which may have been spilled, tracked, or blown onto adjacent streets or areas. • Hauling or transport of oversize loads shall be allowed between the hours of 9:00 a.m. and 3:00 p.m. only, Monday through Friday. No hauling or transport shall be allowed during nighttime hours, weekends, or Federal holidays. Any oversized loads utilizing Coast Highway shall obtain a Caltrans permit for such activities. • Use of local streets shall be prohibited, except what is required to provide direct access to the project site. • Haul trucks entering or exiting public streets shall yield to public traffic at all times. • If hauling operations cause any damage to existing pavement, streets, curbs, and/or gutters along the haul route, the contractor shall be fully responsible for repairs. The repairs shall restore the damaged property to its original condition. • All constructed-related staging of vehicles shall be kept out of the adjacent public roadways and shall occur on-site or within other off-street areas. • Construction-related lane closures would only occur between the hours of 8:30 a.m. and 3:30 p.m., Monday through Friday. More or less restrictive closure hours may be prescribed by the City. • Use of a construction flagperson to assist in maintaining efficient vehicle travel in both directions, particularly during peak travel hours, and use of construction signage and safe detour routes for pedestrians and bicyclists when travel lanes and sidewalks along Coast Highway, Dover Drive, and Bayside Drive are affected. • The engineering drawings and specifications shall meet standards established in the current California	

EIR Section	Impacts	Mitigation Measures	Significance After Mitigation
		Manual on Uniform Traffic Control Device (MUTCD).	
TRA-2	**Hazardous Design Features** *The project could substantially increase hazards due to short-term construction activities within surrounding roadways.*	Refer to Mitigation Measure TRA-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
TRA-3	**Emergency Access** *Implementation of the project could result in inadequate emergency access.*	Refer to Mitigation Measure TRA-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
	Cumulative Impacts ***Roadway, Transit, Bicycle, and Pedestrian Facilities*** *Implementation of the proposed project and other related cumulative projects could conflict with adopted policies, plans, or programs regarding roadway, public transit, bicycle, and pedestrian facilities.*	Refer to Mitigation Measure TRA-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
	Cumulative Impacts ***Hazardous Design Features*** *Implementation of the proposed project and other related cumulative projects could substantially increase hazards due to a proposed design feature.*	Refer to Mitigation Measure TRA-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
	Cumulative Impacts ***Emergency Access*** *Implementation of the proposed project and other related cumulative projects could result in inadequate emergency access.*	Refer to Mitigation Measure TRA-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
5.12 Tribal Cultural Resources			
TCR-1	**Tribal Cultural Resources** *The proposed project could cause a significant impact to a tribal cultural resource.*	Refer to Mitigation Measure CUL-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.
	Cumulative Impacts *The proposed project, combined with other related cumulative projects, could cause a significant impact to a tribal cultural resource.*	Refer to Mitigation Measure CUL-1 for all site plan concepts.	Less Than Significant Impact With Mitigation Incorporated.

1.5 SUMMARY OF PROJECT ALTERNATIVES

In accordance with *CEQA Guidelines* Section 15126.6, this section provides a summary description of the alternatives to the project, which could feasibly attain most of the project's basic objectives, while avoiding or substantially lessening the project's significant effects. The evaluation considers the comparative merits of each alternative. The analysis focuses on alternatives capable of avoiding or substantially lessening the project's significant environmental effects, even if the alternative would impede, to some degree, the attainment of the proposed project objectives. The following alternatives are considered in this EIR:

- "No Project/Future Back Bay Landing Development" Alternative; and
- "Pump Station South Relocation" Alternative.

Throughout Section 7.0, *Alternatives to the Proposed Project*, the alternatives' impacts are analyzed for each environmental issue area, as examined in Sections 5.1 through 5.12 of this EIR. In this manner, each alternative was compared to the project on an issue-by-issue basis. The following is a summary description of each of the alternatives evaluated in Section 7.0.

"NO PROJECT/FUTURE BACK BAY LANDING DEVELOPMENT" ALTERNATIVE

Under the "No Project/Future Back Bay Landing Development" Alternative, the pump station and force mains would remain in their current location and condition. The existing pump station and force mains would not be improved to meet current structural and maintenance standards, would not increase safety for OCSD Operations & Maintenance personnel, and would not construct new on-site odor control infrastructure. As part of this Alternative, the planned development for the Back Bay Landing Project would occur. The development would include dry stack boat storage facility for 140 boats, 61,534 square feet of visitor-serving retail and recreational marine facilities, and up to 49 attached residential units. This Alternative assumes that development associated with the Back Bay Landing project would occur at the project's relocated pump station sites, including the northeast and south pump station sites proposed under the Original Northeast Pump Station, Modified Northeast Pump Station, and South Pump Station conceptual site plans.

"PUMP STATION SOUTH RELOCATION" ALTERNATIVE

The Pump Station South Relocation Alternative would construct a new pump station south of the East Coast Highway and east of Newport Bay Channel; refer to Exhibit 7-1, *Pump Station South Relocation Alternative – Conceptual Site Plan*. The new pump station facility would require construction of a retaining wall along Newport Bay Channel to increase the buildable-space of the property. Approximately 800 feet of dual 30-inch diameter force mains would be installed via either microtunneling or dredging through Newport Bay Channel (south of Newport Bay Bridge). It is assumed that the Newport Bay Channel crossing would be constructed in similar manner to the proposed Original Northeast Pump Station conceptual site plan (i.e., microtunneling). A depiction of proposed work areas associated with microtunneling activities under this Alternative is provided as part of Exhibit 7-2, *Pump Station South Relocation Alternative – Proposed Microtunneling Work Areas*. After crossing Newport Bay Channel, the force mains would connect to the existing OCSD force main system south of West Coast Highway. The new pump station would require the construction of a

new connection to the OCSD gravity sewer system. The 42-inch VCP gravity sewer would be microtunneled under East Coast Highway. After the new facilities are completed and commissioned, the existing force mains would be abandoned, the pump station would be demolished, and OCSD would construct a backup generator and odor control facility where the existing pump station is currently located. The backup generator and odor control facility would be constructed at the existing pump station site due to space constraints at the new pump station site south of East Coast Highway.

"ENVIRONMENTALLY SUPERIOR" ALTERNATIVE

Table 1-1, *Comparison of Alternatives*, summarizes the comparative analysis presented in Section 7.0 (i.e., the alternatives compared to the proposed project). Review of Table 1-1 indicates the "No Project/Future Back Bay Landing Development" Alternative is the environmentally superior alternative, because it would avoid or lessen the majority of impacts associated with development of the proposed project. According to *CEQA Guidelines* Section 15126.6(e)(2), "if the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

Therefore, although no significant and unavoidable impacts have been identified for the proposed project, the "Pump Station South Relocation" Alternative is identified as the Environmentally Superior Alternative. This Alternative would result in reduced impacts related to hazards and hazardous materials and noise as compared to the proposed project, but greater impacts in regard to aesthetics/light and glare.

Table 1-1
Comparison of Alternatives

Sections	No Project/ Future Back Bay Landing Development	Pump Station South Relocation Alternative
Aesthetics/Light and Glare	⮟	⮝
Air Quality	⮟	=
Biological Resources	⮟	=
Cultural Resources	⮟	=
Geology and Soils	=	=
Greenhouse Gas Emissions	⮟	=
Hazards and Hazardous Materials	=	⮟
Hydrology and Water Quality	=	=
Land Use and Relevant Planning	⮟	=
Noise	⮟	⮟
Transportation	=	=
Tribal Cultural Resources	⮟	=

⮝ Indicates an impact that is greater than the proposed project (environmentally inferior).
⮟ Indicates an impact that is less than the proposed project (environmentally superior).
= Indicates an impact that is equal to the proposed project (neither environmentally superior nor inferior).

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2.0 INTRODUCTION AND PURPOSE

Regionally, the project site is located within the southwestern portion of the City of Newport Beach (City), within the County of Orange (County). Locally, the project site includes sewer pump station improvements located within a property located at 300 East Coast Highway. The project also includes sewer force main improvements that would extend from the proposed pump station, proceed westerly beneath the Newport Bay Channel to connect to an existing Orange County Sanitation District (OCSD) valve vault. Two pump station locations and three force main alignments are proposed across the Newport Bay Channel.

2.1 PURPOSE OF THE EIR

OCSD is the Lead Agency under the California Environmental Quality Act (CEQA) and has determined that an Environmental Impact Report (EIR) is required for the Bay Bridge Pump Station and Force Mains Replacement Project (project) (State Clearinghouse No. 2016111031). This EIR has been prepared in conformance with CEQA (California Public Resources Code [PRC] Section 21000 et seq.); CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq.); and the rules, regulations, and procedures for implementation of CEQA, as adopted by OCSD. The principal CEQA Guidelines sections governing content of this document include Article 9 (*Contents of Environmental Impact Reports*) (Sections 15120 through 15132), and Section 15161 (*Project EIR*).

The purpose of this EIR is to review the existing conditions, analyze potential environmental impacts, and identify feasible mitigation measures to reduce potentially significant effects of the proposed project. For more detailed information regarding the project, refer to Section 3.0, *Project Description*.

This EIR addresses the environmental effects of the project, in accordance with Section 15161 of the CEQA Guidelines. As referenced in Section 15121(a) of the CEQA Guidelines, the primary purposes of this EIR are to:

- Inform decision-makers and the public generally of the significant environmental effects of a project;
- Identify possible ways to minimize the significant effects of the project; and
- Describe reasonable alternatives to the project.

Mitigation measures are provided that may be adopted as conditions of approval to avoid or minimize the significance of impacts resulting from the project. In addition, this EIR is the primary reference document used in the formulation and implementation of a mitigation monitoring program for the proposed project.

OCSD (which has the principal responsibility of processing and approving the project) and other public (i.e., responsible and trustee) agencies that may use this EIR in the decision-making or permit process will consider the information in this EIR, along with other information that may be presented during the CEQA process. Environmental impacts are not always mitigatable to a level considered less than significant; in those cases, impacts are considered significant unavoidable impacts. In accordance with Section 15093(b) of the CEQA Guidelines, if a public agency approves a project that

has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts), the agency shall state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is termed, per Section 15093 of the CEQA Guidelines, a "statement of overriding considerations."

This document analyzes the environmental effects of the project to the degree of specificity appropriate to the current proposed actions, as required by Section 15146 of the CEQA Guidelines. The analysis considers the activities associated with the project to determine the short-term and long-term effects associated with their implementation. This EIR discusses both the direct and indirect impacts of this project, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects.

2.2 COMPLIANCE WITH CEQA

A project proposing an upgrade to the existing pump station/force main infrastructure was previously analyzed in the *Bay Bridge Pump Station and Force Mains Replacement Project Draft Environmental Impact Report* (2017 Bay Bridge EIR) (State Clearinghouse No. 2016111031), prepared by Michael Baker International and dated June 2017. The 2017 Bay Bridge EIR was prepared in accordance with CEQA, as amended (Public Resources Code Section 21000, et seq.), the *State CEQA Guidelines for Implementation of CEQA* (California Code of Regulations, Title 14, Section 15000 et seq.), and OCSD's CEQA implementation procedures.

The 2017 Bay Bridge EIR was circulated for public review from June 21, 2017 through August 4, 2017. OCSD received 14 comment letters during the public review period and a Final EIR was prepared, which included responses to comments; revisions to the Draft EIR; and a mitigation monitoring and reporting program. However, the Final EIR was not certified due to conflicts with the planned development of the adjacent Back Bay Landing Project. Since then, OCSD, in consultation with the City of Newport Beach and adjacent property owner (Bayside Village Marina, LLC), has identified three conceptual project designs to move forward with, one being the original design analyzed in the 2017 Bay Bridge EIR. The proposed project's three conceptual designs are described in Chapter 3.0, *Project Description*.

A Lead Agency is required to recirculate an EIR when significant new information is added to the document after public notice is given of the availability of the Draft EIR for public review (in accordance with CEQA Guidelines Section 15087) but before certification. As cited in CEQA Guidelines Section 15088.5, the term "information" can include changes in the project or environmental setting, as well as additional data or other information. New information is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponent has declined to implement. According to CEQA Guidelines Section 15088.5(c), the Lead Agency need only recirculate the chapters or portions of the document that have been modified if the revisions are limited to a few chapters or portions of the EIR.

OCSD is the Lead Agency with authority to prepare this Recirculated Draft EIR and, after completion of the public comment/response process, is the Certifying Agency for the Final EIR. This Recirculated Draft EIR is intended to serve as an informational document to be made available for

public review and consideration by OCSD and the Responsible Agencies during deliberations on the proposed project. The project approvals associated with the proposed project are described in Chapter 3.0.

Questions and comments regarding the preparation of this document and OCSD's review of the project should be referred to the following:

Orange County Sanitation District
10844 Ellis Avenue
Fountain Valley, CA 92708
Attn: Mr. Kevin Hadden, Principal Staff Analyst
CEQA@ocsd.com

PURPOSE AND TYPE OF EIR/INTENDED USES OF THIS EIR

The purpose of this Recirculated Draft EIR is to inform decision makers and the public of any significant adverse environmental effects that may further be disclosed to the public after incorporation of applicable comments received during the public comment period of the 2017 Bay Bridge EIR. The analytical approach used in this Recirculated Draft EIR is consistent with Sections 15161 and 15088.5(c) of the CEQA Guidelines. As a "Project EIR," this Recirculated Draft EIR focuses primarily on the changes in the environment that would result from transition of the project site in its current condition to development and operation of the proposed project.

COMMENTING ON THE RECIRCULATED DRAFT EIR

In accordance with the provision of Public Resources Code Section 21092.1 and CEQA Guidelines Section 15088.5, the Recirculated Draft EIR is subject to a 45-day review period by responsible and trustee agencies and interested parties. Section 15087 of the CEQA Guidelines lists optional procedures for noticing, including publication in a newspaper, posting on-site, or mailing to owners of a property or properties contiguous to the site. In accordance with the provision of Sections 15085(a) and 15087(a)(1) of the CEQA Guidelines, as amended, OCSD, serving as the Lead Agency, will: 1) publish a Notice of Availability of a Recirculated Draft EIR in a newspaper of general circulation; 2) will prepare and transmit a Notice of Completion (NOC) to the State Clearinghouse; and 3) mail notice to those organizations and individuals who have previously requested such notice in writing. Proof of publication is available at the offices of the Lead Agency.

Any public agency or members of the public desiring to comment on the Recirculated Draft EIR must submit their comments in writing to the individual identified above, as well as on the document's NOC. Upon the close of the public review period, the Lead Agency will then proceed to evaluate and prepare responses to all relevant oral and written comments received from both citizens and public agencies during the public review period.

Pursuant to CEQA Guidelines Section 15088.5(f)(1), the Lead Agency is recirculating the entire Draft EIR and is requiring reviewers to submit new comments on the Draft EIR. The Lead Agency will not respond to those comments received during the earlier circulation period. Although the prior comments are part of the administrative record, the previous comments do not require a written response in the Final EIR, and new comments must be submitted in response to the Recirculated Draft EIR.

CHANGES MADE IN THE RECIRCULATED DRAFT EIR

Based on the proposed project modifications since circulation of the 2017 Bay Bridge EIR, the Recirculated Draft EIR has been updated to reflect environmental concerns that were not previously analyzed. The Draft EIR is being recirculated in its entirety to ensure the full document reflects all proposed project modifications as detailed in Chapter 3.0.

FINAL EIR

The Final EIR will consist of the Recirculated Draft EIR, revisions to the Recirculated Draft EIR (if any), and responses to all written comments on environmental issues received from responsible agencies, the public, and any other reviewing parties. After the Final EIR is completed, and at least ten days prior to the certification hearing, a copy of the response to comments made by public agencies on the Recirculated Draft EIR will be provided to the commenting agencies.

2.3 INITIAL STUDY/ NOTICE OF PREPARATION/ EARLY CONSULTATION (SCOPING)

In compliance with the CEQA Guidelines, OCSD has provided opportunities for various agencies and the public to participate in the environmental review process. During preparation of the 2017 Bay Bridge EIR, efforts were made to contact various Federal, State, regional, and local government agencies and other interested parties to solicit comments on the scope of the review in this document. This included the distribution of an Initial Study/Environmental Checklist and Notice of Preparation (NOP) to various responsible agencies, trustee agencies, and interested parties. In addition, a public scoping meeting was held on November 30, 2016 in the Newport Beach Public Central Library Friends Meeting Room located at 1000 Avocado Avenue, Newport Beach, CA 92660.

Pursuant to Section 15082 of the CEQA Guidelines, as amended, OCSD circulated the Initial Study/Environmental Checklist and NOP directly to responsible and trustee agencies (including the State Clearinghouse Office of Planning and Research), special districts, and members of the public who had requested such notice. The NOP was distributed on November 10, 2016, with the 30-day public review period concluding on December 9, 2016. The purpose of the Initial Study/Environmental Checklist and NOP was to formally announce the preparation of a Draft EIR for the proposed project, and that, as the Lead Agency, OCSD was soliciting input regarding the scope and content of the environmental information to be included in the EIR. The Initial Study/Environmental Checklist and NOP provided preliminary information regarding the anticipated range of impacts to be analyzed within the EIR. The Initial Study/Environmental Checklist, NOP, and NOP comments are provided as Appendix 11.1, *Initial Study/Notice of Preparation and Comment Letters*. The NOP comments (and the section of the Recirculated Draft EIR where they are addressed) included the following:

- Aesthetic impacts and alterations to existing visual character and quality of the project site and in the project area (refer to Section 5.1, *Aesthetics, Light and Glare*);
- Impacts related to air quality (refer to Section 5.2, *Air Quality*);

- Odor impacts associated with project operations in the vicinity of the site (refer to Section 5.2, *Air Quality*);
- Impacts to cultural resources (refer to Section 5.4, *Cultural Resources*);
- Impacts to archaeological resources (refer to Section 5.4, *Cultural Resources*);
- Impacts to tribal cultural resources (refer to Section 5.12, *Tribal Cultural Resources*);
- Impacts related to hazardous materials in the project vicinity (refer to Section 5.7, *Hazards and Hazardous Materials*);
- Impacts related to land use and planning on-site (refer to Section 5.9, *Land Use and Relevant Planning*);
- Consistency with local and regional planning documentation, goals, and policies (refer to Section 5.9, *Land Use and Relevant Planning*);
- Noise created by project operations in the vicinity of the site (refer to Section 5.10, *Noise*);
- Traffic circulation and access impacts to local and regional roadway facilities (refer to Section 5.11, *Transportation and Traffic*); and
- Impacts to potential sensitive biological resources on-site (refer to Section 5.3, *Biological Resources*).

2.4 FORMAT OF THE RECIRCULATED DRAFT EIR

The Recirculated Draft EIR is organized into the following sections:

- Section 1.0, *Executive Summary*, provides a brief project description and summary of the environmental impacts and mitigation measures.
- Section 2.0, *Introduction and Purpose*, provides CEQA compliance information.
- Section 3.0, *Project Description*, provides a detailed project description indicating project location, background, and history; project characteristics, goals and objectives; construction; as well as associated discretionary actions required.
- Section 4.0, *Basis of Cumulative Analysis*, describes the approach and methodology for the cumulative analysis.
- Section 5.0, *Environmental Analysis*, contains a detailed environmental analysis of the existing conditions, potential project impacts, recommended mitigation measures, and possible significant and unavoidable impacts for a number of environmental topic areas.
- Section 6.0, *Other CEQA Considerations*, discusses the long-term implications of the proposed action. Irreversible environmental changes that would be involved in the proposed action, should it be implemented, are considered. The project's growth-inducing impacts, including the potential for population growth, and energy conservation impacts are also discussed.
- Section 7.0, *Alternatives to the Proposed Project*, describes a reasonable range of alternatives to the project or to the location of the project that could avoid or substantially lessen the significant impact of the project and still feasibly attain the basic project objectives.

- Section 8.0, *Effects Found Not To Be Significant*, provides an explanation of potential impacts that have been determined not to be significant.
- Section 9.0, *Organizations and Persons Consulted*, identifies all Federal, State, and local agencies, other organizations, and individuals consulted.
- Section 10.0, *References and Sources Cited*, identifies reference sources for the Recirculated Draft EIR.
- Section 11.0, *Appendices*, contains technical documentation for the project.

2.5 RESPONSIBLE AND TRUSTEE AGENCIES

Certain projects or actions undertaken by a Lead Agency require subsequent oversight, approvals, or permits from other public agencies in order to be implemented. Such other agencies are referred to as Responsible Agencies and Trustee Agencies. Pursuant to Sections 15381 and 15386 of the CEQA Guidelines, as amended, Responsible Agencies and Trustee Agencies are respectively defined as follows:

> *"Responsible Agency" means a public agency, which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration. For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the Lead Agency, which have discretionary approval power over the project. (Section 15381)*
>
> *"Trustee Agency" means a state agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California. Trustee Agencies include: (a) The California Department of Fish and Wildlife…; (b) The State Lands Commission…; (c) The State Department of Parks and Recreation…and (d) The University of California with regard to sites within the Natural Land and Water Reserves System. (Section 15386)*

Responsible and Trustee Agencies and other entities that may use this Recirculated Draft EIR in their decision-making process or for informational purposes include, but may not be limited to, the following:

- City of Newport Beach;
- California Department of Transportation;
- Santa Ana Regional Water Quality Control Board;
- State Water Resources Control Board;
- California Department of Fish and Wildlife;
- California Coastal Commission;
- South Coast Air Quality Management District;
- U.S. Army Corps of Engineers; and
- National Marine Fisheries Service.

2.6 INCORPORATION BY REFERENCE

Pertinent documents relating to this Recirculated Draft EIR have been cited in accordance with CEQA Guidelines Section 15150, which encourages incorporation by reference as a means of reducing redundancy and the length of environmental reports. The following documents are hereby incorporated by reference into this Recirculated Draft EIR. Information contained within these documents has been utilized for each section of this Recirculated Draft EIR.

- *Bay Bridge Pump Station and Force Mains Rehabilitation Study Preliminary Alignment Study Report* (Final Submittal May 2016). The *Bay Bridge Pump Station and Force Mains Rehabilitation Study Preliminary Alignment Study Report* (PASR), prepared by OCSD, developed alignment alternatives for the upgrade of Bay Bridge Pump Station and its associated force mains. This analysis was based on the existing conditions of the project area, utility research, predetermined evaluation criteria, and a preliminary cost analysis. This report was the basis of the preliminary design for the proposed project. The PASR reviewed the existing conditions in the project area including utilities and geophysical conditions, including a preliminary geotechnical study. It developed preliminary alignments for the upgraded Bay Bridge Pump Station and its associated force mains, established a set of comprehensive criteria for analyzing each alignment's value to OCSD, and evaluated each alignment based on the set of criteria established in the PASR. In addition, the PASR developed a preliminary opinion of probable cost for each alignment discussed, recommended an alignment for the upgraded Bay Bridge Pump Station and its associated force mains based on the evaluation, and investigated the permitting required for the completion of the project under CEQA.
- *Final Technical Memorandum No. 1 – Alternative 3 Evaluation: Supplement to the PASR* (Final Submittal November 22, 2016). The *Final Technical Memorandum No. 1 – Alternative 3 Evaluation: Supplement to the PASR* (Technical Memorandum), authorized by Amendment No. 1, documented OSCD's analysis for a newly proposed alternative for the upgrade of the Bay Bridge Pump Station and its associated force mains (the subject of this EIR) and compared it to three alternatives considered in the PASR. The Technical Memorandum considered the following:
  - Reviewed and evaluated the new alternative pump station siting and force main alignment qualitatively;
  - Evaluated the new alternative based on the set of criteria established in the PASR;
  - Developed a preliminary opinion of probable cost for the new alternative;
  - Compared the new alternative to the alternatives developed in the PASR;
  - Updated the project recommendation; and
  - Recommended a preferred alternative (the subject of this EIR) for the upgraded Bay Bridge Pump Station and its associated force mains.
- *City of Newport Beach General Plan* (adopted July 25, 2006, as amended periodically since). The *City of Newport Beach General Plan* (General Plan) provides a general, comprehensive, and long-range guide for community decision-making. The General Plan is organized into ten elements: Land Use, Harbor and Bay, Housing, Historical Resources, Circulation, Recreation, Arts and Cultural, Natural Resources, Safety, and Noise. Each General Plan element presents an

overview of its scope, summary of conditions and planning issues, goals, and policies. Goals and policies of the General Plan are applicable to all lands within the City's jurisdiction. Consistent with State statutes, it also specifies policies for the adopted Sphere of Influence (SOI). The General Plan was utilized throughout this document as the fundamental planning document governing development at the project site. Background information and policy information from the General Plan is cited in several sections of this document.

- *City of Newport Beach Final Environmental Impact Report General Plan 2006 Update* (Certified July 25, 2006, as amended periodically since) SCH No. 2006011119. The *City of Newport Beach Final Environmental Impact Report General Plan 2006 Update* (General Plan EIR) reviewed the City and Planning Area's existing conditions, analyzed the potential environmental impacts from implementation of the General Plan Update, identified policies from the proposed General Plan Update that served to reduce and minimize impacts, and identified additional mitigation measures, to reduce potentially significant impacts of the General Plan Update. The General Plan EIR presented a worst-case scenario based upon the City and adjacent areas' maximum potential development from 2002 through 2030. The General Plan EIR was prepared as a Program EIR (CEQA Guidelines Section 15168, Program EIR), and as such, was intended to serve as the environmental document for a series of actions contemplated by the General Plan, including amending the Zoning Ordinance to bring it into consistency with the General Plan.
- *Newport Beach Municipal Code* (current through Ordinance 2018-19, passed December 11, 2018). The *Newport Beach Municipal Code* (Municipal Code) consists of all the regulatory, penal, and administrative ordinances of the City of Newport Beach. The Municipal Code is the primary method the City uses to control land uses, in accordance with General Plan goals and policies. The City's Zoning Code, adopted as Municipal Code Title 20, *Planning and Zoning*, is intended to promote the orderly development of the City; promote and protect the public health, safety, peace, comfort, and general welfare; protect the character, social, and economic vitality of neighborhoods; and to ensure the beneficial development of the City. The City's buildings and construction regulations, adopted as Municipal Code Title 15, *Buildings and Construction*, specify rules and regulations for construction, alteration, and building of structures for human occupancy.
- *Local Coastal Program*. The City's *Local Coast Program* (LCP) implements Coastal Act policies at the local level and is comprised of the *City of Newport Beach Local Coastal Program Coastal Land Use Plan* (CLUP) and the *City of Newport Beach Local Coastal Program Implementation Plan* (Local Coastal Program Implementation Plan).
  - *City of Newport Beach Local Coastal Program Coastal Land Use Plan* (Adopted July 14, 2009, as amended periodically since). The CLUP sets forth goals, objectives, and policies that govern the use of land and water in the coastal zone within the City of Newport Beach and SOI, with the exception of Newport Coast and Banning Ranch. The CLUP addresses public access, recreation, marine environment, land resources, development, and industrial development within three chapters: Land Use and Development, Public Access and Recreation, and Coastal Resource Protection. Each chapter is divided into sections and subsections. Each section or subsection begins with the identification of the Coastal Act sections that are relevant to Newport Beach, followed by a narrative of the local setting and policy direction adopted by the City to address the requirements of the Coastal Act and a listing of specific policies. The City reviews

pending development projects for consistency with the CLUP before an applicant can file for a coastal development permit with the Coastal Commission.

- *City of Newport Beach Local Coastal Program Implementation Plan* (Adopted November 22, 2016). The Local Coastal Program Implementation Plan is the primary tool used by the City to carry out the goals, objectives, and policies of the CLUP. The purposes of the Local Coastal Program Implementation Plan are to:
  - Implement the policies of the CLUP and the California Coastal Act of 1976;
  - Protect, maintain, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources;
  - Assure orderly, balanced use and conservation of resources within the coastal zone taking into account social and economic needs;
  - Maximize public access to and along the coast and maximize public recreational opportunities in the coastal zone consistent with sound resource conservation principles and constitutionally protected rights of private property owners;
  - Assure priority for coastal-dependent and coastal-related development over other types of development on the coast;
  - Encourage State and local cooperation in planning and development of mutually beneficial uses in the coastal zone; and
  - To ensure that any development in the coastal zone preserves and enhances coastal resources, protects and enhances coastal views and access, and ensures that growth, development, and environmental management is conducted a manner consistent with the provisions of the CLUP.

- *Back Bay Landing Planned Community Development Plan (PC-9)* (adopted February 25, 2014, Ordinance No. 2014-4(PA2011-216) and Amended November 22, 2016, Ordinance No. 2016-8. The *Back Bay Landing Planned Community Development Plan (PC-9)* (Back Bay Landing PCDP) is a redevelopment plan involving a mixed-use waterfront project. This project would construct a dry stack boat storage facility for 140 boats, 61,534 square feet of visitor-serving retail and recreational marine facilities, and up to 49 attached residential units. The Back Bay Landing PCDP establishes appropriate zoning regulations governing land use and development of the Planned Community site, consistent with the General Plan and CLUP. The Back Bay Landing PCDP provides a vision for the land uses on the site, sets the development standards and design guidelines for specific project approvals at the Site Development Review and Community Development Plan approval stage, and regulates the long term operation of the developed site.

- *Back Bay Landing Final Environmental Impact Report* (certified February 2014). The *Back Bay Landing Final Environmental Impact Report* (Back Bay Landing EIR) reviewed existing conditions within the project boundaries and surrounding area, analyzed the potential environmental impacts from project implementation, and identified mitigation measures to reduce potentially significant impacts of the project. The project included a General Plan Amendment, CLUP Amendment, and zone change, and proposed the Back Bay Landing PCDP.

3.0 PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SETTING

3.1.1 PROJECT LOCATION

Regionally, the project site is located within the southwestern portion of the City of Newport Beach (City), within the County of Orange (County), California; refer to Exhibit 3-1, *Regional Vicinity*. Locally, the project site is located at 300 East Coast Highway and is developed with an Orange County Sanitation District (OCSD) sewer pump station and associated improvements. The project site also includes sewer force main improvements that extend from the existing pump station westerly beneath the Newport Bay Channel (south of Bay Bridge) to connect to an existing OCSD force main system and valve vault on the west side of Bay Bridge; refer to Exhibit 3-2, *Site Vicinity*.

3.1.2 PROJECT SETTING (EXISTING CONDITIONS)

The proposed project site is located within a fully developed and urbanized area. The existing facility is located immediately north of East Coast Highway. The facility is roughly square shaped with an area of approximately 4,800 square feet, occupied by a one-story pump station building. The perimeter of the pump station building is surrounded by masonry walls on all sides with two entrance gates including one double swing gate and one single swing gate on the southern boundary along the north side of East Coast Highway. The existing pump station building is located within the southern portion of the parcel and is approximately 3,300 square feet in size. The site is surrounded to the north, east, and west by a recreational vehicle (RV) storage area and mobile home park on an approximately 31.4-acre parcel. This parcel is owned by Bayside Village Marina, LLC, and is planned for development as part of the Back Bay Landing Project, a mixed-use waterfront village comprised of recreational and marine-related uses on an approximately seven acre portion of the 31.4-acre parcel.

In addition to the pump station facility, existing force mains consist of dual 24-inch force mains approximately 1,250 feet in length that start from the pump station and route across East Coast Highway, crossing Balboa Marina property just south of East Coast Highway, then routing under the Newport Bay Channel (south of Bay Bridge) to an existing valve vault located on the west side of Bay Bridge approximately 0.25-mile west of the pump station; refer to Exhibit 3-3, *Existing Conditions*. The valve vault is located immediately north of the existing Bayshore Apartments. The existing force mains were originally constructed as mortar lined and coated steel, and the lines were sliplined in 1981 with 20-inch high density polyethylene (HDPE).

Newport Bay Channel is located within Newport Bay. The project vicinity consists of developed channels, beaches, and hardscape areas with a wide range of recreational activities such as sport fishing, kayaking, diving, wind surfing, sailboat racing, excursion, and entertainment boat activities, as well as visitor serving commercial and recreational uses and waterfront residences. The Newport Bay Channel ranges from -10.7 to -14 feet mean lower low water (MLLW) depth.

✱ - Project Site

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BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Regional Vicinity

Exhibit 3-1

Source: Google Earth, 2017.

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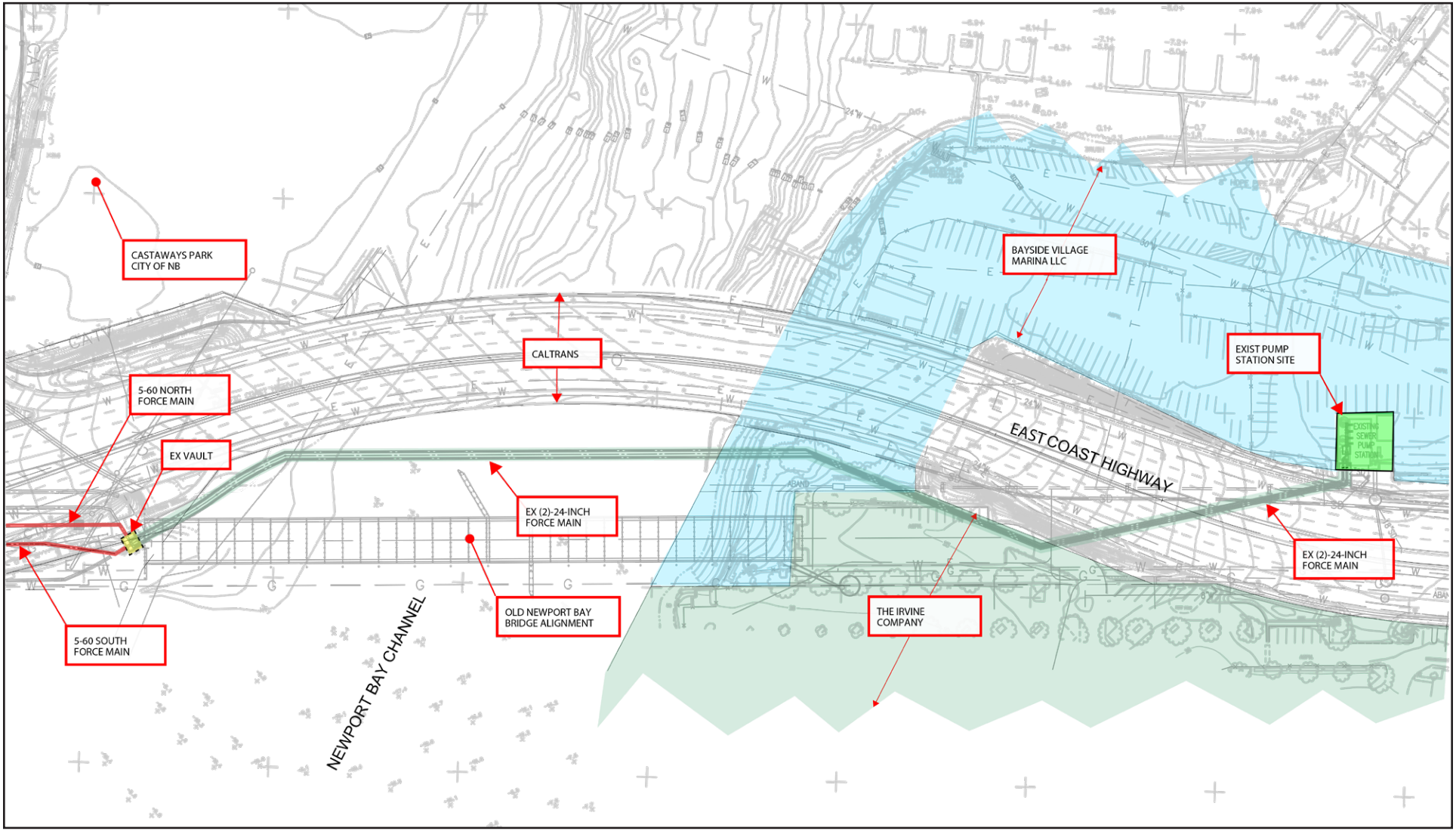
BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Site Vicinity

Exhibit 3-2



Source: Michael Baker International, *Bay Bridge Pump Station and Force Mains Rehabilitation Study Preliminary Alignment Study Report*, May 2016.

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BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Existing Conditions

Exhibit 3-3

Within the vicinity of the project site, East Coast Highway is developed with seven lanes (divided) and is designated an "Eight Lane Road (Divided)" that bridges across the southern portion of the Newport Bay Channel. East Coast Highway is also known as State Route (SR) 1 and is under the jurisdiction of the California Department of Transportation (Caltrans). Bayside Drive, located to the east of the pump station site, is developed with two lanes (undivided) north of East Coast Highway and four lanes (undivided) south of East Coast Highway, and is improved with sidewalks, curb, and street lighting. Bayside Drive is designated a "Secondary Road (Four Lane Undivided)" and a local roadway.

SURROUNDING USES

Surrounding uses in proximity to the project site include residential, commercial, and commercial recreational marine uses, refer to Exhibit 3-3. Table 3-1, *Surrounding Land Uses*, describes the surrounding land uses and associated land use and zoning designations.

Table 3-1
Surrounding Land Uses

Direction	General Plan Designation	Zoning	Existing Land Use
North	Multiple Unit Residential (RM) Parks and Recreation (PR) Open Space (OS)	Bayside Village Mobile Home Park with Mobile Home Park Overlay - UP 463 (PC-1 – MHP) Castaways Marina (PC-37) Upper Castaways (PC-43)	An RV storage area is currently located to the north of the existing pump station site. The RV storage area is part of the proposed Back Bay Landing Project, a mixed-use waterfront village on an approximately 7-acre portion of the 31.4-acre parcel. The remaining portions of the parcel would continue to serve as mobile home facilities. The Back Bay Landing Project would involve land use amendments to provide the legislative framework for the future development of the site. The requested approvals would provide a mix of uses including recreational and marine commercial retail, marine office, marine services, enclosed dry stack boat storage, and mixed-use structures with residential uses above the ground floor.[3] Further north of the project site is the Bayside Village Mobile Home Park. North of the existing force main alignment is Bay Bridge, the Lower Newport Bay, and Castaways Park.
East		Bayside Village Mobile Home Park with Mobile Home Park Overlay - UP 463 (PC-1 – MHP) Commercial General (CG)	The Bayside Village Mobile Home Park is located to the east of the project site. Immediately southeast of the project site, at the southeastern corner of East Coast Highway and Bayside Drive, is a commercial retail center.
South	Recreational and Marine Commercial (CM) Multiple Unit Residential (RM)	Commercial Recreational and Marine (CM 0.3) Multi-Unit Residential (RM [2178])	Balboa Marina recreational and restaurant uses are located to the south across East Coast Highway. The owner of the Balboa Marina is currently proposing to develop the Balboa Marina West Project, which includes 14,252 square feet of restaurant, 12 transient boat slips, 26 private boat slips, 664 square feet of marina restroom, and reconfiguration of a 294-space parking lot. The Bayshore Apartments and the Newport Marina are located further south of the project site.

Table 3-1 [continued]
Surrounding Land Uses

Direction	General Plan Designation	Zoning	Existing Land Use
West	General Commercial (CG) Single-Unit Residential Detached (RS-D)	Commercial General (CG) Bluff Development Single-Unit Residential (R-1)	Single-family residential uses are located west of the project site and Bay Bridge, along Dover Drive. A range of retail and commercial uses are located west of the site along the northern side of West Coast Highway. In addition, single-family residential uses exist along the southern side of West Coast Highway.

3.1.3 EXISTING GENERAL PLAN AND ZONING

The project site is designated Mixed-Use Water Related (MU-W2), Recreational and Marine Commercial (CM), and Tidelands and Submerged Lands (TS) by the *City of Newport Beach General Plan* (General Plan) Overview Map. The site is zoned Back Bay Landing Planned Community (PC-9), Commercial Recreational and Marine (CM 0.3), and Multi-Unit Residential (RM) by the *City of Newport Beach Zoning Map*.

3.2 PROJECT BACKGROUND

OCSD owns, operates, and maintains the existing pump station and associated force mains, which convey wastewater from Newport Beach to OCSD's Plant No. 2 wastewater treatment facility in Huntington Beach. The existing pump station facility is the furthest upstream pump station within the Newport force main network.

The existing facility is critical to OCSD operations as it conveys approximately 50 to 60 percent of the total Newport Beach flow through these force mains. Because the facility and associated force mains are critical elements to OCSD's collection backbone, it is imperative the facility be addressed to ensure continuous service to the community and avoid spills for the next design lifespan (an additional 50 years). This would be accomplished through an upgrade to the existing pump station/force main infrastructure.

A project proposing an upgrade to the existing pump station and force main infrastructure was previously analyzed in the *Bay Bridge Pump Station and Force Mains Replacement Project Draft Environmental Impact Report* (2017 Bay Bridge EIR) (State Clearinghouse No. 2016111031), prepared by Michael Baker International and dated December 2017. The 2017 Bay Bridge EIR analyzed a version of the project involving the demolition of the existing facility, construction of a new and larger facility adjacent to Bayside Drive, and installation of force main improvements beneath the Newport Bay Channel north of Bay Bridge (herein referenced as the Original Northeast Pump Station). The 2017 Bay Bridge EIR was not certified at that time due to conflicts with the planned development of the Back Bay Landing Project. Since then, OCSD has been in negotiations with Bayside Village Marina, LLC, to identify potential site plan alternatives to the Original Northeast Pump Station. As such, the project is proposing three conceptual site plans, one of which was previously analyzed in the 2017 Bay Bridge EIR. Depending on negotiation outcomes with Bayside Village Marina, LLC, OCSD would identify one of the three conceptual site plans described below in Section 3.3, *Project Characteristics*. Upon concept plan selection, minor changes in building siting may occur during the final design phase.

3.3 PROJECT CHARACTERISTICS

The proposed project would replace the existing Bay Bridge Pump Station and associated force mains to bring the pump station facility and force mains to current design and reliability standards to ensure continuous service for the Newport Coast service area. Three conceptual site plans are proposed and described below.

3.3.1 ORIGINAL NORTHEAST PUMP STATION

The Original Northeast Pump Station is the original site plan analyzed in the 2017 Bay Bridge EIR. This site plan involves relocating the existing facility to the northeast corner of the parcel; installing force main improvements across the Newport Bay Channel north of Bay Bridge; and installing force main improvements southerly beneath East Coast Highway to connect to the existing force main valve vault; refer to Exhibit 3-4, *Proposed Conceptual Site Plans*. Overall, the total area of disturbance proposed for the Original Northeast Pump Station is approximately 50,000 square feet (1.15 acres).

PUMP STATION

The proposed project would involve constructing new pump station facilities including a pump station, generator, and odor control facilities in the northeast corner of the existing Bayside Village RV storage facility; refer to Exhibit 3-5, *Original Northeast Pump Station Layout*. The new pump station facility would be approximately 10,000 square feet in site area, as opposed to approximately 4,800 square feet under existing conditions (an increase of 5,200 square feet). OCSD would be required to negotiate and acquire the property for use and access from the property owner (Bayside Village Marina, LLC).

In addition, the new pump station would require the replacement of portions of the existing OCSD gravity sewer system, which would be constructed to convey wastewater to the new pump station wet well. These gravity sewer improvements include installing 320 linear feet (LF) of 12-inch vitrified clay pipe (VCP) within East Coast Highway immediately west of Bayside Drive, 320 LF of 36-inch VCP along Bayside Drive immediately north of East Coast Highway, and 100 LF of 42-inch VCP from Bayside Drive to the new pump station.

Primary access to the proposed pump station would be provided via a shared driveway from Bayside Drive through Bayside Village Marina, LLC property. OCSD currently operates the pump station with two large and two smaller duty variable frequency drive (VFD) pumps. Currently, two large VFD pumps (sized at 250 horsepower [HP] each) convey full peak wet weather flows and the two smaller duty VFD pumps are 50 HP each and convey low flows. OCSD recently added a large standby pump to the existing pump station for additional contingency during peak wet weather flow should one of the large duty pumps become disabled. Therefore, the new pump station would be sized to house all pumps and provide the desired contingency and redundancy to maintain uninterrupted service. All the facilities would be placed within a new pump station building, electrical building, generator building, and an odor control facility. The proposed pump station building would include features, architecture, and screening consistent with the *Back Bay Landing Planned Community Development Plan* (PCDP) and associated design guidelines to ensure consistency with surrounding future development.

Source: Google Earth, 2019.

Original Northeast Pump Station and Force Main Alignment
Modified Northeast Pump Station and Force Main Alignment
South Pump Station and Force Main Alignment

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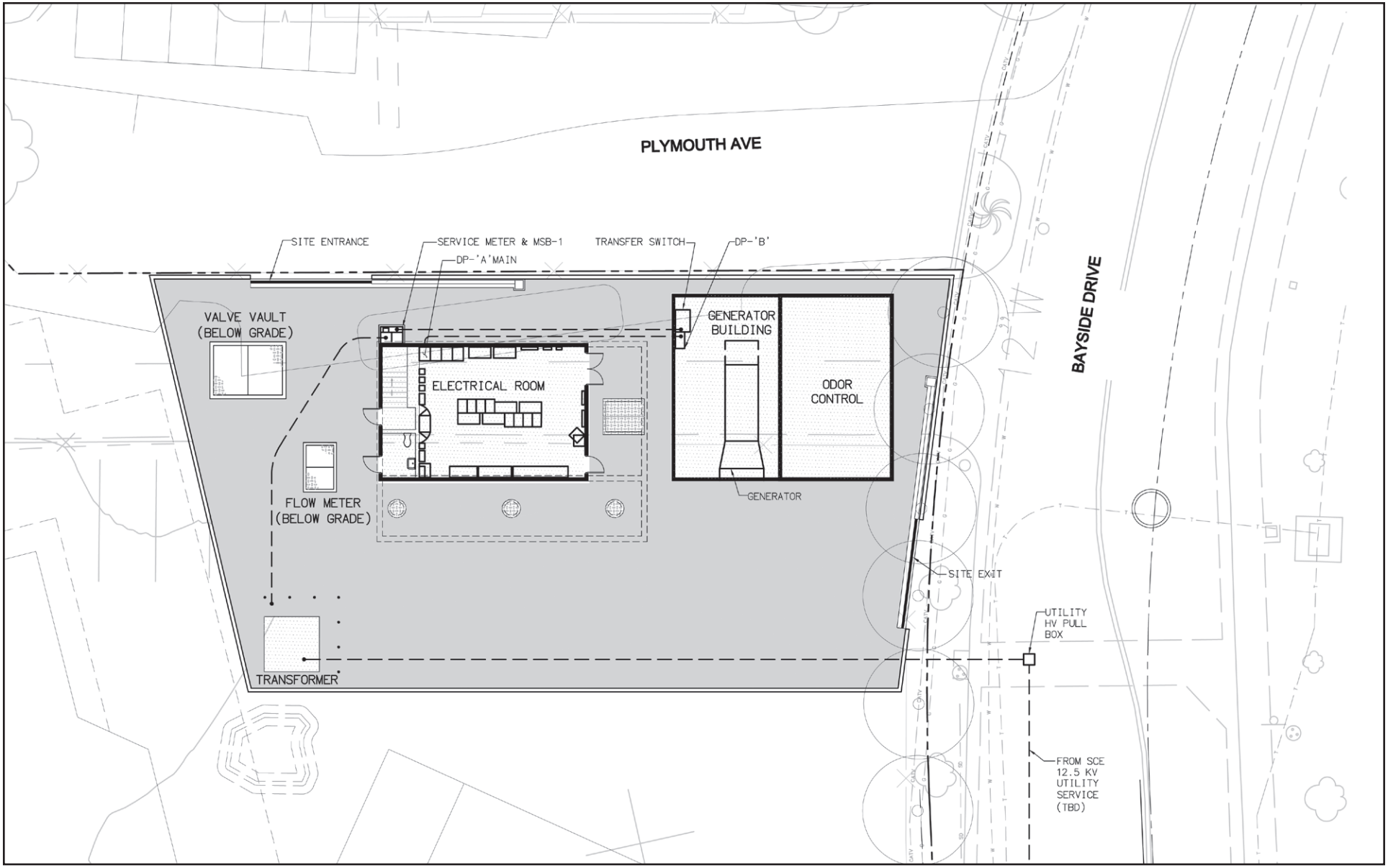
RECIRCULATED ENVIRONMENTAL IMPACT REPORT
BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Proposed Conceptual Site Plans

Exhibit 3-4



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BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Original Northeast Pump Station Layout

Exhibit 3-5

Pump Station Mechanical Room and Wet Well

The proposed pump station building would be constructed with a below-grade dry-pit, which would house the pumps, motors, and other mechanical equipment, and an above grade building that would house the electrical instrumentation, control equipment, and restroom. An underground wet well would be constructed adjacent to the mechanical room in an orientation similar to the existing pump station. A total of five VFD pumps would be installed to meet existing peak flow of 18.5 million gallons per day (MGD) and provide required contingency/redundancy.

Pump Station Electrical Room

The electrical room associated with the proposed pump station would be located above the mechanical room referenced above. Ancillary equipment within the electrical room would include electrical breakers, lighting control panel, closed-circuit television equipment, work areas, and storage space.

Pump Station Generator Facility

A 620-square foot backup generator facility would be built adjacent to the proposed pump station building. A 750-kilowatt Caterpillar diesel backup generator would be provided to handle the power requirement of the new pump station running at full capacity. The backup generator would be paired with a 66-gallon fuel tank, which would allow the pump station to run on backup power for approximately 11 hours of operational redundancy.

Pump Station Odor Control

A new odor control facility would be built adjacent to the new pump station. It would hold a multi-stage vapor-phase odor control scrubber system, which would remove odorous compounds from the incoming waste stream. Two 10-foot diameter tanks would accommodate liquid phase odor control.

FORCE MAIN IMPROVEMENTS

Development of the Original Northeast Pump Station would involve installing 3,985 LF of dual 32-inch force mains to connect the proposed new pump station to the existing OCSD force main system west of the Newport Bay Channel by crossing north of Bay Bridge. It is acknowledged that the existing force mains are 24-inch force mains and the project proposes up to 32-inch force mains. Although the pipe size would be larger, the project would not result in increased capacity. This upsizing of pipe is necessary to accommodate less head loss, resulting in increased efficiency of the facility, which also reduces operating costs. The proposed project is not designed to increase capacity of the facility and is not expected to result in increases in peak flows. The force mains would travel west underneath the Newport Bay Channel and enter a disturbed area of Castaways Park, then tunnel beneath West Coast Highway to connect to the existing force main system.

ACCESS, EASEMENTS, AND PROPERTY ACQUISITION

Development of the Original Northeast Pump Station would require easements, permits, and property acquisitions including, but not limited to:

- Fee acquisition from Bayside Village Marina, LLC for the new pump station site;

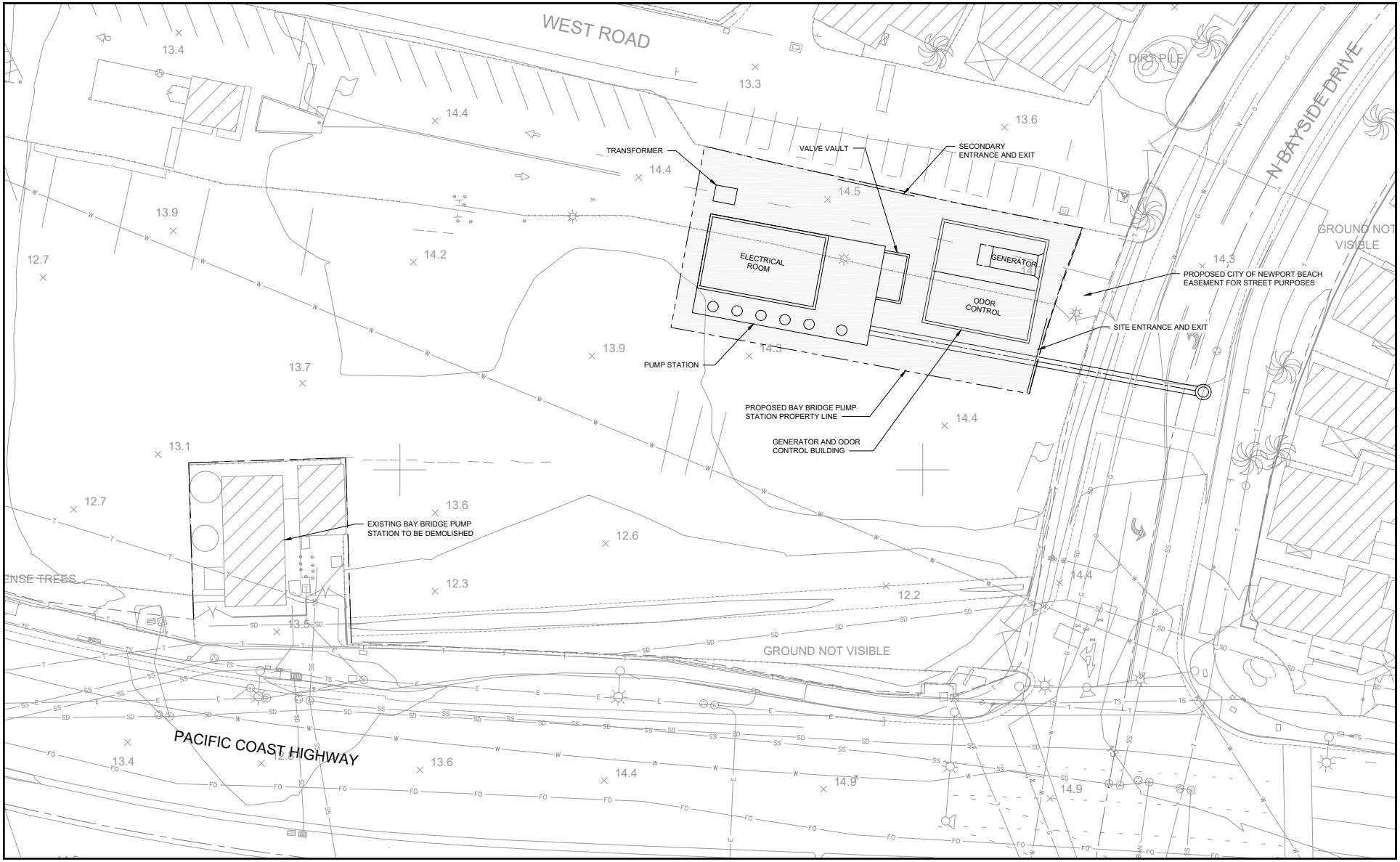
- Temporary easement from Bayside Village Marina, LLC for the eastern work area for construction of the new pump station, demolition of the existing pump station, and construction of the Newport Bay Channel force main crossing;
- Temporary easement from the City of Newport Beach for the western work area for construction of force main improvements within the City-owned disturbed area within the southern portion of Castaways Park.
- Permanent easement from Bayside Village Marina, LLC of approximately 4,100 SF for permanent driveway access to the new pump station site for OCSD staff;
- Permanent easement from Bayside Village Marina, LLC to maintain access to proposed force mains;
- Permanent easement from the City of Newport Beach to maintain access to proposed pipelines occurring within the City-owned disturbed area within the southern portion of Castaways Park;
- Encroachment permit from Caltrans for construction activities occurring on West Coast Highway and East Coast Highway; and
- Encroachment permit from the City of Newport Beach for construction activities occurring on Bayside Drive and Dover Drive.

3.3.2 MODIFIED NORTHEAST PUMP STATION

Similar to the Original Northeast Pump Station, development of the Modified Northeast Pump Station would involve relocating the existing facility to the northeast corner of the 31.4-acre Bayside Village Marina, LLC parcel and installing force main improvements across the Newport Bay Channel. However, the force main improvements would be installed south of Bay Bridge and would not require crossing beneath West Coast Highway; refer to Exhibit 3-4. Overall, the total area of disturbance proposed for the Modified Northeast Pump Station is approximately 55,000 to 85,000 square feet (1.26 to 1.95 acres), depending on the construction method. Proposed dredging would result in a total area of disturbance of up to 1.95 acres, whereas microtunneling across Bay Bridge would only result in a total area of disturbance of up to 1.26 acres.

PUMP STATION

Pump station improvements associated with the Modified Northeast Pump Station would be the same as those proposed under the Original Northeast Pump Station, however, the pump station layout would be slightly changed; refer to Exhibit 3-6, *Northeast Pump Station Layout*. Gravity sewer improvements associated with the Modified Northeast Pump Station would involve installing 300 LF of 36-inch VCP in Bayside Drive across East Coast Highway and 350 LF of 8-inch VCP within the south side of East Coast Highway immediately west of Bayside Drive. Primary access to the proposed pump station would similarly be provided via a shared driveway from Bayside Drive through the Bayside Village Marina, LLC property.



Source: AECOM TECHNICAL SERVICES, JANUARY 9, 2019
Note: This plan is considered conceptual and subject to minor refinement during the final design phase.

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RECIRCULATED ENVIRONMENTAL IMPACT REPORT
BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Modified Northeast Pump Station Layout

Exhibit 3-6

FORCE MAIN IMPROVEMENTS

Development of the Modified Northeast Pump Station would involve installing 2,000 LF of dual force mains (up to 32 inches in diameter) to connect the proposed pump station to the existing OCSD force main system west of the Newport Bay Channel by crossing south of Bay Bridge. As the force main would be installed south of Bay Bridge, the Modified Northeast Pump Station would not impact Castaways Park nor would it require microtunneling beneath West Coast Highway. Rather, the project would microtunnel under East Coast Highway, to the southside of the bridge, where the project would either dredge or microtunnel under Newport Bay Channel. Areas where the pipe is microtunneled may include a casing pipe as large as 72-inch diameter. The disturbed area of Castaways Park may still be temporarily utilized for construction staging; refer to Section 3.4, *Construction*.

ACCESS, EASEMENTS, AND PROPERTY ACQUISITION

Development of the Modified Northeast Pump Station would require easements, permits, and property acquisitions including, but not limited to:

- Fee acquisition from Bayside Village Marina, LLC for the new pump station site;
- Temporary easement from Bayside Village Marina, LLC for the eastern work area for construction of the new pump station, demolition of the existing pump station, and construction of the Newport Bay Channel force main crossing (south of Bay Bridge);
- Temporary easement from the City of Newport Beach for the western work area for construction staging;
- Temporary easement from the Bay Shores Community Association property for construction access to proposed pipelines on the west side of the Newport Bay Channel;
- Permanent easement from Bayside Village Marina, LLC of approximately 4,100 SF for permanent driveway access to the new pump station site for OCSD staff;
- Permanent easement from Bayside Village Marina, LLC to maintain access to proposed force mains;
- Encroachment permit from Caltrans for construction activities occurring on West Coast Highway and East Coast Highway;
- Encroachment permit from the City of Newport Beach for construction activities occurring on Bayside Drive; and
- Permanent easement from the Bay Shores Community Associations property to maintain access to proposed pipelines on the west side of the Newport Bay Channel.

3.3.3 SOUTH PUMP STATION

Development of the South Pump Station would involve shifting and expanding the existing pump station facility site approximately 200 feet to the west, constructing a new pump station building, and installing force main improvements across the Newport Bay Channel south of Bay Bridge; refer to Exhibit 3-4. Overall, the total area of disturbance proposed for the South Pump Station is approximately 50,000 to 80,000 square feet (1.15 to 1.84 acres), depending on the construction

method. Proposed dredging would result in a total area of disturbance of up to 1.84 acres, whereas microtunneling across Bay Bridge would only result in a total area of disturbance of up to 1.15 acres.

PUMP STATION

Pump station improvements associated with the South Pump Station would be the same as those proposed under the Original Northeast Pump Station and Modified Northeast Pump Station. However, no replacement of existing gravity sewer within East Coast Highway immediately west of Bayside Drive is necessary for the South Pump Station, rather approximately 50 LF of 36-inch or 46-inch sewer would be installed on East Coast Highway. Primary site access would be provided via the existing facility driveway along East Coast Highway and an egress-only driveway would be provided approximately 120 feet to the west of the entry way; refer to Exhibit 3-7, *South Pump Station Layout*.

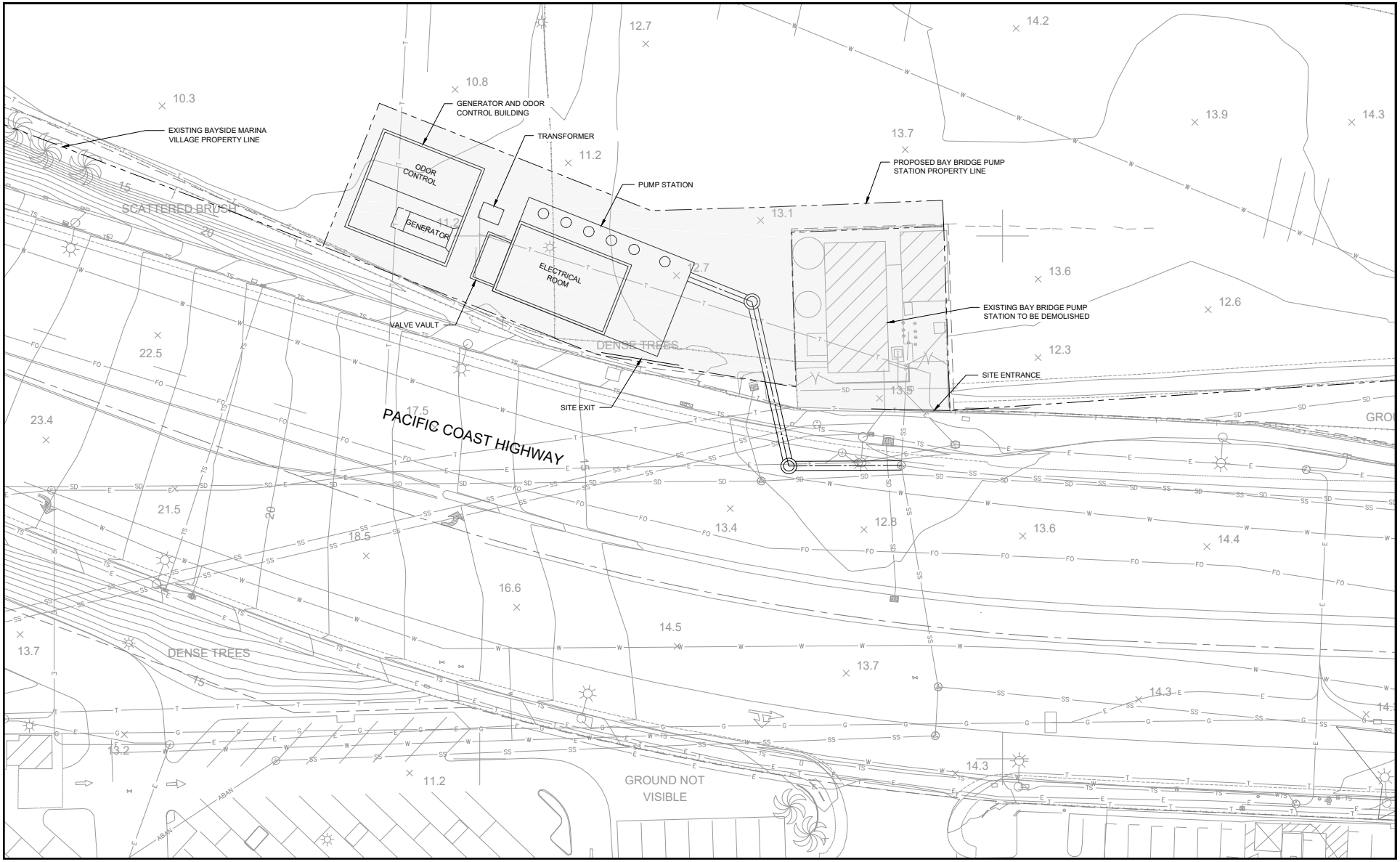
FORCE MAIN IMPROVEMENTS

The South Pump Station would connect to the existing OCSD force main system to the west by installing 1,500 LF of dual force mains (up to 32 inches in diameter) across the Newport Bay Channel south of Bay Bridge. As the force main would be installed south of Bay Bridge, development of the South Pump Station would not impact Castaways Park nor would it require microtunneling beneath West Coast Highway. Rather, the project would microtunnel under East Coast Highway, to the southside of the bridge, where the project would either dredge or microtunnel under Newport Bay Channel. Areas where the pipe is microtunneled may include a casing pipe as large as 72-inch diameter. A portion of Castaways Park may still be temporarily utilized for construction staging; refer to Section 3.4.

ACCESS, EASEMENTS, AND PROPERTY ACQUISITION

Development of the South Pump Station would require approval of easements, permits, and property acquisitions including, but not limited to:

- Fee acquisition from Bayside Village Marina, LLC for the new pump station site;
- Temporary easement from Bayside Village Marina, LLC for the eastern work area for construction of the new pump station, demolition of the existing pump station, and construction of the Newport Bay Channel force main crossing (south of Bay Bridge);
- Temporary easement from the City of Newport Beach for the western work area for construction staging;
- Temporary easement from the Bay Shores Community Association property for construction access to proposed pipelines on the west side of the Newport Bay Channel;
- Permanent easement from Bayside Village Marina, LLC to maintain access to proposed force mains;
- Encroachment permit from Caltrans for construction activities occurring on West Coast Highway and East Coast Highway; and
- Permanent easement from the Bay Shores Community Associations property to maintain access to proposed pipelines on the west side of the Newport Bay Channel.



Source: AECOM TECHNICAL SERVICES, JANUARY 9, 2019
Note: This plan is considered conceptual and subject to minor refinement during the final design phase.

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BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

South Pump Station Layout

Exhibit 3-7

3.4 CONSTRUCTION

3.4.1 ORIGINAL NORTHEAST PUMP STATION

Construction of the Original Northeast Pump Station and force main improvements is expected to take approximately 44 months for completion and would occur during weekdays (between 7:00 a.m. and 6:30 p.m.) and Saturdays (between 8:00 a.m. and 6:00 p.m.), unless otherwise directed by the City of Newport Beach (pursuant to City Municipal Code Section 10.28.040(D)(2). However, it is acknowledged that HDD drilling activities may require 24 hours per day operations (for approximately two weeks). Primary elements associated with construction of the Original Northeast Pump Station are described in detail below and illustrated on Exhibit 3-8, *Original Northeast Pump Station Work Areas*, and Exhibit 3-9, *Original Northeast Pump Station Construction*.

PUMP STATION

Approximately 1,500 cubic yards of cut and 300 cubic yards of fill would be required to grade and level the site. As noted above, the existing pump station facility would remain in service until the new facilities have been constructed and commissioned. Once the new pump station is placed in service, the existing pump station would be taken out of service and demolished. Construction access would be provided via a driveway to the property along the west side of Bayside Drive. Any temporary construction access through private property (e.g., Bayside Village Marina, LLC) would be negotiated between OCSD and the property owner.

In addition, modifications to the existing gravity sewer system would be required to route gravity sewage flows to the new pump station's wet well. As stated above, these gravity sewer improvements include installing 320 LF of 12-inch VCP within East Coast Highway immediately west of Bayside Drive, 320 LF of 36-inch VCP along Bayside Drive immediately north of East Coast Highway, and 100 LF of 42-inch VCP from Bayside Drive to the new pump station. These pipes would be installed via open trench excavation along East Coast Highway and Bayside Drive and is anticipated to take two to four weeks to complete.

FORCE MAIN IMPROVEMENTS

The proposed force main improvements are anticipated to take approximately 9 to 12 months. The east and west construction work areas and proposed force main alignment are depicted on Exhibit 3-9.

Newport Bay Channel Crossing

In order to convey wastewater from the new pump station, the project proposes to install 32-inch HDPE dual force mains underneath the existing Newport Bay Channel via horizontal directional drilling (HDD). HDD is a trenchless method of installing underground utilities (e.g., pipelines, conduit, or cables) with minimal impact. The drilling technique involves a launch and receiving pit at each end of the proposed alignment to guide a drill string along a prescribed bore path to avoid obstacles, such as the existing Newport Bay Channel. Due to the nature of HDD installation, these operations would require approximately five months for site preparation and installation (only two weeks of this time frame would involve actual drilling activities). Site preparation would include pit

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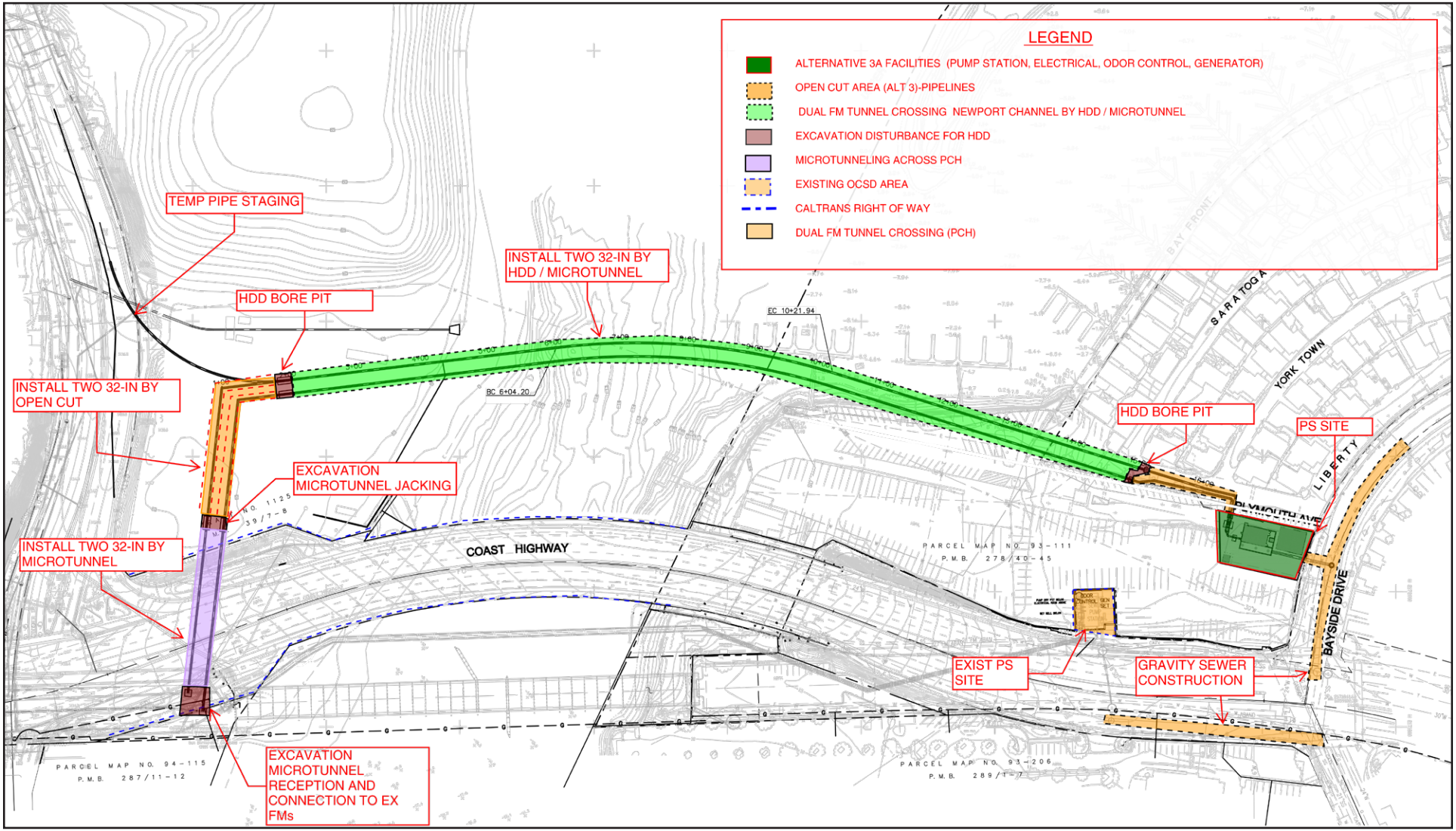
Original Northeast Pump Station Work Areas

Exhibit 3-8



Source: Michael Baker International, March 28, 2017.
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Original Northeast Pump Station Construction

Exhibit 3-9

excavation, stringer pipe, and traffic control for pipe stringing. Drilling activities may require 24 hours per day operations (for approximately two weeks).

At the new pump station site, approximately 150 LF of dual 32-inch sewer force main would be constructed in a trench between the HDD bore pit and the new pump station. The dual force mains would exit the pump station's west side, through a flow meter and valve vault, and continue west to cross under the Newport Bay Channel (north of Bay Bridge). The lowest point of crossing would be at approximate -60 to -70 feet in elevation. The tunnels would be approximately 1,360 feet long and would be drilled from either side of the Newport Bay Channel. From the side the pipe is being installed on, a continuous pipe stringer would be utilized. The stringer is the pipe that would be pulled into the tunnel and would extend along the eastern portion of Dover Drive. The location where the force mains enter Castaways Park is preferred to be on the south end. In the event it is determined during final design that the force mains would land on the north end, OCSD would consult with the City of Newport Beach to encumber the property as little as possible. Microtunneling[1] may be utilized as an alternate option for construction of the force mains across the Newport Bay Channel, which would result in a similar range of impacts in regard to construction activity, work areas, and construction duration.

If pipe staging activities on Dover Drive are not possible, another potential option for pipe staging activities can be provided along Bayside Drive as shown on Exhibit 3-10, *Temporary Pipe Stringing Alignment Option*. The optional construction pipe staging alignment would be approximately 1,457 feet in length and would extend approximately 250 feet from the HDD/microtunneling pit to Bayside Drive, continue approximately 990 feet east along Bayside Drive, and would terminate approximately 220 feet northeast of the guard shack associated with the Newport Dunes Resort Marina. The pipe staging areas would encompass proposed pipe stringing activities, which would involve placing piping above ground within existing roadway right-of-way and below ground, using a steel casing sleeve, within the existing driveways in order to maintain traffic flow. If this optional alignment is selected, the pipe stringing activities would occur for approximately four to six weeks in conjunction with the construction of the proposed force mains. This potential pipe stringing option would occur entirely within disturbed areas (existing roadway) and would not involve substantial ground disturbance, aside from driveway locations to maintain access to adjacent properties. During this time, existing street parking and sidewalk access along one side of Bayside Drive would be temporarily closed.

West Coast Highway Crossing

After crossing the Newport Bay Channel, the force main alignment would head south from a disturbed area in Castaways Park to the existing OCSD force main system. Within the disturbed area in Castaways Park, the force mains would be trenched via open cut for approximately 260 LF in a westerly and southerly direction towards West Coast Highway.

To avoid impacts to traffic along West Coast Highway, the force mains would be microtunneled beneath the roadway surface to extend to the existing OCSD valve vault. The microtunnel would begin within the southerly portion of the disturbed area south of Castaway Park and would extend approximately 260 LF within two separate tunnels (each carried in a 48-inch casing) and terminate at

[1] Microtunneling is a digging process that uses a remote-controlled microtunnel boring machine combined with a pipe jack-and-bore method to install pipes underground in a single pass. Similar to HDD, microtunneling avoids the need to have long stretches of open trench for pipe-laying construction.

Source: Google Earth, 2019.
- Optional Alignment

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Temporary Pipe Stringing Alignment Option

Exhibit 3-10

the existing valve vault. If it is determined during final design that the new force mains cannot be connected to the existing valve vault, an alignment variation would traverse Dover Drive and connect to the existing force mains within the intersection of Dover Drive and West Coast Highway.

The West Coast Highway force main crossing is expected to require approximately 20,000 square feet of jacking shaft area within the disturbed area of Castaways Park, and approximately 10,000 square feet of reception shaft work area on the south side of West Coast Highway. This jacking shaft area north of West Coast Highway would account for excavations necessary to layout the new force mains to fit and connect up to the existing force mains south of the roadway. The existing north force main is made of HDPE and would be fused to the new force main once it crosses West Coast Highway.

East and west temporary work areas are proposed on each side of the Newport Bay Channel; refer to Exhibit 3-8. The east work area would encompass approximately 80,000 square feet in the Bayside Village Marina, LLC property, and the west work area would encompass approximately 65,000 square feet in a disturbed area of Castaways Park. These work areas are necessary for drilling of the HDD bore path, removal of spoils (i.e., waste materials) during the reaming process, and staging for pipe and other construction equipment. The east and west temporary work areas are anticipated to be used for approximately 9 to 12 months.

TEMPORARY LANE CLOSURES

The proposed construction activities would require the following temporary lane closures:

- *East Coast Highway:* Temporary closure of one eastbound lane of traffic to allow for construction of the gravity sewer improvements and temporary closure of one westbound lane of traffic to demolish existing manhole and abandon the existing 42-inch sewer.
- *West Coast Highway:* Temporary closure of one eastbound lane of traffic and bus turnout area to allow for connection of the two force mains to the existing system.
- *Bayside Drive:* Temporary closure of one lane of traffic north of East Coast Highway and two lanes of traffic south of East Coast Highway for the proposed gravity sewer improvements and access pit.
- *Dover Drive:* Temporary closure of one northbound lane of traffic during off-peak hours (i.e., hours outside of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.) for staging and pipe stringing activities to support the directional drilling of force mains across Newport Bay Channel. The force mains would be staged on Dover Drive and fused in one continuous pipe string.
- *Bayside Drive*: If pipe staging activities on Dover Drive are not possible, temporary closure of one northbound lane of traffic on Bayside Drive may occur during off-peak hours (i.e., hours outside of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.) for staging and pipe stringing activities; refer to Exhibit 3-10.

OCSD would be required to develop a Traffic Control Plan for review and approval by Caltrans and the City of Newport Beach to ensure continuous access to surrounding routes and uses.

3.4.2 MODIFIED NORTHEAST PUMP STATION

Construction activities associated with the Modified Northeast Pump Station would encompass work areas on both sides of the Newport Bay Channel as illustrated on Exhibit 3-11, *Modified Northeast Pump Station Work Areas*. Construction activities would occur during weekdays (between 7:00 a.m. and 6:30 p.m.) and Saturdays (between 8:00 a.m. and 6:00 p.m.), unless otherwise directed by the City of Newport Beach (pursuant to City Municipal Code Section 10.28.040(D)(2). However, it is acknowledged that due to the nature of microtunneling installation, these operations are likely to include 24 hours per day operations and these construction activities would take approximately six months (three months to microtunnel across East Coast Highway and three months to microtunnel across Newport Bay Channel).

PUMP STATION

Pump station improvements for the Modified Northeast Pump Station would be similar to the Original Northeast Pump Station. Construction is anticipated to occur for 24 months and would require approximately 2,800 cubic yards of cut and 300 cubic yards of fill.

In addition, modifications to the existing gravity sewer system would be required to route gravity sewage flows to the new pump station's wet well. Gravity sewer improvements within the existing Bayside Drive right-of-way would be installed via microtunneling while those outside of the existing right-of-way would be installed via open cut excavation; refer to Exhibit 3-11.

FORCE MAIN IMPROVEMENTS

Construction of the force main improvements from the new pump station site across East Coast Highway would require both open cut excavation and microtunneling beneath the roadway as shown on Exhibit 3-11. The following two potential construction methods are proposed to install the force mains across the Newport Bay Channel south of Bay Bridge.

Dredging

As shown on Exhibit 3-12, *Modified Northeast Pump Station Construction (Dredging)*, dredging across the Newport Bay Channel is one potential construction method to install the force main improvements. This construction method would require trenching approximately 580 LF and 10 feet wide across the Newport Bay Channel with a depth of 18 feet. Shoring of the walls may be required to lay down the dual force mains. Dredging would require approximately 3,870 cubic yards of cut and 3,730 cubic yards of fill. These construction activities would take approximately four months.

Microtunneling

Exhibit 3-13, *Modified Northeast Pump Station Construction (Microtunneling)*, illustrates the microtunneling method to install the force main improvements under the Newport Bay Channel. The force mains would be installed in 72-inch reinforced concrete pipe casing at a depth of 20 feet across approximately 1,050 LF. Construction is anticipated to require 1,100 cubic yards of cut and take approximately three months. The two proposed shafts would be located on the eastern and western side of the Newport Bay Channel south of Bay Bridge along the southern side of East and West Coast Highways; refer to

Source: ARCADIS, JANUARY 2019
Note: This plan is considered conceptual and subject to minor refinement during the final design phase.

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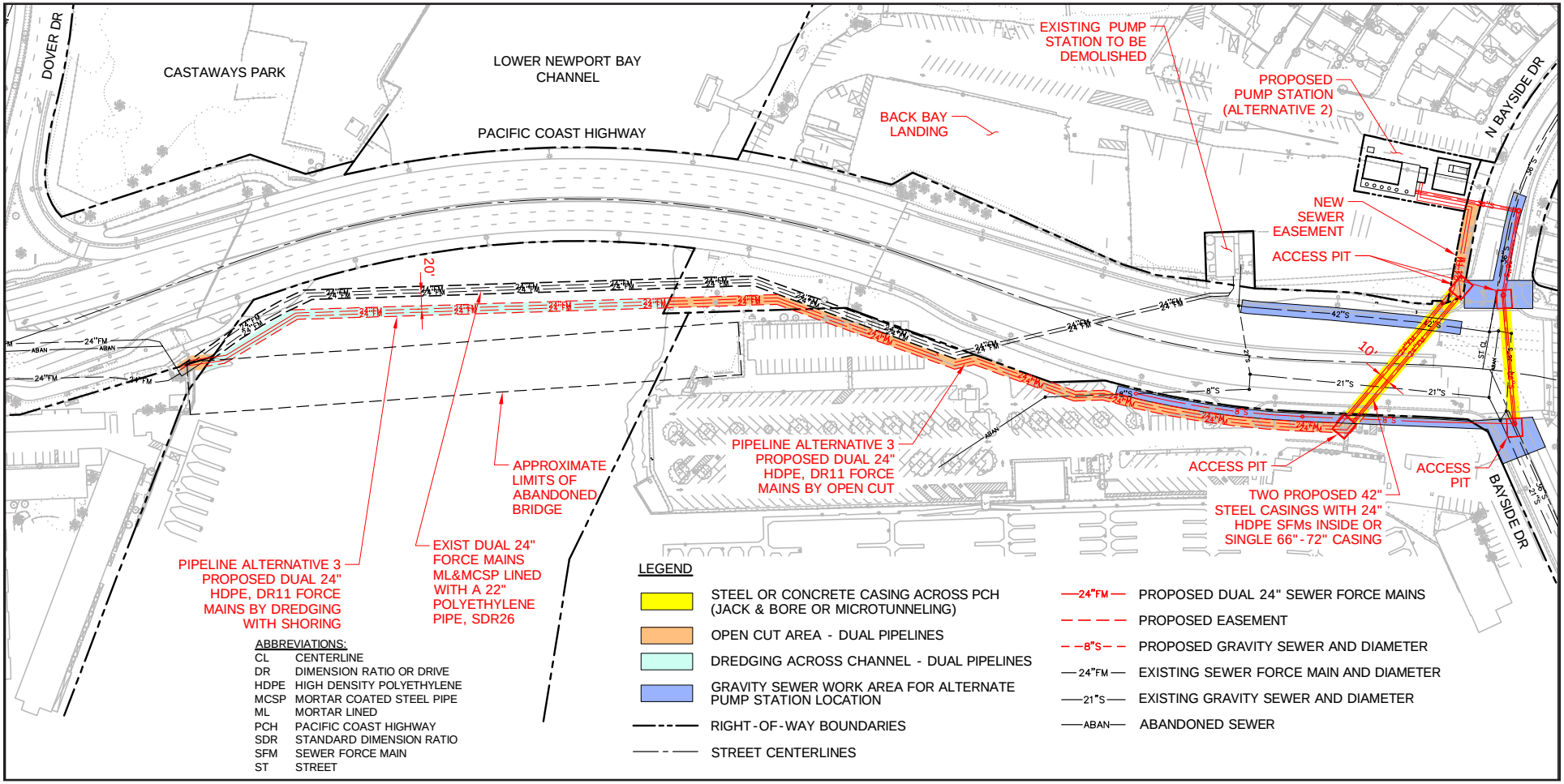
BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Modified Northeast Pump Station Work Areas

Exhibit 3-11



Source: AECOM TECHNICAL SERVICES, JANUARY 9, 2019
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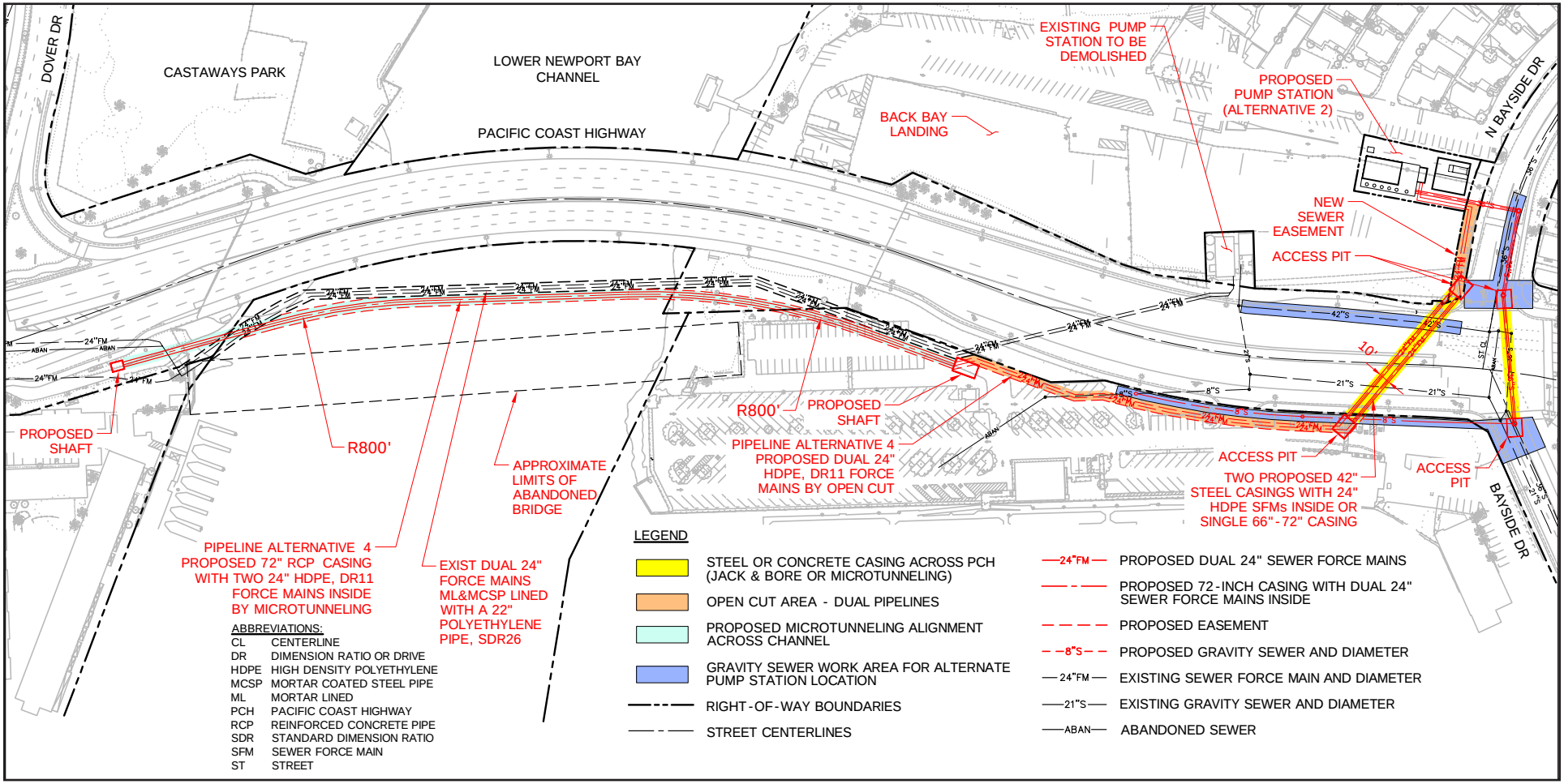
Modified Northeast Pump Station Construction (Dredging)

Exhibit 3-12



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Modified Northeast Pump Station Construction (Microtunneling)

Exhibit 3-13

Exhibit 3-13. The shafts would be approximately 20 feet wide, 15 feet long, and 20 to 30 feet deep, and would require 560 cubic yards of cut and 545 cubic yards of fill. Due to the nature of microtunneling installation, these operations are likely to include 24 hours per day operations and these construction activities would take approximately three months (note that this is in addition to the two months required to microtunnel across East Coast Highway).

TEMPORARY LANE CLOSURES

The proposed construction activities for the Modified Northeast Pump Station would require the following temporary lane closures, similar to the Original Northeast Pump Station:

- *East Coast Highway:* Temporary closure of one eastbound lane of traffic to allow for construction of the gravity sewer improvements and temporary closure of one westbound lane of traffic to demolish existing manhole and abandon the existing 42-inch sewer.
- *West Coast Highway:* Temporary closure of one eastbound lane of traffic and bus turnout area to allow for connection of the two force mains to the existing system.
- *Bayside Drive:* Temporary closure of one lane of traffic north of East Coast Highway and two lanes of traffic south of East Coast Highway for the proposed gravity sewer improvements and access pit.

Unlike the Original Northeast Pump Station, the Modified Northeast Pump Station would not require temporary lane closures on Dover Drive. Similar to the Original Northeast Pump Station, OCSD would be required to develop a Traffic Control Plan for review and approval by Caltrans and the City of Newport Beach to ensure continuous access to surrounding routes and uses.

3.4.3 SOUTH PUMP STATION

Construction activities associated with the South Pump Station would encompass work areas on both sides of the Newport Bay Channel as illustrated on Exhibit 3-14, *South Pump Station Work Areas*. Construction activities would occur during weekdays (between 7:00 a.m. and 6:30 p.m.) and Saturdays (between 8:00 a.m. and 6:00 p.m.), unless otherwise directed by the City of Newport Beach (pursuant to City Municipal Code Section 10.28.040(D)(2). However, it is acknowledged that due to the nature of microtunneling installation, these operations are likely to include 24 hours per day operations and these construction activities would take approximately five months (two months to microtunnel across East Coast Highway and three months to microtunnel across Newport Bay Channel).

PUMP STATION

Pump station construction activities for the South Pump Station would be similar to that of the Original Northeast Pump Station and Modified Northeast Pump Station. The South Pump Station improvements would require approximately 2,800 cubic yards of cut and 500 cubic yards of fill. Refer above for proposed pump station construction details. Gravity sewer improvements would be installed via open cut excavation; refer to Exhibit 3-14.

Source: ARCADIS, JANUARY 2019
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South Pump Station Work Areas

Exhibit 3-14

FORCE MAIN IMPROVEMENTS

Force main improvements from the South Pump Station across East Coast Highway would require microtunneling beneath the roadway as shown on Exhibit 3-14. The force mains would then be installed across the Newport Bay Channel via one of two potential construction methods described below.

Dredging

As shown on Exhibit 3-15, *South Pump Station Construction (Dredging)*, dredging activities for the South Pump Station would be similar to dredging for the Modified Northeast Pump Station. Refer above for proposed dredging details.

Microtunneling

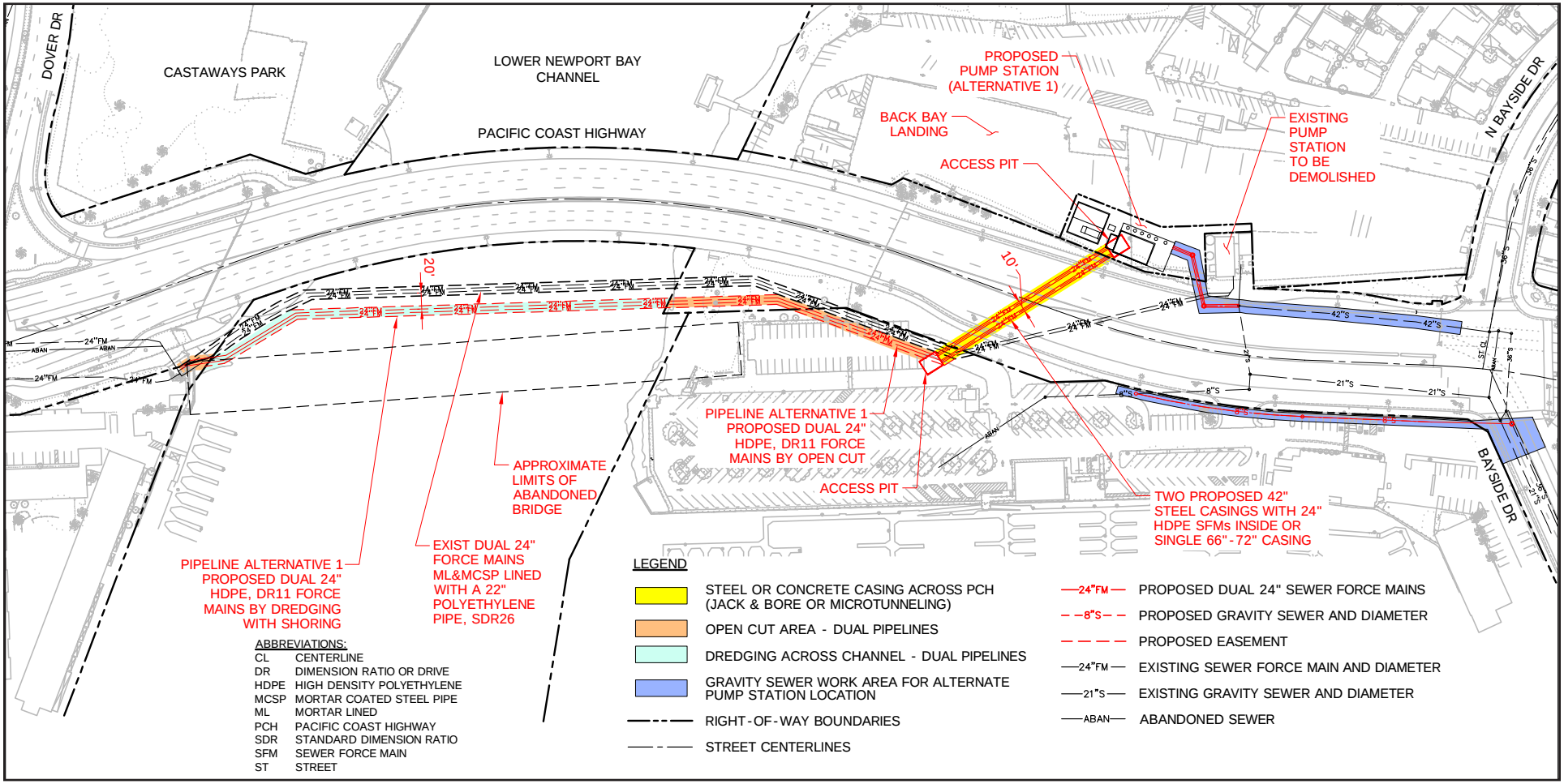
Microtunneling activities for the South Pump Station is shown on Exhibit 3-16, *South Pump Station Construction (Microtunneling)*. The force mains would be installed across the Newport Bay Channel in 72-inch reinforced concrete pipe casing for approximately 1,230 LF at a depth of 20 feet. Construction is anticipated to require 1,290 cubic yards of cut. The two proposed shafts would be located on the eastern and western side of the Newport Bay Channel south of Bay Bridge along the southern side of East and West Coast Highways; refer to Exhibit 3-16. The shafts would be approximately 10 to 20 feet wide, 15 feet long, and 20 to 30 feet deep, and would require 510 cubic yards of cut and 495 cubic yards of fill. Due to the nature of microtunneling installation, these operations are likely to include 24 hours per day operations and these construction activities would take approximately three months (note that this is in addition to the two months required to microtunnel across East Coast Highway).

TEMPORARY LANE CLOSURES

The proposed construction activities for the South Pump Station would require the following temporary lane closures:

- *East Coast Highway:* Temporary closure of one westbound lane of traffic to allow for construction of the gravity sewer improvements.
- *West Coast Highway:* Temporary closure of one eastbound lane of traffic and bus turnout area to allow for connection of the two force mains to the existing system.

Unlike the Original Northeast Pump Station and the Modified Northeast Pump Station, the South Pump Station would not require temporary lane closures on Dover Drive or Bayside Drive. Similar to the Original Northeast Pump Station, OCSD would be required to develop a Traffic Control Plan for review and approval by Caltrans and the City of Newport Beach to ensure continuous access to surrounding routes and uses.



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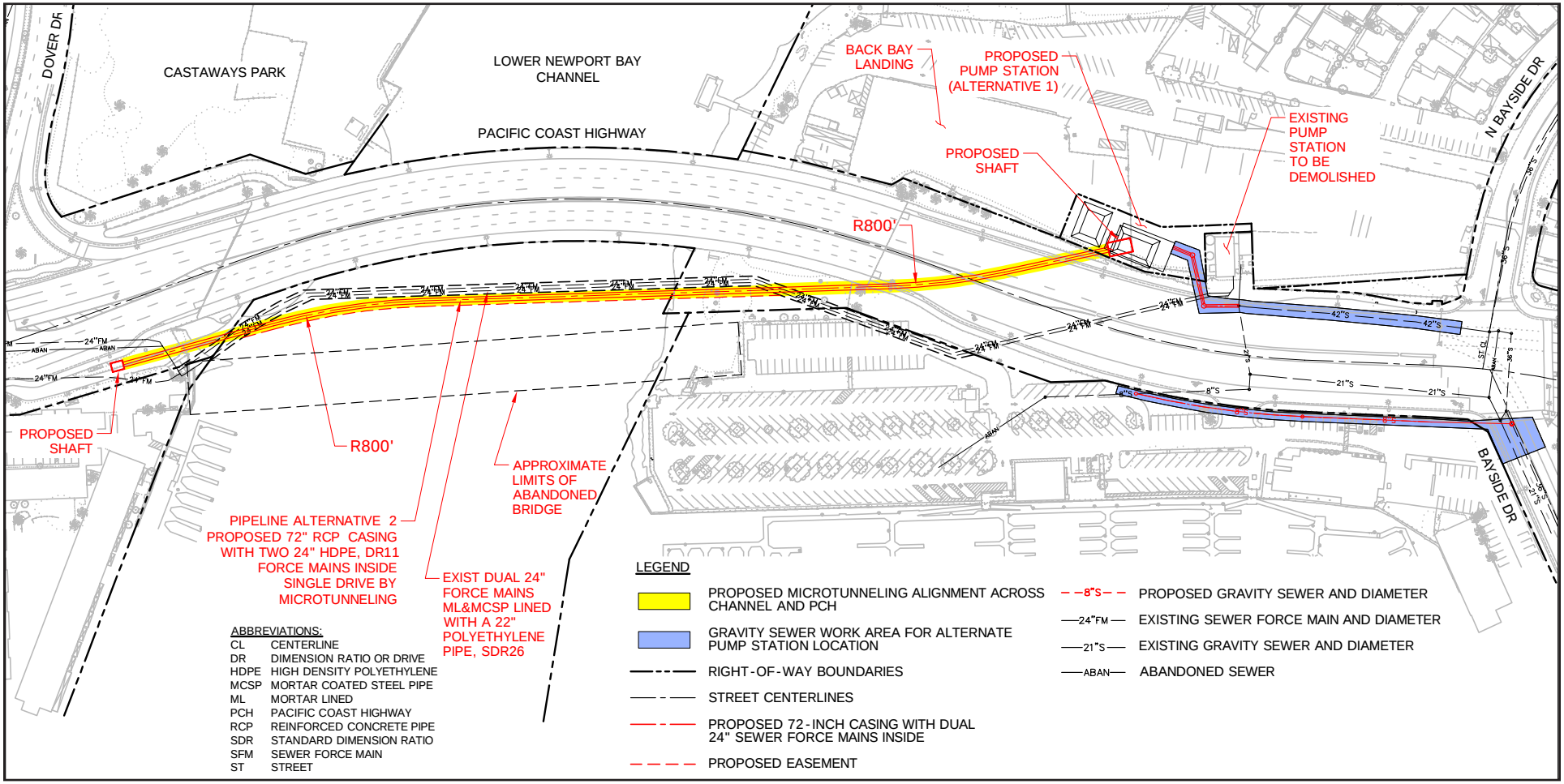
BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

South Pump Station Construction (Dredging)

Exhibit 3-15



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BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

South Pump Station Construction (Microtunneling)

Exhibit 3-16

3.5 GOALS AND OBJECTIVES

As noted above, the Bay Bridge Pump Station is critical to OCSD operations as it conveys approximately 50 to 60 percent of the total Newport Beach flow through these force mains. Because the Bay Bridge Pump Station and associated force mains are critical elements to OCSD's Newport Coast collection backbone, it is imperative the facility be improved to ensure continuous service to the community and avoid spills for the next design lifespan (an additional 50 years).

The goals and objectives associated with the proposed project consist of:

1. Increase reliability since the existing Bay Bridge Pump Station is over 50 years old, outdated, and no longer meets structural, electrical, or maintenance standards. In addition, since the existing force mains are located under the Newport Bay Channel, thorough inspection to predict the remaining life span is not possible. Thus, replacement of the force mains would reduce the risk of failure and prevent possible releases of sewage into the Newport Bay Channel;

2. Increase safety for OCSD Operations & Maintenance personnel where safe entry and exit can be made and maintenance crews and drivers can easily access the site. The existing pump station is accessed directly from East Coast Highway, where adjacent traffic creates safety hazards for OCSD vehicles. Maintenance trucks accessing the site require that they back into oncoming traffic; and

3. Improve odor control through a new 620 square foot odor control facility, which houses a vapor-phase odor control scrubber system that would remove odorous vapors from the incoming waste system as well as two 10-foot diameter tanks to accommodate liquid phase odor control.

3.6 PERMITS AND APPROVALS

The applicable agency approvals and related environmental review/consultation requirements associated with the project may include the following, among others. It is not anticipated that any other agencies would require use of the EIR in their decision making process.

- CEQA Clearance – OCSD;
- Limited Term Permit – City of Newport Beach;
- Encroachment Permits – City of Newport Beach and Caltrans;
- Permanent/Temporary Easements – City of Newport Beach, Bayside Village Marina, LLC, and Bay Shores Community Association;
- Traffic Control Plan Approval – City of Newport Beach and Caltrans;
- Coastal Development Permit – California Coastal Commission and City of Newport Beach (as required under the California Coastal Act, Public Resources Code Division 20);
- California State Lands Commission – Consultation regarding implementation of Newport Bay Channel force main crossing;

- California Department of Fish and Wildlife – Consultation regarding implementation of Newport Bay Channel force main crossing;
- National Marine Fisheries Service – Dredging/shoring construction activities;
- Section 404 Permit – Army Corps of Engineers (required for dredging/shoring construction activities);
- Section 401 Permit – Santa Ana Regional Water Quality Control Board (required for dredging/shoring construction activities); and
- General Construction Permit – Santa Ana Regional Water Quality Control Board (as required under National Pollutant Discharge Elimination System [NPDES] General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ [as amended by 2010-0014-DWQ and 2012-006-DWQ], NPDES Number CAS000002).

4.0 BASIS OF CUMULATIVE ANALYSIS

CEQA Guidelines Section 15355, as amended, provides the following definition of cumulative impacts:

> *"Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.*

Pursuant to CEQA Guidelines Section 15130(a), a project's cumulative impacts shall be discussed when the project's incremental effect is "cumulatively considerable," as defined in CEQA Guidelines Section 15065(a)(3). Section 5.0, *Environmental Analysis*, of this Recirculated Draft EIR assesses the cumulative impacts for each applicable environmental issue and does so to a degree that reflects each impact's severity and likelihood of occurrence.

As indicated above, a cumulative impact involves two or more individual effects. Per CEQA Guidelines Section 15130(b), the discussion of cumulative impacts shall be guided by the standards of practicality and reasonableness, and should include the following elements:

1. *Either:*

   A. *A list of past, present and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or*

   B. *A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projects may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.*

2. *When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type. Location may be important, for example, when water quality impacts are at issue since projects outside the watershed would probably not contribute to a cumulative effect. Project type may be important, for example, when the impact is specialized, such as a particular air pollutant or mode of traffic.*

3. *Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.*

4. *A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and*

5. *A reasonable analysis of the cumulative impacts of the relevant projects, including examination of reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.*

The related projects and other possible development in the area determined as having the potential to interact with the proposed project, such that the proposed project's incremental effect may be cumulatively considerable, are outlined in Table 4-1, *Cumulative Projects List*.

Table 4-1
Cumulative Projects List

No.[1]	Name	Location	Proposed Land Use	Status
City of Newport Beach [2]				
1	Newport Village[3]	2200-2244 West Coast Highway; 2001-2507 West Coast Highway	Construction of 240,650 square feet of nonresidential uses (i.e., retail, office, and food service), 175 multi-family dwelling units, and subterranean parking garages with 1,347 spaces. The project would also develop a new public boardwalk along the waterfront and a new marina with 77 slips and additional slips for Duffy boat rentals.	Application submitted on December 4, 2017. Under review for completeness.
2	Mariner Square	1244 Irvine Avenue	Demolition of an existing 114-unit residential apartment complex and redevelopment of the site with a new 92-unit residential condominium complex.	Application submitted November 21, 2017. Under review for completeness.
3	Ullman Sail Lofts[3]	410 and 412 29th Street	Development of a mixed-use structure with 1,171 square feet of retail floor area, one 2,347-square foot dwelling unit, and three residential dwelling units ranging from 2,484 square feet to 2,515 square feet.	Anticipated CEQA Exemption.
4	ExplorOcean[3]	600 East Bay; 209 Washington Street; 600 and 608 Balboa Avenue; 200 Palm	Construction of a 70,295-square foot, 4-story Ocean Literacy Facility. This project would include removal of a 63-metered space surface parking lot and construction of 388 spaces, a 141,000-square foot, five-level off-site parking structure, and a 6,500-square foot floating classroom.	Application submitted April 22, 2014. On hold per applicant's request.
5	Back Bay Landing	300 East Coast Highway	Redevelopment project involving a mixed-use waterfront project. This project would construct a dry stack boat storage facility for 140 boats, 61,534 square feet of visitor-serving retail and recreational marine facilities, and up to 49 attached residential units.	Approved. Site Development Review and Coastal Development Permit (CDP) anticipated to be filed in 2018.
6	Balboa Marina Expansion	201 East Coast Highway	Expansion of the Balboa Marina to include a 14,252-square foot restaurant, 24 boat slips, and a 664-square foot marina restroom.	Approved.
7	Newport Harbor Yacht Club[3]	720, 800, and 711-721 West Bay Avenue; 710-720 Balboa Boulevard	Construction of a 23,163-square foot yacht club.	Under Construction.
8	Newport Dunes Hotel	1131 Back Bay Drive	Development of a 275-room, 201,498-square foot hotel with amenities, including a coffee shop, gift/sundry shop, business center, function room, spa/fitness facilities, restaurant, pool, tennis courts, sand volleyball courts, and picnic area.	Application Incomplete.

Table 4-1 [continued]
Cumulative Projects List

No.[1]	Name	Location	Proposed Land Use	Status
9	Old Newport Boulevard/West Coast Highway Widening	Intersection of Old Newport Boulevard and West Coast Highway	Widening of westbound West Coast Highway at Old Newport Boulevard to accommodate a third through lane, a right-turn pocket, and a bike lane.	Negative Declaration draft complete.
10	Lower Sunset View Park Bridge, Parking Lot, and Park	Intersection of West Coast Highway and Superior Avenue	Construction of a pedestrian overcrossings, parking, and park uses for Lower Sunset View Park.	Pending CEQA determination.
11	Arches Storm Drain Diversion	Newport Boulevard north of Coast Highway	Diversion of dry weather flows from west and east storm drains (subwatersheds) to the sanitary sewer system.	Pending CEQA determination.
12	Big Canyon Rehab Project	Big Canyon, downstream of Jamboree Road and south of Big Canyon Creek	Diversion of dry weather flows from the creek into a bioreactor.	Final Mitigated Negative Declaration in Progress.
13	Bay Crossings Water Main Replacement	Newport Harbor	Replacement of deteriorating water transmission mains pursuant to the Water Master Plan and Bay Crossing Water Transmission Study.	Pending CEQA determination.
14	ENC Preschool	745 Dover Drive	Construction of an Environmental Nature Center Preschool.	Approved. CEQA Exemption.
15	Park Avenue Bridge Replacement	Balboa Island	Replacement of Park Avenue Bridge that connects Balboa Island and Little Balboa Island.	Under construction.
16	Ebb Tide	1560 Placentia Drive	Construction of 83 single-unit residences, private streets, common open space, and landscaping, and development of a Planned Community Development Plan.	Under construction.
17	Westcliff Medical[3]	2011, 2043, 2121, and 2131 Westcliff Drive	Construction of four buildings (two buildings, three-level parking structure, and an existing building) totaling 73,722 square feet with 382 spaces of off-street parking.	Under construction.
18	Lido Villas[3]	3303 and 3355 Via Lido	Construction of 23 attached three-story townhome condominiums.	Building permit expired. Application, Coastal Land Use Plan Amendment, and CDP application approved.
19	10 Big Canyon	10 Big Canyon	Rough grading for development of a single-family residence.	Approved.
20	Old Newport GPA Project	328, 332, and 340 Old Newport Boulevard	Construction of a 25,000-square foot medical office building.	Under construction.
21	Hoag Memorial Hospital Presbyterian Master Plan Update Project	1 Hoag Drive	Reallocation of up to 225,000 square feet of previously approved (but not constructed) square footage from the Lower Campus to the Upper Campus.	Approved.

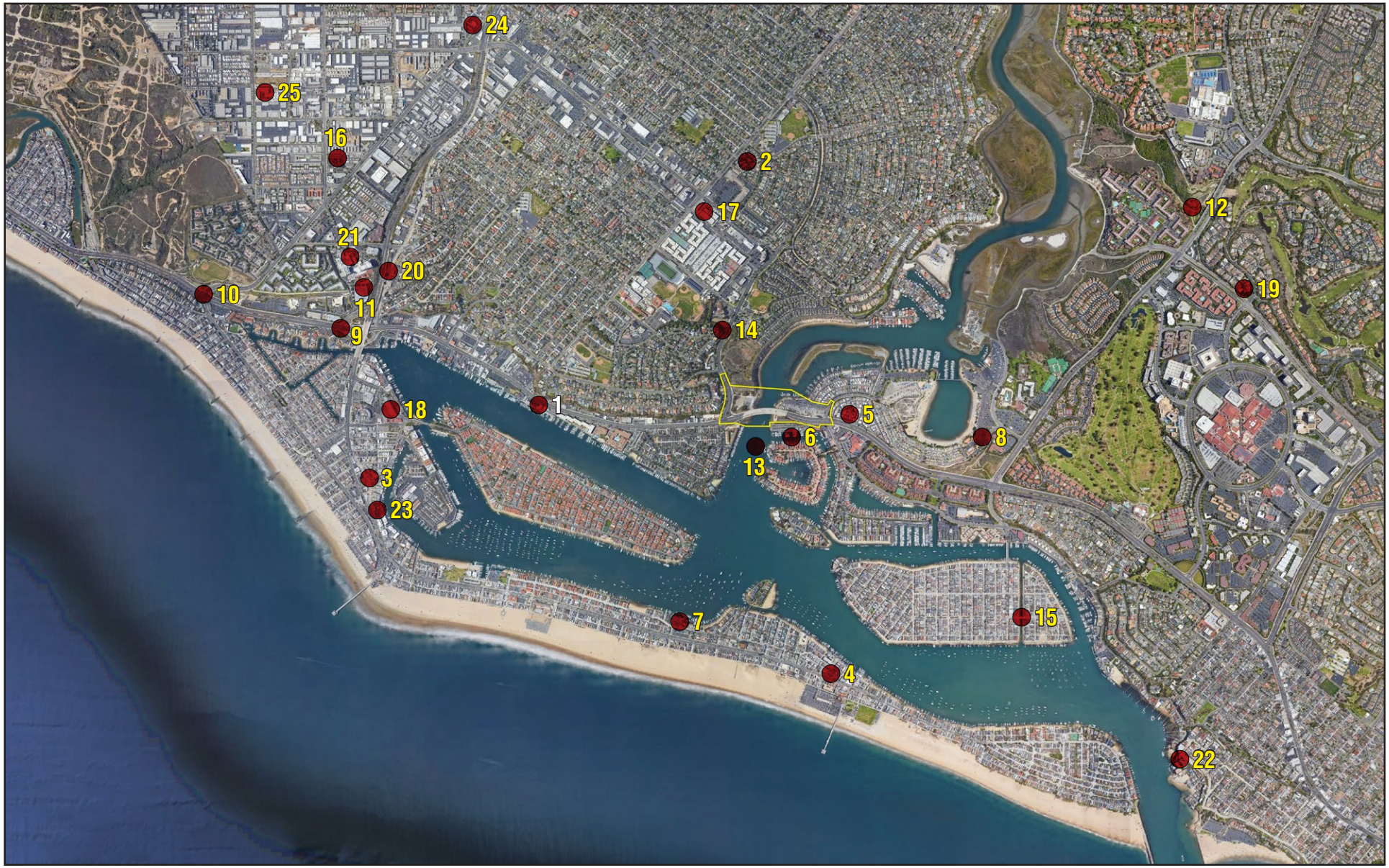
Table 4-1 [continued]
Cumulative Projects List

No.[1]	Name	Location	Proposed Land Use	Status
22	AERIE Project[3]	301-207 Carnation Avenue; 101 Bayside Place	Construction of eight residential condominium units and replacement, reconfiguration, and expansion of the existing gangway platform, pier walkway, and dock facilities.	Under construction.
23	Newport Marina – ETCO Development	2300 Newport Boulevard	Construction of a mixed-use development consisting of 27 residential units and approximately 36,000 square feet of retail and office uses.	Under construction.
City of Costa Mesa[3]				
24	Lions Park Project[4]	Lions Park; 570 West 18th Street; 1845 and 1855 Park Avenue	Improvements to Lions Park; new signage, library building, and café; and renovation and repurposing of the existing Donald Dungan Library building to the Neighborhood Community Center.	Under construction.
25	Westside Lofts Mixed-Use Development Project	1640 Monrovia Avenue	Construction of a mixed-use development with a 185-unit assisted living facility (Phase I) and 42,000 square feet of commercial office uses (Phase II).	Under construction.

Notes:
1. Refer to Exhibit 4-1, Cumulative Project Locations.
2. City of Newport Beach, Cumulative Projects List, https://www.newportbeachca.gov/Pln/CEQA_Cumulative/cumulative_projects_current.pdf, accessed November 6, 2018.
3. Written Correspondence: Minoo Ashabi, Principal Planner, City of Costa Mesa, November 13, 2018.

For projects with multiple addresses, the address with the nearest proximity to the project site was depicted in Exhibit 4-1.

This list of cumulative projects was derived based on information provided by the cities of Newport Beach and Costa Mesa. The geographic areas, and hence the cumulative projects, considered for the cumulative impact analyses vary depending upon the type of environmental issue being analyzed. The geographic areas were determined based upon the project's scope and anticipated area in which the project could contribute to an incremental increase in cumulatively considerable impacts (as discussed throughout Section 5.0). The implementation of each project represented in Table 4-1 and depicted in Exhibit 4-1, *Cumulative Project Locations*, was determined to be reasonably foreseeable by the cities.



Source: Google Earth, 2019.

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RECIRCULATED ENVIRONMENTAL IMPACT REPORT
BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Cumulative Project Locations

Exhibit 4-1

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5.0 ENVIRONMENTAL ANALYSIS

The following subsections of this Recirculated Draft EIR contain a detailed environmental analysis of the existing conditions, project impacts (including direct, indirect, short-term, long-term, and cumulative impacts), recommended mitigation measures, and unavoidable significant impacts. This section analyzes those environmental issue areas where potentially significant impacts may occur, as stated in Appendix 11.1, *Initial Study/Notice of Preparation and Comment Letters*.

Since the *Bay Bridge Pump Station and Force Mains Replacement Project Draft Environmental Impact Report*, dated December 2017, was released, the California Natural Resources Agency has updated the CEQA Guidelines, which includes changes to Appendix G, *Environmental Checklist Form*. This Recirculated Draft EIR examines environmental factors outlined in the updated Appendix G of the CEQA Guidelines as follows:

5.1 Aesthetics;
5.2 Air Quality;
5.3 Biological Resources;
5.4 Cultural Resources;
5.5 Geology and Soils;
5.6 Greenhouse Gas Emissions;
5.7 Hazards and Hazardous Materials;
5.8 Hydrology and Water Quality;
5.9 Land Use and Relevant Planning;
5.10 Noise;
5.11 Transportation; and
5.12 Tribal Cultural Resources.

Additionally, Energy is addressed in Section 6.0, *Other CEQA Considerations*. Based on the Initial Study (refer to Appendix 11.1) and available technical information, no impacts involving the following environmental issue areas are anticipated:

- Agriculture and Forest Resources;
- Mineral Resources;
- Population and Housing;
- Public Services;
- Recreation;
- Utilities and Service Systems; and
- Wildfire.

As a result, these issue areas are addressed in Section 8.0, *Effects Found Not To Be Significant*.

Each potentially significant environmental issue area is addressed in a separate section of this Recirculated Draft EIR and is organized into seven subsections, as follows:

- "Existing Setting" describes the physical conditions that exist at the present time and that may influence or affect the issue under consideration.
- "Regulatory Setting" lists and discusses the laws, ordinances, regulations, and standards that apply to the project.

- "Impact Thresholds and Significance Criteria" provides the thresholds that are the basis of conclusions of significance, which are primarily the criteria in Appendix G of the CEQA Guidelines (California Code of Regulations, Sections 15000 – 15387).

  Primary sources used in identifying the significance criteria include the CEQA Guidelines; local, State, Federal, or other standards applicable to an impact category; and officially established significance thresholds. "An ironclad definition of significant effect is not always possible because the significance of any activity may vary with the setting" (CEQA Guidelines Section 15064[b]). Principally, " a substantial, or potentially substantial, adverse change in any of the physical conditions within an area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic and aesthetic significance" constitutes a significant impact (CEQA Guidelines Section 15382).

- "Impacts and Mitigation Measures" describes potential changes to the existing physical conditions that may occur if the proposed project is implemented. Evidence consisting on factual and scientific data is presented to show the cause and effect relationship between the proposed project and the potential changes in the environment. The exact magnitude, duration, extent, frequency, range or other parameters of a potential impact are ascertained, to the extent possible, to determine whether impacts may be significant. The analysis considers all of the potential direct effects, as well as reasonably foreseeable indirect effects.

  Given that the project involves three conceptual site plans, the impact analysis for each impact statement include the following subheadings and separate analysis for each site plan:

  - Original Northeast Pump Station;
  - Modified Northeast Pump Station; and
  - South Pump Station.

  Impacts are generally classified as potentially significant impacts, less than significant impacts, or no impact. The "Level of Significance After Mitigation" identifies the impacts that would remain after the application of mitigation measures, and whether the remaining impacts are considered significant. When these impacts, even with the inclusion of mitigation measures, cannot be mitigated to a level considered less than significant, they are identified as "unavoidable significant impacts."

  "Mitigation Measures" are measures that would be required of the project to avoid a significant adverse impact, to minimize a significant adverse impact, to rectify a significant adverse impact by restoration, to reduce or eliminate a significant adverse impact over time by preservation and maintenance operations, or to compensate for the impact by replacing or providing substitute resources or environment.

  Should mitigation measure(s) be applicable to only one or two of the three conceptual site plans (i.e., not applicable to all), the impact analysis includes appropriate headings detailing the applicable mitigation measure(s) and level of significance after mitigation under each subheading (e.g., Original Northeast Pump Station, Modified Northeast Pump Station, and South Pump Station).

- "Cumulative Impacts" describes potential environmental changes to the existing physical conditions that may occur because of the proposed project, together with all other reasonably foreseeable, planned, and approved future projects producing related or similar impacts.

  Similar to the "Impacts and Mitigation Measures" section, the impact analysis for each cumulative impact statement include the following subheadings and separate analysis for each site plan:

  - Original Northeast Pump Station;
  - Modified Northeast Pump Station; and
  - South Pump Station.

  Should mitigation measure(s) be applicable to only one or two of the three conceptual site plans (i.e., not applicable to all), the impact analysis includes appropriate headings detailing the applicable mitigation measure(s) and level of significance after mitigation under each subheading (e.g., Original Northeast Pump Station, Modified Northeast Pump Station, and South Pump Station).

- "Significant Unavoidable Impacts" describes impacts that would be significant and cannot be feasibly mitigated to less than significant, and thus would be unavoidable. Should significant and unavoidable impacts only apply to certain conceptual site plans, separate significance conclusion are provided for each conceptual site plan under each respective subheading (e.g., Original Northeast Pump Station, Modified Northeast Pump Station, and South Pump Station).

  To approve a project with significant unavoidable impacts, the lead agency must adopt a Statement of Overriding Considerations. In adopting such a statement, the lead agency is required to balance the benefits of a project against its unavoidable environmental impacts when determining whether to approve the project. If the benefits of a project are found to outweigh the unavoidable adverse environmental effects, the adverse effects may be considered "acceptable" (CEQA Guidelines Section 15093[a]).

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5.1 AESTHETICS/LIGHT AND GLARE

This section assesses the potential for aesthetics/light and glare impacts using accepted methods for evaluating visual quality, as well as identifying the type and degree of change the proposed project would likely have on the character of the landscape. The analysis in this section is primarily based on information provided by OCSD and a site visit conducted by Michael Baker on April 5, 2017.

5.1.1 EXISTING SETTING

The City is located in the coastal center of Orange County, with Los Angeles County to the north and San Diego County to the south. Public views in the City include views to Crystal Cove State Park to the east, ocean views to the southwest (including those of the open waters of the ocean and bay, sandy beaches, rocky shores, wetlands, canyons, and coastal bluffs). The Upper and Lower Newport Bay bisects the City and creates a dominant physical land feature that includes estuaries, beaches, the harbor, coastal bluffs, and meandering waterways unique to Newport Beach. From higher elevations within the City, views to the north include the San Joaquin Corridor and the Santa Ana Mountains.

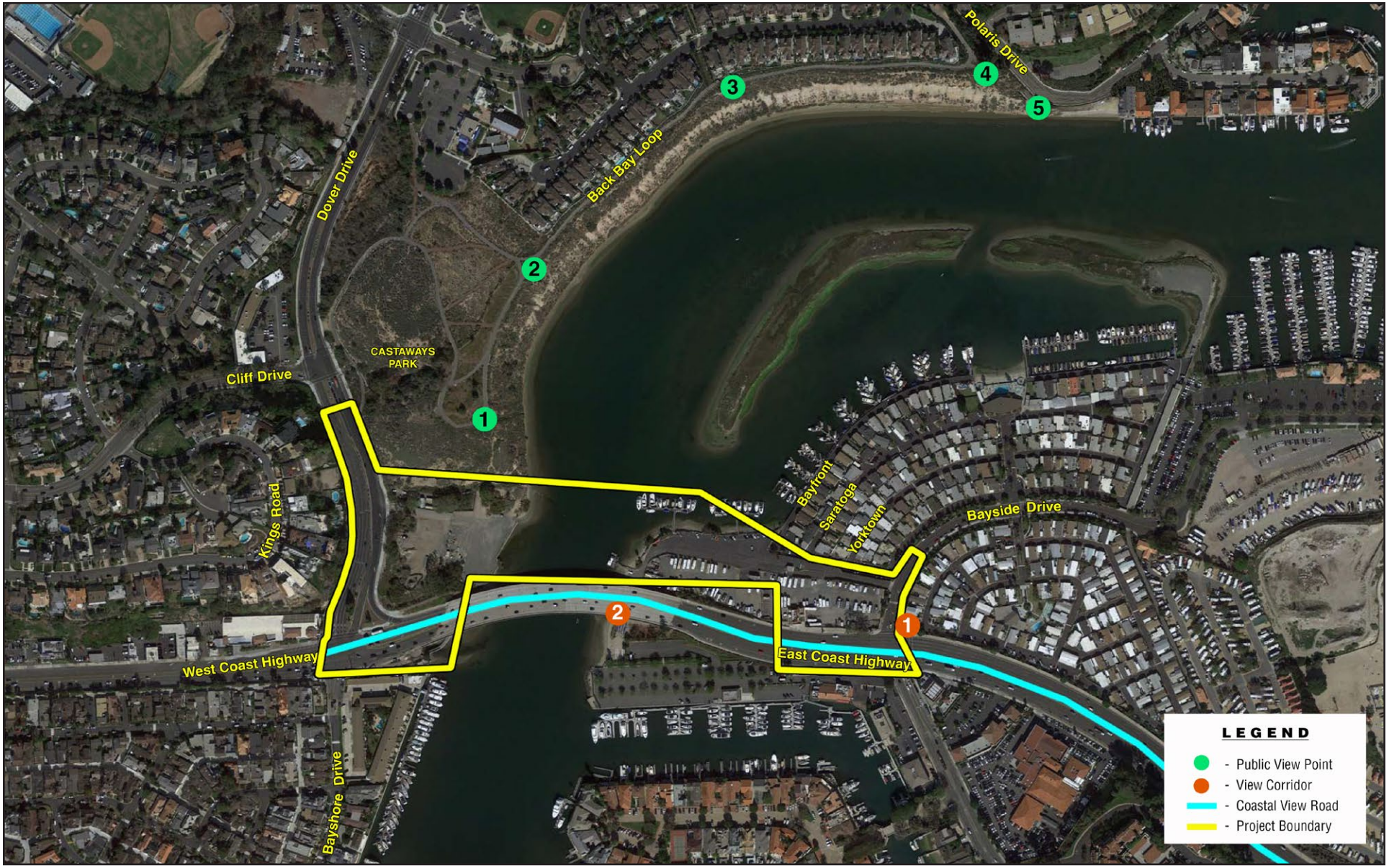
The City has historically been sensitive to the need to protect and provide access to available scenic resources and has developed a system of public parks, piers, trails, and viewing areas. The City's development standards, including bulk and height limits in the area around the bay, have helped preserve scenic views and regulate the massing of structures. The City's many small "view parks" are intentionally designed to take advantage of significant views. In addition, the City provides policies in the Municipal Code and Local Coastal Plan that protect public views, which are defined as views from public vantage points. As for the City's coastal and other bluff areas, while many have been preserved as parkland and other open space, most have been subdivided and developed over the years, including Newport Heights, Cliff Haven, Irvine Terrace, and Corona Del Mar.

The proposed project is within the Lower Newport Bay, specifically the Newport Bay Channel. Lower Newport Bay is comprised of developed channels, beaches, and hardscape areas with a wide range of recreational activities such as sport fishing, kayaking, diving, wind surfing, sailboat racing, excursion, and entertainment boat activities, as well as visitor serving commercial and recreational uses and waterfront residences.

SCENIC VIEWS AND VISTAS

Within the project vicinity, visual resources include the Pacific Ocean, Newport Bay, bluffs, and from higher elevations, the San Joaquin Mountains. Figure NR3, *Coastal Views*, in the General Plan, illustrates five public viewpoints located north of the project site and a coastal view road (Coast Highway[1]), which transects the project site in an east to west direction; refer to Exhibits 5.1-1a through 5.1-1c, *Coastal Views Within Project Vicinity*. The public viewpoints within the project vicinity are located along a portion of the Back Bay Loop trail that spans the bluffs from Castaways Park to the west to Polaris Drive to the east. These viewpoints include:

[1] This roadway is designated as West Coast Highway west of the Bay Bridge, and East Coast Highway east of the Bay Bridge. However, for the purposes of this impact section and for simplicity, the roadway is simply referred to as "Coast Highway" unless a differentiation is required.



Source: Google Earth, 2017.

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BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Coastal Views Within Project Vicinity

Exhibit 5.1-1a

Public View Point 1: View of Newport Bay and project site looking southeast from Public View Point 1, located along the Back Bay Loop trail within the southeastern portion of Castaways Park.

Public View Point 2: View of Newport Bay and project site looking southeast from Public View Point 2, located along the Back Bay Loop trail within the northeastern portion of Castaways Park.

Public View Point 3: View of Newport Bay and project site looking south/southeast from Public View Point 3, located along the Back Bay Loop trail just south of the single-family residences positioned on the bluff.

Public View Point 4: View of Newport Bay and project site looking south/southwest from Public View Point 4, located along the Back Bay Loop trail, southeast of the single-family residences positioned on the bluff.

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Coastal Views Within Project Vicinity

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Exhibit 5.1-1b

Public View Point 5: View of Newport Bay and project site looking south/southwest from Public View Point 5, located along Polaris Drive just south of Westcliff Park.

View Corridor 1: View of East Coast Highway and project site looking west from the northeast corner of East Coast Highway and Bayside Drive.

View Corridor 2: View of East Coast Highway and project site looking east from the Bay Bridge traveling eastbound.

Coastal Views Within Project Vicinity

- *Public Viewpoint 1:* This viewpoint is located along the Back Bay Loop trail within the southeastern portion of Castaways Park.
- *Public Viewpoint 2:* This viewpoint is located along the Back Bay Loop trail within the northeastern portion of Castaways Park.
- *Public Viewpoint 3:* This viewpoint is located along the Back Bay Loop trail just south of the single family residences positioned on the bluff.
- *Public Viewpoint 4:* This viewpoint is located along the Back Bay Loop trail, southeast of the single family residences positioned on the bluff.
- *Public Viewpoint 5:* This viewpoint is located along Polaris Drive just south of Westcliff Park.

As shown on Exhibits 5.1-1a through 5.1-1c, the five public viewpoints provide similar views of the Pacific Ocean, Newport Bay, Newport Bay Channel, and San Joaquin Hills. These views also encompass the project site, including the existing Pump Station facility. Sensitive viewers that have access to these views include pedestrians and bicyclists along the Back Bay Loop trail and motorists, pedestrians, and bicyclists traveling along Polaris Drive.

In addition to designated public viewpoints, Coast Highway is recognized as a coastal view road in the General Plan and is designated as an eligible State Scenic Highway.[2] Within the project vicinity, Coast Highway provides motorists, pedestrians, and bicyclists views of the Pacific Ocean, Newport Bay, coastal bluffs, and the San Joaquin Hills to the east; refer to Exhibit 5.1-1c.

VISUAL CHARACTER/QUALITY

The City's coastal zone contains distinctive topographic features such as bluffs, cliffs, hillsides, canyons, and other significant natural landforms, which play an important part of the scenic and visual qualities of the City. Along the southwestern margin of the City, sediments flowing from the Santa Ana River and San Diego Creek (the two major drainage courses that transect the mesa) have formed the beaches, sandbars, and mudflats of Newport Bay and West Newport.

Coastal bluffs are a prominent landform in Newport Beach and are considered significant scenic and environmental resources. There are coastal bluffs facing the wetlands of Upper Newport Bay. Most of the coastal bluff top lands have been subdivided and developed over the years. However, many have been preserved as parkland and other open space. Also, most of the faces of the coastal bluff surrounding the Upper Newport Bay have been protected by dedication to the Upper Newport Bay Nature Preserve or dedicated as open space as part of planned residential developments. Eastbluff Remnant, Mouth of Big Canyon, Castaways, Newporter North, and Newport Beach Marine Life Refuge are undeveloped open spaces.

In other areas, including Newport Heights, Cliff Haven, Irvine Terrace, Corona del Mar, Shorecliffs, and Cameo Shores, the coastal bluffs fall within conventional residential subdivisions. Development on these lots occurs mainly on a lot-by-lot basis. As a result, some coastal bluffs remain pristine and others are physically or visually obliterated by structures, landform alteration, or landscaping. While

[2] California Department of Transportation website, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed February 15, 2019.

some development has maintained the natural character of the coastal bluffs, other developments have been larger and more visually prominent, potentially impacting views of those bluffs.

In addition, coastal bluffs surround Lower Newport Bay. These can be seen along Coast Highway from the Semeniuk Slough to Dover Drive, along Bayside Drive in Irvine Terrace, and in Corona del Mar above the Harbor Entrance. These bluffs faced the open ocean before the Balboa Peninsula formed and are now generally separated from the shoreline.

The proposed project site is located within a developed area along Newport Bay Channel. Currently, the existing pump station facility is visible along East Coast Highway. The new pump station site is currently paved with the existing RV storage facilities. The areas of proposed trenching would occur within roadway right-of-ways, the RV storage facilities, surface parking and areas of ornamental landscaping on private property, as well as disturbed area located within the southern portion of Castaways Park. The surrounding land is urbanized, consisting of roadways, recreational, residential, and commercial uses. The Bayside Village Mobile Home Park is located north/northeast, single family residential units are located to the north (along the bluff) and west (west of Dover Drive), and the Bayshore Apartments are located south of the project site along Bayshore Drive. Recreational uses also surround the project site and include Castaways Park, Back Bay Loop trail, and Newport Bay.

The most prominent factors influencing the character of the project site and its surroundings are views of the surrounding coastal bluffs and bay. Structures in the surrounding area include a mix of low lying uses with varying architectural details (e.g., restaurants, commercial retail stores, residential, and marine recreational uses).

LIGHT AND GLARE

Lighting effects are associated with the use of artificial light during the evening and nighttime hours. There are two primary sources of light: light emanating from building interiors passing through windows and light from exterior sources (i.e., street lighting, building illumination, security lighting, parking lot lighting, and landscape lighting). Light introduction can be a nuisance to adjacent residential areas, diminish the view of the clear night sky, and if uncontrolled, can cause disturbances. Uses such as residences and hotels are considered light sensitive, since occupants have expectations of privacy during evening hours and may be subject to disturbance by bright light sources. Light spill is typically defined as the presence of unwanted light on properties adjacent to the property being illuminated. With respect to lighting, the degree of illumination may vary widely depending on the amount of light generated, height of the light source, presence of barriers or obstructions, type of light source, and weather conditions.

Glare is primarily a daytime occurrence caused by the reflection of sunlight or artificial light by highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into the light source of a luminaire. Daytime glare generation is common in urban areas and is typically associated with buildings with exterior facades largely or entirely comprised of highly reflective glass. Glare can also be produced during evening and nighttime hours by the reflection of artificial light sources such as automobile headlights. Glare-sensitive uses include residences, hotels, transportation corridors, and aircraft landing corridors. Glare can also be produced during evening and nighttime hours by reflection of artificial light sources,

such as automobile headlights. Glare is typically related to either moving vehicles or sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year.

Currently, daytime glare on-site and in the project area is minimal. The source of daytime glare on-site includes windshields of parked vehicles within the RV storage area. Surrounding daytime glare includes light reflection off windows from neighboring structures. Nighttime light and glare is currently emitted from both on-site and off-site sources. Existing security lighting and vehicle headlights are experienced at the existing pump station facility and RV storage facility. Vehicle headlights, street lighting, and traffic signals are present along surrounding roadways, including Coast Highway, Bayside Drive, and Dover Drive.

5.1.2 REGULATORY SETTING

CALIFORNIA COASTAL ACT POLICY 30251

Pursuant to the California Coastal Act Policy 30251, the scenic and visual qualities of coastal areas shall be considered and protected as resources of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas, such as those designated in the California Coastline Preservation and Recreation Plan prepared by the California Department of Parks and Recreation and by local government, shall be subordinate to the character of its setting.

LOCAL

City of Newport Beach General Plan

City policies pertaining to scenic vistas and visual character are contained in the Natural Resources Element and Land Use Element of the General Plan. These relevant policies include the following:

Natural Resources Element

Goals:

NR 20: Preservation of significant visual resources.

NR 21: Minimized visual impacts of signs and utilities.

NR 22: Maintain the intensity of development around Newport Bay to be consistent with the unique character and visual scale of Newport Beach.

NR 23: Development respects natural landforms such as coastal bluffs.

Policies:

NR 20.1 *Enhancement of Significant Resources*: Protect and, where feasible, enhance significant scenic and visual resources that include open space, mountains, canyons, ridges, ocean, and harbor from public vantage points, as shown in Figure NR3. (Imp 2.1)

NR 20.2 *New Development Requirements*: Require new development to restore and enhance the visual quality in visually degraded areas, where feasible, and provide view easements or corridors designed to protect public views or to restore public views in developed areas, where appropriate. (Imp 20.3)

NR 20.3 *Public Views*: Protect and enhance public view corridors from the following roadway segments (shown in Figure NR3), and other locations may be identified in the future:

- Coast Highway/Newport Bay Bridge

NR 21.1 *Signs and Utility Siting and Design*: Design and site signs, utilities, and antennas to minimize visual impacts. (Imp 2.1)

NR 22.1 *Regulation of Structure Mass*: Continue to regulate the visual and physical mass of structures consistent with the unique character and visual scale of Newport Beach. (Imp 2.1)

NR 23.1 *Maintenance of Natural Topography*: Preserve cliffs, canyons, bluffs, significant rock outcroppings, and site buildings to minimize alteration of the site's natural topography and preserve the features as a visual resource. (Imp 2.1)

NR 23.7 *New Development Design and Siting*: Design and site new development to minimize the removal of native vegetation, preserve rock outcroppings, and protect coastal resources. (Imp 2.1)

Land Use Element

Policies:

LU 1.1 *Unique Environment*: Maintain and enhance the beneficial and unique character of the different neighborhoods, business districts, and harbor that together identify Newport Beach. Locate and design development to reflect Newport Beach's topography, architectural diversity, and view sheds. (Imp 1.1)

LU 1.6 *Public Views*: Protect and, where feasible, enhance significant scenic and visual resources that include open space, mountains, canyons, ridges, ocean, and harbor from public vantage points. (Imp 1.1)

City of Newport Beach Local Coastal Program

The CLUP sets forth goals, objectives, and policies that govern the use of land and water in the coastal zone within the City and its sphere of influence, with the exception of Newport Coast and Banning

Ranch. Coastal Act policies related to scenic and visual resources that are relevant to Newport Beach include the following:

- *30251*. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

SCENIC AND VISUAL RESOURCES

The following CLUP policies are applicable to the proposed project:

4.4.1-1. Protect and, where feasible, enhance the scenic and visual qualities of the coastal zone, including public views to and along the ocean, bay, and harbor and to coastal bluffs and other scenic coastal areas.

4.4.1-2. Design and site new development, including landscaping, so as to minimize impacts to public coastal views.

4.4.1-6. Protect public coastal views from the following roadway segments:

- Coast Highway/Newport Bay Bridge.

4.4.1-7. Design and site new development, including landscaping, on the edges of public coastal view corridors, including those down public streets, to frame and accent public coastal views.

4.4.1-8. Require that buildings be located and sites designed to provide clear views of and access to the Harbor and Bay from the Coast Highway and Newport Boulevard rights-of-way in accordance with the following principles, as appropriate:

- Clustering of buildings to provide open view and access corridors to the Harbor.
- Modulation of building volume and masses.
- Variation of building heights.
- Inclusion of porticoes, arcades, windows, and other "see-through" elements in addition to the defined open corridor.
- Minimization of landscape, fencing, parked cars, and other nonstructural elements that block views and access to the Harbor.

- Prevention of the appearance of the public right-of-way being walled off from the Harbor.

- Inclusion of setbacks that in combination with setbacks on adjoining parcels cumulatively form functional view corridors.

- Encouragement of adjoining properties to combine their view corridors that achieve a larger cumulative corridor than would have been achieved independently.

- A site-specific analysis shall be conducted for new development to determine the appropriate size, configuration, and design of the view and access corridor that meets these objectives, which shall be subject to approval in the coastal development plan review process.

4.4.2-1. Maintain the 35-foot height limitation in the Shoreline Height Limitation Zone, as graphically depicted on Map 4-3.

4.4.2-2. Continue to regulate the visual and physical mass of structures consistent with the unique character and visual scale of Newport Beach.

4.4.2-3. Implement the regulation of the building envelope to preserve public views through the height, setback, floor area, lot coverage, and building bulk regulation of the Zoning Code in effect as of October 13, 2005 that limit the building profile and maximize public view opportunities.

4.4.4-1. Design and site signs, utilities, and antennas to minimize visual impacts to coastal resources.

4.4.4-6. Continue to require new development to underground utilities.

Local Coastal Program Implementation Plan policies related to scenic and visual resources that are relevant to Newport Beach include the following:

- Design Guidelines, (B) Site Planning: 4. Scenic view corridors should be incorporated throughout the project to maintain or enhance existing coastal views from East Coast Highway as shown on Exhibit 13, East Coast Highway View Corridors.
- Design Guidelines, (E) Public Views: 1. As illustrated on Exhibit 13, East Coast Highway View Corridors, buildings should be oriented to maximize view opportunities while minimizing the visual impact of the building on existing view sheds.
- Design Guidelines, (E) Public Views: 2. Buildings proposed adjacent to the Coast Highway-Bay Bridge shall preserve coastal views that are afforded due to the differential in height between the elevation of the bridge and the elevation of the site. The public coastal views shall be consistent with Section 4.4.1-8 of the Newport Beach Coastal Land Use Plan policies.
- Design Guidelines, (E) Public Views: 3. A pedestrian view corridor shall be designed at the southeast corner of Bayside Drive and East Coast Highway, shown as View Corridor 2 on

Exhibit 13, East Coast Highway View Corridors, allowing northbound pedestrians and motorists to see into the project and the coastal view beyond.

- Design Guidelines, (E) Public Views: 5. The development shall be designed to frame existing bay views and should create new bay views where they are currently blocked by fencing and outdoor vehicle/boat storage.

City of Newport Beach Municipal Code

Back Bay Landing Planned Community Development Plan

The *Newport Beach Municipal Code* (Municipal Code) allows a Planned Community Development Plan (PCDP) to address land use designations and regulations in Planned Communities. The Back Bay Landing PCDP serves as the controlling zoning ordinance for the site and is authorized and intended to implement the provisions of the Newport Beach General Plan and CLUP. The design guidelines within the Back Bay Landing PCDP provide a comprehensive vision of the architectural theme and desired character of the development.

The following discusses the Development Standards and Design Guidelines that would normally apply to a development at the project site, for the purposes of considering character/quality; however, it is acknowledged that pursuant to California Code of Regulations Section 53091(d), building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.

Development Standards

A. Setback Requirements

Setbacks are the minimum distance from the property line to building or structure, unless otherwise specified.

1. Street Setback

   a) East Coast Highway - 0 feet (provided a minimum 10-foot landscape buffer is provided to the back of sidewalk).

   b) Coast Highway-Bay Bridge - 20 feet to edge of bridge (kayak/paddleboard rentals, storage, and launch uses may be permitted within this setback and beneath the bridge, subject to Site Development Review).

   c) Bayside Drive - 5 feet.

2. Perimeter Setback

   a) Abutting Non-residential - 0 feet.

   b) Abutting Existing Residential - 25 feet, except:

i. In Planning Area 1, public restrooms and marina lockers may provide a minimum 5-foot setback.

4. Setback Encroachments

a) Fences, Walls, and Hedges

i. Permitted within the Perimeter Setback Abutting Existing Residential up to a maximum height of 8 feet.

iii. Permitted in all other setback areas up to a maximum height of 42 inches.

b) Architectural Features

i. Roof overhangs, brackets, cornices and eaves may encroach 30 inches into a required Perimeter Setback area, provided a minimum vertical clearance above grade of 8 feet is maintained.

ii. Decorative architectural features (e.g., belt courses, ornamental moldings, pilasters, and similar features) may encroach up to 6 inches into any required Perimeter Setback.

d) Other - Other encroachments may be permitted through the Site Development Review.

B. Permitted Height of Structures

1. Building Height

The maximum allowable building height shall be 35 feet, except as follows:

a) As illustrated on Exhibit 3, *Building Heights*, 100 feet from back of curb along Bayside Drive within the eastern portion of Planning Area 1, maximum allowable building height shall not exceed 26 feet for flat roofs and 31 feet for sloped roofs.

b) Within Planning Area 1, maximum allowable height for any parking structure shall not exceed 30 feet for flat roofs and 35 feet for sloped roofs.

2. Grade for the Purposes of Measuring Height

a) Within Planning Area 1, height shall be measured from the established baseline elevation of either 11 feet or 14 feet as illustrated on Exhibit 3, *Building Heights*, or as determined by the Sea Level Rise and Shoreline Management Plan.

J. Lighting

A detailed lighting plan with lighting fixtures and standard designs shall be submitted with the Site Development Review application. The lighting plan shall illustrate how all exterior lighting is designed to reduce unnecessary illumination of adjacent properties, conserve energy, minimize

detrimental effects on sensitive environmental areas, and provide minimum standards for safety. At minimum, exterior lighting shall comply with the following:

1. Protection from glare.

    a) Shielding required. Exterior lighting shall be shielded and light rays confined within boundaries of the site.

    b) Light spill prohibited. Direct rays or glare shall not create a public nuisance by shining onto public streets, adjacent sites, or beyond the perimeter of the bayfront promenade.

    c) Maximum light at property line. No more than one candlefoot of illumination shall be present at the property line.

    d) Maximum light beyond bayfront. No more than 0.25 candlefoot of illumination shall be present beyond the perimeter of the Bayfront promenade.

2. Photometric study. A photometric study plan shall be incorporated into the lighting plan to ensure lighting will not negatively impact surrounding land uses and adjacent sensitive coastal resource areas.

3. Lighting fixtures. Exterior lights shall consist of a light source, reflector, and shielding devices so that, acting together, the light beam is controlled and not directed across a property line or beyond the bayfront promenade.

Design Guidelines

A. Architectural Theme

The development shall be designed with a Coastal architectural theme. This architectural theme is influenced by the marine climate of the California coastline, with varied historical vernacular and casually elegant palette, with building forms and massing that define and create unique and often seamless indoor/outdoor spaces. The project would follow principles of quality design, exhibiting a high level of architectural standards and shall be compatible with the surrounding area, sensitive to scale, proportion, and identity with a focus on place-making. Massing offsets, variation of roof lines, varied textures, openings, recesses, and design accents on all building elevations shall be provided to enhance the architectural design. The intent is not to select a historically specific or rigid architectural style for the project, but to create an active, mixed-use village.

B. Site Planning

9. Ground level equipment, refuse collection areas, storage tanks, infrastructure equipment and utility vaults should be screened from public right-of-way views with dense landscaping and/or walls of materials and finishes compatible with adjacent buildings.

10. Site-specific analyses (wind patterns, noise assessments, etc.) and special design features shall be incorporated into the proposed buildings surrounding the OCSD pump station facility to offset potential noise and odor control issues associated with the existing operations of the

facility. Indoor air conditioned spaces within the development shall include the installation of odor filters, such as activated carbon filters or similar, to filter indoor air.

C. Building Massing

1. Avoid long, continuous blank walls, by incorporating a variety of materials, design treatments and/or modulating and articulating elevations to promote visual interest and reduce massing.

D. Facade Treatments

9. Roof-mounted mechanical equipment shall not be visible in any direction from a public right-of-way, as may be seen from a point 6 feet above ground level, including from the Coast Highway-Bay Bridge curb elevation. In addition, screening of the top of the roof-mounted mechanical equipment may be required if necessary to protect views.

10. Subject to the approval of the OCSD, the existing building exterior of the OCSD facility located adjacent to East Coast Highway and at the property's southwestern boundary shall undergo aesthetic improvements (refacing, reroofing, etc.) to reflect the architectural design standards contained in the PCDP. Should the OCSD facility be reconstructed, the architectural design of the structure shall be compatible with the architectural design of the Back Bay Landing development and design standards contained in the PCDP.

E. Public Views

1. As illustrated on Exhibit 13, *East Coast Highway View Corridors*, buildings should be oriented to maximize view opportunities while minimizing the visual impact of the building on existing viewsheds.

2. Buildings proposed adjacent to the Coast Highway-Bay Bridge shall preserve coastal views that are afforded due to the differential in height between the elevation of the bridge and the elevation of the site. Buildings located within View Corridors 5, 6, and 7, as shown in Exhibit 13, *East Coast Highway View Corridors*, shall maintain a low profile against East Coast Highway, allowing coastal views over the development. The public coastal views shall be consistent with Section 4.4.1-8 of the CLUP policies.

5.1.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Have a substantial adverse effect on a scenic vista (refer to Impact Statement AES-1);
- Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway (refer to Impact Statement AES-1);
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from

publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? (refer to Impact Statements AES-2 and AES-3); and/or

- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area (refer to Impact Statement AES-4).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

5.1.4 IMPACTS AND MITIGATION MEASURES

SCENIC VIEWS AND VISTAS

AES-1 PROJECT IMPLEMENTATION COULD HAVE A SUBSTANTIAL ADVERSE EFFECT ON A SCENIC VIEW OR VISTA.

Impact Analysis:

Original Northeast Pump Station

According to the Natural Resources Element of the General Plan, the Pacific Ocean, Newport Bay, Newport Bay Channel, hills, canyons, and coastal bluffs are considered visual resources within the City. Figure NR3, *Coastal Views*, illustrates the public viewpoints and coastal view road within the project vicinity. In addition to the General Plan, Coast Highway is designated as an eligible State Scenic Highway.[3]

Public Viewpoints

The public viewpoints relevant to the project are located along a portion of the Back Bay Loop trail that spans the bluffs from Castaways Park to the west to Polaris Drive to the east. As illustrated on Exhibits 5.1-1a through 5.1-1c, these viewpoints provide pedestrians and bicyclists along the Back Bay Loop trail with views of the Newport Bay, Newport Bay Channel, and Pacific Ocean, as well as the distant San Joaquin Hills. Due to the distance of these views from the project site (0.20 mile or greater), the existing on-site pump station facility is not readily visible and does not extend above the visible horizon/sky line.

Implementation of the proposed project would construct the new pump station approximately 200 feet northeast of the existing facility and would expand the facility an additional 5,200 square feet. All other project features would be constructed underground, resulting in no impacts to visual resources as seen from public viewpoints. The new building would be up to 24 feet in height. As illustrated in Exhibits 5.1-1a through 5.1-1c, the new 24-foot high pump station facility would not be readily visible from public viewpoints, nor would this new structure extend above the visible horizon/skyline or

[3] California Department of Transportation website, http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed February 15, 2019.

result in view blockage of existing visual resources. Impacts in this regard would be less than significant.

Coastal View Road/State Scenic Highway

Coast Highway provides motorists, pedestrians, and bicyclists views of the coastal bluffs in the western direction (in the vicinity of the project site) and the Pacific Ocean, Newport Bay, Newport Bay Channel, and distant views of the San Joaquin Hills in the eastern direction.

As discussed above, the only aboveground features proposed by the project include the new pump station facility. This new facility would be a maximum of 24-feet in height and would be set back an additional 200 feet from East Coast Highway, compared to the existing pump station facility. Further, as illustrated in Exhibit 5.1-1c, the relocated pump station facility would not result in any increased view blockage to coastal bluffs, as seen from East Coast Highway (looking west). Impacts in this regard would be less than significant. For eastern views, implementation of the proposed project would not result in increased view blockage of the San Joaquin Hills, as the proposed structures would remain low lying (24 feet in height). Impacts in this regard would be less than significant.

Modified Northeast Pump Station

Public Viewpoints

Implementation of the Modified Northeast Pump Station would construct the 24-foot tall pump station, similar in character to the Original Northeast Pump Station. However, an approximate 5-foot setback from the Back Bay Landing dedication for Bayside Drive right-of-way (or approximately 22 feet from the existing Bayside Drive)_would be provided, which would shift the facility westerly accordingly. All other project features would be constructed underground. As the project vicinity is relatively flat, these changes in building siting would not result in any new increased view blockage from public vantage points along the coastal bluffs. No new structures would extend above the visible horizon/skyline or result in view blockage of existing visual resources. Thus, impacts in this regard would be less than significant.

Coastal View Road/State Scenic Highway

As discussed above, the only aboveground features proposed by the project include the new pump station facility. The new 24-foot structure would be shifted approximately 5-feet west of the Back Bay Landing dedication for Bayside Drive right-of-way, compared to that sited in the Original Northeast Pump Station. These changes in building siting would not result in any new view blockage of the San Joaquin Hills from motorists traveling along Coast Highway, so impacts in this regard would be less than significant.

South Pump Station

Public Viewpoints

The analysis for the Original Northeast Pump Station and Modified Northeast Pump Station is also applicable to the South Pump Station. Similar to the Modified Northeast Pump Station, the South Pump Station would construct a 24-foot tall pump station, similar in character to the Original Northeast Pump Station. However, due to the location in proximity to East Coast Highway right-of-

way and the Bay Bridge, a retaining wall would have to be constructed. The proposed retaining wall would range in maximum height from 1 to 8 feet and would face north. Since this feature would be a retaining wall and would not rise above other structures in the vicinity (e.g., surrounding structures and Bay Bridge), the South Pump Station would not result in structures extending above the visible horizon/skyline or result in any new view blockage of existing visual resources, as seen from public vantage points along the coastal bluffs. Thus, impacts in this regard would be less than significant.

Coastal View Road/State Scenic Highway

As discussed above, the only aboveground features proposed by the project include the new 24-foot pump station facility and associated retaining wall. The proposed retaining wall would not obstruct views from Coast Highway, as the wall would face north. Similar to the Original Northeast Pump Station and the Modified Northeast Pump Station, the South Pump Station would not result in any increased view blockage of the San Joaquin Hills, as seen from motorists traveling along Coast Highway. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required for all site plan concepts.

Level of Significance: Less Than Significant Impact.

SHORT-TERM VISUAL IMPACTS

AES-2 PROJECT CONSTRUCTION ACTIVITIES COULD TEMPORARILY DEGRADE THE VISUAL CHARACTER/QUALITY OF THE SITE AND ITS SURROUNDINGS.

Impact Analysis:

Original Northeast Pump Station

Construction of the Original Northeast Pump Station would temporarily disturb the character of the site, affecting the quality of the landscape during this time. Proposed access to the site for the removal of excavated soils and delivery of heavy equipment would primarily occur via Bayside Drive in the eastern portion of the project site as well as Dover Drive and West Coast Highway to the west of the project site. Project construction is anticipated to occur within 44 months, beginning in September 2020 and concluding in May 2024.

The proposed project would involve the construction of a new pump station on the north side of the Bayside Village Marina property, new force mains, and replacement of portions of OCSD's gravity sewers. The new pump station site would be expanded from approximately 4,800 square feet under existing conditions to approximately 10,000 square feet (an increase of 5,200 square feet). The existing pump station would remain in service and fully operational while the new pump station is being constructed.

Following site preparation activities, the use of HDD/microtunneling techniques would allow for construction to occur without trenching across the Newport Bay Channel (refer to Exhibit 3-6) and microtunneling the force mains would be directed under West Pacific Coast Highway (refer to Exhibit 3-7). Trenching would be utilized for short spans of the force mains within the paved Bayside Village

Marina parcel and disturbed area within the southern portion of Castaways Park. Construction staging and parking areas would occur within the boundaries of the project site. Once the new pump station and associated facilities are completed and commissioned, the existing force mains would be abandoned, and the existing pump station would be taken out of service, and demolished.

Construction activities, equipment, vehicles, and grading, drilling, and trenching would be visible and temporary site disturbance would result from access pits and roads. However, these potential visual impacts would be short-term and would cease upon completion of construction. In addition, construction staging areas would be sited to minimize visual impacts to adjacent uses appropriately, and the perimeter of the site would be screened (Mitigation Measure AES-1). Completion of the proposed project would restore the surfaces in the project area to conditions similar to existing conditions. With implementation of Mitigation Measure AES-1, short-term impacts would be reduced to less than significant levels.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. However, proposed force mains would be installed south of Bay Bridge instead of north. This development scenario would consider two construction methods, microtunneling or dredging. Proposed microtunneling would install the force main improvements across the Newport Bay Channel (to the south of Bay Bridge) from entry/receiving pits to the east and west of the Newport Bay Channel (refer to Exhibit 3-13). These activities would result in similar changes to character/quality during construction, compared to the Original Northeast Pump Station. Mitigation Measure AES-1, pertaining to minimizing visual impacts to adjacent uses through appropriate staging and/or screening, would reduce these impacts to less than significant.

This site plan option is also considering dredging as a potential construction method, as opposed to microtunneling, across the Newport Bay Channel and to the south of Bay Bridge (refer to Exhibit 3-12). Should dredging be used for construction across Newport Bay Channel, construction staging and dredging equipment would be visible during this time. Impacts would be temporary in nature, as project construction would occur linearly along the project alignment. Construction staging areas would be similar to the Original Northeast Pump Station. Similar to the Original Northeast Pump Station, Mitigation Measure AES-1 would require that project construction materials, heavy duty equipment, and debris piles are clustered in the project's designated staging areas as well as use of appropriate screening as necessary. Compliance with Mitigation Measure AES-1 would ensure the project's construction-related impacts to scenic vistas would be reduced to less than significant levels. As these impacts would be temporary in nature and would cease upon completion of construction, the degradation of character/quality would be less than significant.

South Pump Station

Pump station improvements associated with the Modified Northeast Pump Station would be the same as those proposed under the Original Northeast Pump Station, with the exception of the replacement of portions of the existing OCSD gravity sewer system, including the construction of 8-inch vitrified clay pipe (VCP) within East Pacific Coast Highway immediately west of Bayside Drive. These impacts would result in similar impacts to the degradation of character/quality as that described for the Original Northeast Pump Station. With implementation of the Mitigation Measure AES-1, impacts to

scenic views/vistas and degradation of character/quality during construction would be reduced to less than significant levels.

Mitigation Measures: The following mitigation measures apply to all site plan concepts:

AES-1 Prior to issuance of any grading and/or demolition permits, whichever occurs first, engineering drawings and specifications shall be submitted for review and approval by the Orange County Sanitation District Director of Engineering. These documents shall, at a minimum, indicate the equipment and vehicle staging areas, stockpiling of materials, fencing (i.e., temporary fencing with opaque material), and haul route(s). Staging areas shall be sited to minimize public views and/or screened from public views. Construction haul routes shall minimize impacts to sensitive uses in the project area by avoiding local residential streets.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

LONG-TERM VISUAL CHARACTER/QUALITY

AES-3 WITHIN AN URBANIZED AREA, PROJECT IMPLEMENTATION COULD CONFLICT WITH APPLICABLE ZONING AND OTHER REGULATIONS GOVERNING SCENIC QUALITY.

Impact Analysis:

Original Northeast Pump Station

The Original Northeast Pump Station would involve the construction of a new pump station within the northeast portion of the Bayside Village Marina property, which is situated within an urbanized area. As stated in Impact Statement AES-1, the only project features that would be above ground include the new pump station facilities. The proposed pump station site would be expanded from approximately 4,800 square feet under existing conditions to approximately 10,000 square feet (an increase of 5,200 square feet). Within the 10,000 square feet, the one story (24-foot high) pump station structures would include two buildings and a transformer; refer to Exhibit 3-5. The building located in the northeast portion would house the generator and odor control. The building located west of the generator/odor control building would house the electrical room. The valve vault and flow meter would be located below grade just west of the electrical room. The site entrance would be accessed from the northwest boundary of the project site, off the existing Bayside Village Marina entrance road. The site exit would be along the southeast boundary, off Bayside Drive.

As discussed in Section 5.9, *Land Use and Relevant Planning*, development of the Original Northeast Pump Station would be consistent with the zoning and regulations governing scenic quality. The new facility would be similar in character to the existing pump station facility. The new structures would be set back an additional 200 feet northeast of East Coast Highway, compared to the existing facility. The new pump station structures (up to 24 feet high) would be low lying in character, consistent with the requirements of the Back Bay Landing PCDP Height Limitation Zone requirements. Further, in order to ensure consistency with the surrounding area, the project would be required to be generally consistent with the Back Bay Landing PCDP design guidelines, particularly involving architectural theme, façade treatments (if applicable), and public view considerations. Therefore, with

implementation of Mitigation Measure AES-2, the proposed project would not conflict with any applicable zoning or regulations governing scenic quality.

Modified Northeast Pump Station

Construction of the proposed project would be similar to construction of the Original Northeast Pump Station, although the Modified Northeast Pump Station would provide greater setback of proposed structures from Bayside Drive. The Modified Northeast Pump Station is listed as a permitted use under the PCDP and would be designed to meet or exceed all setback requirements identified in the PCDP. Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station would have a maximum building height of 24 feet and would have nighttime security lighting that complies with the PCDP standards (e.g., design parameters for shielding, light spill, and fixtures). The pump station design would be the same as the Original Northeast Pump Station. As such, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

While the South Pump Station would be located slightly south of the Original Northeast Pump Station, it is listed as a permitted use under the PCDP and would be designed to meet or exceed all setback requirements identified in the PCDP. Similar to the Original Northeast Pump Station, the South Pump Station would have a maximum building height of 24 feet and would have nighttime security lighting that complies with the PCDP standards (e.g., design parameters for shielding, light spill, and fixtures). The pump station design would be the same as the Original Northeast Pump Station. As such, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: The following mitigation measures apply to all site plan concepts:

AES-2 Prior to construction of the new pump station facility, Orange County Sanitation District shall submit design plans of the proposed pump station to the City of Newport Beach for review and comment, and final approval by the District, to ensure consistency with the Back Bay Landing PCDP design guidelines.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

LIGHT AND GLARE

AES-4 IMPLEMENTATION OF THE PROPOSED PROJECT COULD GENERATE ADDITIONAL LIGHT AND GLARE BEYOND EXISTING CONDITIONS.

Impact Analysis:

Original Northeast Pump Station

Light pollution (also known as photopollution or luminous pollution) refers to light that people find annoying or harmful. Because not everyone is irritated by the same lighting sources, light pollution has a measure of subjectivity. It is common for one person's light "pollution" to be light that is desirable for another. Light trespass occurs when unwanted light enters one's property, for instance, by shining over a neighbor's fence. A common light trespass problem occurs when a strong light

enters the window of one's home from outside, causing problems such as sleep deprivation or the blocking of an evening view.

Glare is the result of excessive contrast between bright and dark areas in the field of view and is primarily a road safety issue, as bright and/or badly shielded lights around roads may partially blind drivers or pedestrians unexpectedly. There are three types of glare: blinding glare, which is completely blinding and leaves temporary vision deficiencies; disability glare, which describes such effects as being blinded by automobile headlights, thus causing a significant reduction in sight capabilities; and discomfort glare, which does not typically cause a dangerous situation by itself, and is mostly annoying and irritating.

Short-term light and glare impacts associated with construction activities would likely be limited to nighttime lighting (for construction and security purposes), as proposed construction of the Newport Channel force main crossing would require 24-hour operation. Mitigation Measure AES-3 would require a construction safety lighting plan. Nighttime security lighting, as necessary, would be oriented downward and away from adjacent residential areas. With implementation of Mitigation Measure AES-3, impacts in this regard would be reduced to less than significant levels.

Currently, daytime glare on-site and in the project area is minimal. The source of daytime glare on-site includes windshields of parked vehicles within the RV storage area. Surrounding daytime glare includes light reflection off windows from neighboring structures. Implementation of the proposed project would result in similar daytime glare conditions as that already present on-site and in the surrounding area.

Nighttime light and glare is currently emitted from both on-site and off-site sources. Existing security lighting and vehicle headlights are experienced at the existing pump station facility and RV storage facility. Vehicle headlights, street lighting, and traffic signals are present along surrounding roadways, including Coast Highway, Bayside Drive, and Dover Drive.

The proposed project would not create a substantial increase in nighttime lighting as a result of long-term operations. The new facility would require similar lighting for security purposes as that currently at the project site. Notwithstanding, in order to ensure that no additional light spillover occurs, particularly along the northern boundary where residential uses are present, the project would be required to comply with Mitigation Measure AES-4. All outdoor lighting associated with the project would be required to comply with the guidelines set forth within the Back Bay Landing PCDP, which requires a detailed lighting plan. The lighting plan must illustrate how all exterior lighting is designed to reduce unnecessary illumination of adjacent properties, conserve energy, minimize detrimental effects on sensitive environmental areas, and provide minimum standards for safety. Exterior lighting would be required to be shielded and light rays confined within boundaries of the site. Exterior lights must consist of a light source, reflector, and shielding devices so that, acting together, the light beam is controlled and not directed across a property line or beyond the bayfront promenade.

With implementation of recommended Mitigation Measures AES-3 and AES-4, impacts pertaining to an increase in light and glare would be reduced to less than significant levels.

Modified Northeast Pump Station

Although the proposed pump station building has shifted slightly west, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Construction lighting proposed would be similar in character to that described for the Original Northeast Pump Station. Short-term light and glare impacts associated with construction activities would be limited to nighttime lighting. Mitigation Measure AES-3 would require a construction safety lighting plan to reduce the potential for an increase in light and glare to less than significant levels.

Similar to the Original Northeast Pump Station, daytime glare would be similar to the existing condition. During operations, nighttime security lighting would be present. However, with compliance with Mitigation Measure AES-4, lighting would be shielded with light rays confined within the boundaries of the site to ensure that no that no additional light spillover would occur.

As such, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. With implementation of recommended Mitigation Measures AES-3 and AES-4, impacts pertaining to an increase in light and glare would be reduced to less than significant levels for the Modified Northeast Pump Station.

South Pump Station

Impacts from light pollution and glare would be similar to the Original Northeast Pump Station under the Southeast Pump Station, although to a lesser extent, as residence would be cited further from proposed facilities. Similar to the Original Northeast Pump Station, implementation of Mitigation Measures AES-3 and AES-4 would reduce short- and long-term light spillover to less than significant levels. As such, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. With implementation of recommended Mitigation Measures AES-3 and AES-4, impacts pertaining to an increase in light and glare would be reduced to less than significant levels.

Mitigation Measures: The following mitigation measures apply to all site plan concepts:

AES-3 All construction-related lighting fixtures (including portable fixtures) shall be oriented downward and away from adjacent sensitive areas (including residential and biologically sensitive areas). Lighting shall consist of the minimal wattage necessary to provide safety at the construction site and shall be consistent with all applicable requirements of the CLUP and CDP as determined by the City of Newport Beach. A construction safety lighting plan shall be submitted to the Orange County Sanitation District for review and approval prior to any nighttime construction activities. The Orange County Sanitation District, or designee, shall implement all requirements identified in the CLUP and CDP approved by the City of Newport Beach. The plan shall also demonstrate that although the minimum wattage necessary to provide safety at the site is being utilized, nighttime construction lighting does not spillover onto adjacent residential properties.

AES-4 Prior to construction of the proposed pump station, lighting plans shall be provided to the Orange County Sanitation District for review and approval. The District shall provide the lighting plans to the City of Newport Beach for review and comment, pertaining to consistency with the Back Bay Landing PCDP regulations for lighting. Per these requirements, all outdoor lighting fixtures shall be designed, shielded, aimed, located, and

maintained to minimize impacts to adjacent sites and to not produce glare onto adjacent sites or roadways. Final approval of the lighting plans shall be made by the District prior to start of construction of the pump station. The District, or designee, shall verify that the approved plans incorporate all suggested revisions and address all comments received from the City of Newport Beach.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.1.5 CUMULATIVE IMPACTS

The cumulative impacts discussed below rely upon the list of cumulative development projects in Table 4-1, *Cumulative Projects List*, of Section 4.0, *Basis of Cumulative Analysis*. The analysis below discloses the cumulative impacts from those projects listed in Table 4-1, and the proposed project's contribution to that cumulative impact. The nearest cumulative projects to the project site in Table 4-1 are the Back Bay Landing project (which is within and surrounding the project site), Balboa Marina West Expansion project (which adjoins the project site to the south), Bay Crossing Water Main Replacement project (south of the East Coast Highway/Newport Bay Bridge), and Newport Dunes Hotel (located approximately 0.15 mile east of the project boundary); refer to Exhibit 4-1, *Cumulative Projects Map*.

SCENIC VIEWS AND VISTAS

THE PROPOSED PROJECT, COMBINED WITH OTHER RELATED CUMULATIVE PROJECTS, COULD HAVE AN ADVERSE EFFECT ON A SCENIC VISTA.

Impact Analysis:

Original Northeast Pump Station

The Back Bay Landing project, Balboa Marina West Expansion project, Bay Crossing Water Main Replacement project, and Newport Dunes Hotel project are located within the viewshed of the project site. Upon construction of these cumulative projects, new structures could increase public view blockage to the visual resources including the Newport Bay bluffs and Newport Bay. All projects within the City would have to undergo the City's Design Review process to ensure that no significant impacts regarding public view blockage would result.

As discussed in Impact Statement AES-1, the proposed project would maintain the existing designated scenic views along Coast Highway and public viewpoints along the bluff, resulting in less than significant impacts to scenic views. No view blockage of designated visual resources would result. Thus, the proposed project would not have a cumulatively considerable incremental effect on scenic vistas, and impacts in this regard would be less than significant.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. The Modified Northeast Pump Station would also maintain existing designated scenic views along Coast Highway and public viewing points along the coastal bluffs, would not block any

designated visual resources, or result in a cumulatively considerable incremental effect on scenic vistas. Impacts in this regard would be less than significant.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. The South Pump Station would similarly have no effect on existing designated scenic views along Coast Highway. Views from public viewing points along the coastal bluffs, would not block any designated visual resources, or result in a cumulatively considerable incremental effect on scenic vistas. Impacts in this regard would be less than significant.

Mitigation Measures: No mitigation measures are required for all site plan concepts.

Level of Significance: Less Than Significant Impact.

SHORT-TERM VISUAL CHARACTER/QUALITY

PROJECT CONSTRUCTION ACTIVITIES, COMBINED WITH CONSTRUCTION ACTIVITIES FOR OTHER RELATED CUMULATIVE PROJECTS, COULD TEMPORARILY DEGRADE THE VISUAL CHARACTER/QUALITY OF THE DEVELOPMENT SITES AND THEIR SURROUNDINGS.

Impact Analysis:

Original Northeast Pump Station

As noted above, the nearest cumulative projects to the project site include the Back Bay Landing project, Balboa Marina West Expansion project, Bay Crossing Water Main Replacement project, and Newport Dunes Hotel project. It is unknown at this time when these projects would be constructed. Construction activities could overlap with any or all projects. All grading and earthwork activities would be required to be conducted in accordance with an approved construction grading plan and grading permit issued by the City of Newport Beach Public Works Department. Thus, construction impacts from these cumulative projects would be lessened through the City's design review and permitting processes. Overall cumulative impacts would occur during construction activities. However, with implementation of existing local standards and regulations during construction, these cumulative impacts would be reduced.

Per Impact Statement AES-2, project construction activities could result in short-term visual degradation at the project site due to staging equipment, soil piles, truck hauling, etc. However, project construction activities are considered to be short-term and would cease upon project completion. Further, Mitigation Measures AES-1 (requiring staging area screening) would reduce short-term construction impacts to a less than significant level. Thus, the proposed project's incremental effect would not be cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, with the exception of proposed potential dredging during construction. As discussed

in the Impact Statement AES-2, dredging would result in short-term visual degradation, but would cease upon completion. Implementation of Mitigation Measure AES-1 and the City's permitting processes, impacts in this regard would be reduced to less than significant levels. Thus, the project's incremental effect would not be cumulatively considerable.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station. Implementation of Mitigation Measure AES-1 as well as the City's permitting processes would reduce impacts in this regard to less than significant levels. Thus, the project's incremental effect would not be cumulatively considerable.

Mitigation Measures: Refer to Mitigation Measure AES-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

LONG-TERM VISUAL CHARACTER/QUALITY

WITHIN AN URBANIZED AREA, PROJECT IMPLEMENTATION, COMBINED WITH OTHER RELATED CUMULATIVE PROJECTS, COULD CONFLICT WITH APPLICABLE ZONING AND OTHER REGULATIONS GOVERNING SCENIC QUALITY.

Impact Analysis:

Original Northeast Pump Station

The Back Bay Landing project and Balboa Marina West Expansion project have undergone the City's Design Review process to ensure compatibility with the surrounding character/quality, and the Newport Dunes Hotel project would be subject to the same level of review. Each cumulative project's impacts to visual character would be dependent upon project- and site-specific variables, including proximity to visually sensitive receptors, the visual sensitivity of the respective development sites, and the compatibility of a project's architectural style, scale, and setbacks with the surrounding land uses. Each cumulative project would be subject to local standards and regulations and would be enforced through the City's Design Review process. This process would ensure compliance with the City's desired architectural styles, color schemes, materials, etc. for this area. It is anticipated that the Bay Crossing Water Main Replacement project would be constructed underground. Therefore, the Bay Crossing Water Main Replacement project would not contribute to any long-term visual character/quality impact within the area.

As discussed in Impact Statement AES-3, the project is consistent with the PCDP standards pertaining to scenic quality. Thus, the Original Northeast Pump Station's incremental effect would not be cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. The Modified Northeast Pump Station is listed as a permitted use under the PCDP and

would be designed to meet or exceed all setback requirements identified in the PCDP. Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station would be subject to Mitigation Measure AES-2 and the incremental effect would not be cumulatively considerable. As such, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, and the resultant incremental effect would not be cumulatively considerable.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. While the South Pump Station would be located slightly south of the Original Northeast Pump Station, it is listed as a permitted use under the PCDP and would be designed to meet or exceed all setback requirements identified in the PCDP. Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station would be subject to Mitigation Measure AES-2 and the incremental effect would not be cumulatively considerable. As such, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

Mitigation Measures: Refer to Mitigation Measure AES-2 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

LIGHT AND GLARE

PROJECT IMPLEMENTATION, COMBINED WITH OTHER RELATED CUMULATIVE PROJECTS, COULD CUMULATIVELY CONTRIBUTE TO SIGNIFICANT LIGHT/GLARE IMPACTS.

Impact Analysis:

Original Northeast Pump Station

Development of cumulative projects could result in increased lighting in the City. The impacts related to light and glare from the nearest cumulative project would be dependent upon project- and site-specific variables, including proximity to visually sensitive receptors and the visual sensitivity of the respective development sites. The potential impacts of the Back Bay Landing project, Balboa Marina West Expansion project, Bay Crossing Water Main Replacement project, and Newport Dunes Hotel, and other projects related to light and glare would be evaluated on a project-by-project basis. Potential increased lighting impacts would be minimized through compliance with Municipal Code Section 20.30.060, Back Bay Landing PCDP, and General Plan Policy LU 5.6.2 on a project-by-project basis, which would ensure proper lighting fixtures, placement, and minimal spillover.

As discussed in Impact Statement AES-4, the project's short-term construction lighting impacts would be less than significant with implementation of the recommended Mitigation Measure AES-3, ensuring construction-related lighting remains on-site. Further, operational lighting would be reduced to less than significant levels following compliance with the City's Back Bay Landing PCDP lighting regulations (Mitigation Measure AES-4). Thus, the project's incremental effect would not be cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. As discussed in Impact Statement AES-4, the project's short-term construction lighting impacts would be less than significant with implementation of the Mitigation Measure AES-3 and AES-4, ensuring construction and operation-related lighting do not spillover onto off-site properties. Thus, the project's incremental effect would not be cumulatively considerable. As such, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. The project's short-term construction lighting impacts would be less than significant with implementation of the Mitigation Measure AES-3 and AES-4, ensuring construction and operation-related lighting do not spillover onto off-site properties. Thus, the project's incremental effect would not be cumulatively considerable. As such, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

Mitigation Measures: Refer to Mitigation Measures AES-3 and AES-4 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.1.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No unavoidable significant impacts related to aesthetics/light and glare have been identified following implementation of mitigation measures referenced in this section.

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5.2 AIR QUALITY

This section addresses the air emissions generated by the construction and operation of the proposed project, and the potential impacts to air quality. The analysis also addresses the consistency of the proposed project with the air quality policies set forth within the South Coast Air Quality Management District's (SCAQMD) *2016 Air Quality Management Plan*. The analysis of project-generated air emissions focuses on whether the proposed project would cause an exceedance of an ambient air quality standard or SCAQMD significance thresholds. Air quality technical data is included as Appendix 11.2, *Air Quality/Greenhouse Gas Emissions/Energy Data*.

5.2.1 EXISTING SETTING

SOUTH COAST AIR BASIN

Geography

The City is located in the South Coast Air Basin (Basin), a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the nondesert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area of Riverside County.

The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of air pollutants throughout the Basin.

Climate

The general region lies in the semipermanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. The climate consists of a semiarid environment with mild winters, warm summers, moderate temperatures, and comfortable humidity. Precipitation is limited to a few winter storms. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The average annual temperature varies little throughout the Basin, averaging 75 degrees Fahrenheit (°F). However, with a less-pronounced oceanic influence, the eastern inland portions of the Basin show greater variability in annual minimum and maximum temperatures. All portions of the Basin have recorded temperatures over 100°F in recent years.

Although the Basin has a semi-arid climate, the air near the surface is moist due to the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the Basin by offshore winds, the ocean effect is dominant. Periods with heavy fog are frequent, and low stratus clouds, occasionally referred to as "high fog," are a characteristic climate feature. Annual average relative humidity is 70 percent at the coast and 57 percent in the eastern part of the Basin. Precipitation in the Basin is typically 9 to 14 inches annually and is rarely in the form of snow or hail

due to typically warm weather. The frequency and amount of rainfall is greater in the coastal areas of the Basin.

The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the day. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone (O_3) observed during summer months in the Basin. Smog in southern California is generally the result of these temperature inversions combining with coastal winds during the day and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

The area in which the project is located offers clear skies and sunshine, yet is still susceptible to air inversions. These inversions trap a layer of stagnant air near the ground, where it is then further loaded with pollutants. These inversions cause haziness, which is caused by moisture, suspended dust, and a variety of chemical aerosols emitted by trucks, automobiles, furnaces, and other sources.

The local climate is typically warm during summer when temperatures tend to be in the 70s, and cool during winter when temperatures tend to be in the 60s. The warmest month of the year is August with an average maximum temperature of 72 degrees Fahrenheit, while the coldest month of the year is December with an average minimum temperature of 49 degrees Fahrenheit. Temperature variations between night and day tend to be moderate during summer with a difference that can reach 12 degrees Fahrenheit, and moderate during winter with a difference of approximately 14 degrees Fahrenheit. The annual average precipitation in Newport Beach is 10.8 inches. Rainfall occurs most frequently in February, with an average rainfall of 2.7 inches.[1]

LOCAL AMBIENT AIR QUALITY

The SCAQMD has divided its jurisdiction into 38 source receptor areas (SRA) with a designated ambient air monitoring station in most areas. The project is located in the North Coastal Orange County SRA (SRA 18). The monitoring station representative of this area is the Costa Mesa station, which is located approximately 4.1 miles north of the project site and located within SRA 18. The air pollutants measured at the Costa Mesa station site include O_3, CO, nitrogen dioxide (NO_2), and Sulfur dioxide (SO_2). Particulates (PM_{10} and $PM_{2.5}$) are not measured at the Costa Mesa site. The nearest station to the project site measuring particulates is the Mission Vieo station, which is located approximately 13 miles east of the project site (within SRA 19). The air quality data monitored at the Costa Mesa and Mission Viejo stations from 2015 to 2017 are presented in Table 5.2-1, *Measured Air Quality Levels*.

[1] The Weather Channel, *Newport Beach, CA*, https://weather.com/weather/monthly/l/USCA0764:1:US, Accessed March 15, 2019.

Table 5.2-1
Measured Air Quality Levels

Pollutant	Primary Standard		Year	Maximum Concentration[1]	Number of Days State/Federal Std. Exceeded
	California	Federal			
Carbon Monoxide (CO) [2] (1-Hour)	20 ppm for 1 hour	35 ppm for 1 hour	2015 2016 2017	3.07 ppm 3.72 3.84	0/0 0/0 0/0
Ozone (O_3) [2] (1-Hour)	0.09 ppm for 1 hour	N/A	2015 2016 2017	0.099 ppm 0.090 0.088	0/1 0/0 0/0
Ozone (O_3) [2] (8-Hour)	0.070 ppm for 8 hours	0.070 ppm for 8 hours	2015 2016 2017	0.080 ppm 0.069 0.080	2/2 0/0 5/4
Nitrogen Dioxide (NO_x) [2]	0.18 ppm for 1 hour	0.100 ppm for 1 hour	2015 2016 2017	0.060 ppm 0.060 0.060	0/0 0/0 0/0
Particulate Matter (PM_{10}) [3, 4, 5]	50 µg/m^3 for 24 hours	150 µg/m^3 for 24 hours	2015 2016 2017	48.0 µg/m^3 59.3 58.2	0/0 0/0 7/0
Fine Particulate Matter ($PM_{2.5}$) [3, 4, 5]	No Separate State Standard	35 µg/m^3 for 24 hours	2015 2016 2017	31.5 µg/m^3 27. 19.5	0/0 0/0 0/0

ppm = parts per million
µg/m^3 = micrograms per cubic meter
NM = Not Measured
PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less
NA = Not Applicable

Notes:
1. Maximum concentration is measured over the same period as the California Standard.
2. Measurements taken at the Costa Mesa Monitoring Station located at 2850 Mesa Verde Drive East, Costa Mesa, California 92626.
3. Measurements taken at the Mission Viejo Monitoring Station located at 26081 Via Pera, Mission Viejo, California 92691.
4. PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
5. PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

Source:
California Air Resources Board, *ADAM Air Quality Data Statistics*, http://www.arb.ca.gov/adam/, accessed on March 18,2019.
California Air Resources Board, *AQMIS2: Air Quality Data*, https://www.arb.ca.gov/aqmis2/aqdselect.php, accessed on March 18, 2019.

Carbon Monoxide (CO). CO is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions.

CO replaces oxygen in the body's red blood cells. Individuals with a deficient blood supply to the heart, patients with diseases involving heart and blood vessels, fetuses (unborn babies), and patients with chronic hypoxemia (oxygen deficiency) are most susceptible to the adverse effects of CO exposure. People with heart disease are also more susceptible to developing chest pains when exposed to low levels of carbon monoxide. Exposure to high levels of carbon monoxide can slow reflexes and cause drowsiness, and result in death at very high concentrations.

Ozone (O_3). Ozone occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately 10 miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good") ozone layer extends upward from about 10 to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

"Bad" ozone is a photochemical pollutant created by chemical reactions between volatile organic compounds (VOCs) and nitrogen oxides (NO_X) in the presence of sunlight. As such, VOCs and NO_X are known as ozone precursors. To reduce ozone concentrations, it is necessary to control the emissions of these ozone precursors. Significant ozone formation generally requires an adequate amount of precursors in the atmosphere and a period of several hours in a stable atmosphere with strong sunlight. High ozone concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

While ozone in the upper atmosphere (stratosphere) protects the earth from harmful ultraviolet radiation, high concentrations of ground-level ozone (in the troposphere) can adversely affect the human respiratory system and other tissues. Ozone is a strong irritant that can cause inflammation and constricted airways, forcing the respiratory system to work hard to deliver oxygen. Individuals exercising outdoors, children, and people with pre-existing lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible to the health effects of ozone. Short-term exposure (lasting for a few hours) to ozone at elevated levels can result in aggravation of respiratory diseases such as emphysema, bronchitis and asthma, shortness of breath, increased susceptibility to infections, inflammation of the lung tissue, increased fatigue, as well as chest pain, dry throat, headache, and nausea.

Nitrogen Dioxide (NO_2). Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone, and react in the atmosphere to form acid rain. NO_2 (often used interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (e.g., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes and cause pulmonary dysfunction.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter smaller than 10 microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003, the California Air Resources Board (CARB) adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both State and Federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the U.S. Environmental Protection Agency (EPA) announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the United States Supreme Court reversed this decision and upheld the EPA's new standards.

On January 5, 2005, the EPA published a Final Rule in the Federal Register that designates the Basin as a nonattainment area for Federal $PM_{2.5}$ standards. On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current State standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Sulfur Dioxide (SO_2). SO_2 is a colorless, irritating gas with a rotten egg smell; it is formed primarily by the combustion of sulfur-containing fossil fuels. Sulfur dioxide is often used interchangeably with SO_X. Exposure of a few minutes to low levels of SO_2 can result in airway constriction in some asthmatics.

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive populations (sensitive receptors) that are in proximity to localized sources of toxics and CO are of particular concern. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. The following types of people are most likely to be adversely affected by air pollution, as identified by CARB: children under 14, elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. Locations that may contain a high concentration of these sensitive population groups are called sensitive receptors and include residential areas, hospitals, day-care facilities, elder-care facilities, elementary schools, and parks. Sensitive receptors in the project vicinity include residential homes, schools, parks and recreation facilities, places of worship, libraries, and a hospital. Sensitive receptors are depicted below in Table 5.2-2, *Sensitive Receptors*.

5.2.2 REGULATORY SETTING

U.S. ENVIRONMENTAL PROTECTION AGENCY

The EPA is responsible for implementing the Federal Clean Air Act (FCAA), which was first enacted in 1955 and amended numerous times after. The FCAA established Federal air quality standards known as the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare; refer to Table 5.2-3, *National and California Ambient Air Quality Standards*.

CALIFORNIA AIR RESOURCES BOARD

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 5.2-3, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management

Plan (AQMP) to achieve compliance with CAAQS. These AQMP's also serve as the basis for the preparation of the State Implementation Plan (SIP) for the State of California.

Table 5.2-2
Sensitive Receptors

Type	Name	Approximate Distance from Project Site (feet)	Orientation from Project Site	Location/Description
Residential	Residential Uses	25	North	Single Family Residences
		25	East	Single Family Residences
		25	South	Single Family Residences
		50	West	Single Family Residences
Hotels	Hyatt Regency Newport Beach	3,705	East	1107 Jamboree Road
	Balboa Inn	5,269	South	105 Main Street
Schools	Newport Harbor High School	1,925	Northwest	600 Irvine Avenue
	Horace Ensign Intermediate School	2,765	Northwest	2000 Cliff Drive
	Harper Elementary School	4,546	North	452 E 18th Street, Costa Mesa
	Mariners Elementary School	4,785	North	2100 Mariners Drive
	Newport Elementary School	4,850	Southwest	1327 West Balboa Boulevard
	Children's Center By the Sea	4,910	Southwest	1400 West Balboa Boulevard
	Newport Heights Elementary	4,981	Northwest	300 E 15th Street
Places of Worship	Newport Harbor Lutheran Church	910	North	798 Dover Drive
	St. Andrew's Presbyterian Church	2,047	Northwest	600 St Andrews Road
	St. John Vianney Chapel	4,480	Southeast	314 Marine Avenue
	Christ Church by the Sea	4,910	Southwest	1400 West Balboa Boulevard
	Our Lady of Mount Carmel Church	5,172	Southwest	1441 West Balboa Boulevard
Hospitals	Newport Bay Hospital	1,265	North	1501 East 16th Street
Libraries	Balboa Branch Library	4,277	South	100 East Balboa Boulevard
	Mariners Library	5,182	North	1300 Irvine Avenue
Recreation/Parks	Bob Henry Park	1,370	North	900 Dover Drive
	Back Bay View Park	2,904	Southeast	Jamboree Road and East Coast Highway
	Back Bay Golf & Fitness	3,724	Northeast	1107 Jamboree Road
	Genoa Park	3,791	West	232 Via Genoa
	Harper Park	4,546	North	452 E 18th Street, Costa Mesa
	Galaxie View Park	4,750	Northeast	1554 Galaxy Drive
	Pinkley Park	4,794	Northwest	360 Ogle Street, Costa Mesa
	Cliff Drive Park	4,840	Northwest	298 Riverside Avenue

Note:
1. Distances are measured from the exterior project boundary only and not from individual construction projects/areas within the interior of the project site.
Source: Google Earth, 2019.

Table 5.2-3
National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[3,4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m³)	**Nonattainment**	N/A	N/A[5]
	8 Hours	0.070 ppm (137 µg/m³)	**Nonattainment**	0.070 ppm (137 µg/m³)	**Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 µg/m³	**Nonattainment**	150 µg/m³	Attainment/Maintenance
	Annual Arithmetic Mean	20 µg/m³	**Nonattainment**	N/A	N/A
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 µg/m³	**Nonattainment**
	Annual Arithmetic Mean	12 µg/m³	**Nonattainment**	12.0 µg/m³	**Nonattainment**
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Attainment/Maintenance
	1 Hour	20 ppm (23 mg/m³)	Attainment	35 ppm (40 mg/m³)	Attainment/Maintenance
Nitrogen Dioxide (NO_2)[5]	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	N/A	53 ppb (100 µg/m³)	Attainment/Maintenance
	1 Hour	0.18 ppm (339 µg/m³)	Attainment	100 ppb (188 µg/m³)	Attainment/Maintenance
Lead (Pb)[7,8]	30 days Average	1.5 µg/m³	Attainment	N/A	N/A
	Calendar Quarter	N/A	N/A	1.5 µg/m³	**Nonattainment**
	Rolling 3-Month Average	N/A	N/A	0.15 µg/m³	**Nonattainment**
Sulfur Dioxide (SO_2)[6]	24 Hours	0.04 ppm (105 µg/m³)	Attainment	0.14 ppm (for certain areas)	Unclassified/Attainment
	3 Hours	N/A	N/A	N/A	N/A
	1 Hour	0.25 ppm (655 µg/m³)	Attainment	75 ppb (196 µg/m³)	N/A
	Annual Arithmetic Mean	N/A	N/A	0.30 ppm (for certain areas)	Unclassified/Attainment
Visibility-Reducing Particles[9]	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	**No Federal Standards**	
Sulfates	24 Hour	25 µg/m³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Unclassified		
Vinyl Chloride[7]	24 Hour	0.01 ppm (26 µg/m³)	N/A		

µg/m³ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

Table 5.2-3 Notes [continued]

5. On June 15, 2005 the 1-Hour Ozone NAAQS was revoked for all areas except the 8-Hour Ozone nonattainment Early Action Compact (EAC) areas. California does not contain any EAC areas.
6. On June 2, 2010, a new 1-hour SO2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. Note that the 1-hour national standard is in units of ppb. California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
7. CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
8. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
9. In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: California Air Resources Board and U.S. Environmental Protection Agency, *Ambient Air Quality Standards chart,* http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, May 4, 2016.

Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard, and are not used as a basis for designating areas as nonattainment.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

The SCAQMD is one of 35 air quality management districts that have prepared AQMP's to accomplish a five-percent annual reduction in emissions. On March 3, 2017, the SCAQMD Governing Board approved the *2016 Air Quality Management Plan* (2016 AQMP), which is a regional blueprint for achieving air quality standards and healthful air. The 2016 AQMP represents a new approach, focusing on available, proven, and cost-effective alternatives to traditional strategies, while seeking to achieve multiple goals in partnership with other entities promoting reductions in greenhouse gases and toxic risk, as well as efficiencies in energy use, transportation, and goods movement. The 2016 AQMP relies on a multi-level partnership of governmental agencies at the federal, state, regional, and local level. These agencies (EPA, CARB, local governments, Southern California Association of Governments [SCAG] and the SCAQMD) are the primary agencies that implement the AQMP programs. The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest *Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts. The 2016 AQMP includes integrated strategies and measures to meet the NAAQS. To ensure air quality goals will be met while maximizing benefits and minimizing adverse impacts to the regional economy, the following policy objectives have guided the development of the 2016 AQMP:

- Eliminate reliance on future technologies (CAA Section 182(e)(5)) measures to the maximum extent feasible;
- Calculate and take credit for co-benefits from other planning efforts;
- Develop a strategy with fair-share emission reductions at the federal, state, and local levels;

- Invest in strategies and technologies meeting multiple objectives regarding air quality, climate change, air toxics exposure, energy, and transportation;
- Identify and secure significant funding for incentives to implement early deployment and commercialization of zero and near-zero technologies;
- Enhance the socioeconomic analysis and pursue the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets; and
- Prioritize enforceable regulatory measures as well as non-regulatory, innovative and "win-win" approaches for emission reductions.

In addition to the 2016 AQMP and its rules and regulations, the SCAQMD published the *CEQA Air Quality Handbook*. The SCAQMD *CEQA Air Quality Handbook* provides guidance to assist local government agencies and consultants in developing the environmental documents required by CEQA. With the help of the *CEQA Air Quality Handbook*, local land use planners and other consultants are able to analyze and document how proposed and existing projects affect air quality and should be able to fulfill the requirements of the CEQA review process. The SCAQMD is in the process of developing an *Air Quality Analysis Guidance Handbook* to replace the current *CEQA Air Quality Handbook* approved by the SCAQMD Governing Board in 1993.

AIR QUALITY HEALTH IMPACTS

Adverse health effects induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individual [e.g., age, gender]). In particular, ozone precursors VOCs and NOx affect air quality on a regional scale. Health effects related to ozone are therefore the product of emissions generated by numerous sources throughout a region. Existing models have limited sensitivity to small changes in criteria pollutant concentrations, and, as such, translating project-generated criteria pollutants to specific health effects or additional days of nonattainment would produce meaningless results.

As noted in the Brief of Amicus Curiae by the SCAQMD (April 6, 2015), the SCAQMD acknowledged it would be extremely difficult, if not impossible to quantify health impacts of criteria pollutants for various reasons including modeling limitations as well as where in the atmosphere air pollutants interact and form. Furthermore, as noted in the Brief of Amicus Curiae by the San Joaquin Valley Air Pollution Control District (SJVAPCD) (April 13, 2015), SJVAPCD has acknowledged that currently available modeling tools are not equipped to provide a meaningful analysis of the correlation between an individual development project's air emissions and specific human health impacts.

The SCAQMD acknowledges that health effects quantification from ozone, as an example is correlated with the increases in ambient level of ozone in the air (concentration) that an individual person breathes. SCAQMD's Brief of Amicus Curiae states that it would take a large amount of additional emissions to cause a modeled increase in ambient ozone levels over the entire region. The SCAQMD states that based on their own modeling in the SCAQMD's 2012 Air Quality Management Plan, a reduction of 432 tons (864,000 pounds) per day of NOx and a reduction of 187 tons (374,000 pounds) per day of VOCs would reduce ozone levels at highest monitored site by only nine parts per billion. As such, the SCAQMD concludes that it is not currently possible to accurately quantify ozone-

related health impacts caused by NOx or VOC emissions from relatively small projects (defined as projects with regional scope) due to photochemistry and regional model limitations.

CITY OF NEWPORT BEACH

Newport Beach Municipal Code

Newport Beach Municipal Code Chapter 3.30, *Air Quality Improvement Trust Fund*, addresses air quality by establishing a special fund to receive revenue distributed by the SCAQMD. The SCAQMD imposes additional vehicle registration fees to bring the City into compliance with the requirements set forth in Section 44243 of the Health and Safety Code, in order to receive fee revenues for the purpose of implementing mobile source reduction programs.

5.2.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

REGIONAL AIR QUALITY

The Basin is currently in nonattainment status with State standards for O_3, $PM_{2.5}$, and PM_{10}, as well as Federal O_3 and $PM_{2.5}$ standards. The SCAQMD has established methods to guide local agency reviews of land use projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any Federal attainment plan.

In its *CEQA Air Quality Handbook* (November 1993), the SCAQMD has established significance thresholds to assess the impact of project related air pollutant emissions. These significant thresholds are used to determine whether or not the proposed project would violate an air quality standard or contribute to an existing violation during operations and/or construction. Table 5.2-4, *SCAQMD Regional Pollutant Emission Thresholds of Significance*, presents these significance thresholds. There are separate thresholds for short-term construction and long-term operational emissions. A project with daily emission rates below these thresholds is considered to have a less than significant effect on regional air quality.

Table 5.2-4
SCAQMD Regional Pollutant Emission Thresholds of Significance

Phase	Pollutant (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Construction	75	100	550	150	150	55
Operation	55	55	550	150	150	55

CO = carbon monoxide; VOC = volatile organic compounds; NO_X = nitrogen oxides; PM_{10} = particulate matter smaller than 10 microns; $PM_{2.5}$ = particulate matter smaller than 2.5 microns
Source: South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993.

Construction

Mass daily combustion emissions, fugitive PM_{10} and $PM_{2.5}$, and off-gassing emissions were calculated using the California Emissions Estimator Model version 2016.3.1 (CalEEMod), as recommended by the SCAQMD. CalEEMod separates the construction process into multiple phases, including demolition and site clearing, grading, trenching, building construction, and architectural coating. Construction emissions account for on-site construction equipment emissions, haul truck trips, and worker commute trips. Construction activities were based upon construction scheduling and other preliminary construction details provided by the City. Where appropriate, CalEEMod defaults were utilized. CalEEMod assumptions are provided in Appendix 11.2, *Air Quality/Greenhouse Gas Emissions/Energy Data*.

LOCAL AIR QUALITY

Localized Significance Thresholds

Localized Significance Thresholds (LSTs) were developed in response to the SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (revised July 2008) for guidance. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The LST methodology assists lead agencies in analyzing localized impacts associated with proposed projects. The SCAQMD provides the LST lookup tables for one, two, and five acre projects emitting CO, NO_X, PM_{10}, and $PM_{2.5}$. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over the roadways. The SCAQMD recommends that any project over five acres should perform air quality dispersion modeling to assess impacts to nearby sensitive receptors.

Localized CO

In addition, the project would result in a local air quality impact if the project results in increased traffic volumes and/or decreases in Level of Service (LOS) that would result in an exceedance of the CO ambient air quality standards of 20 parts per million (ppm) for 1-hour CO concentration levels, and 9 ppm for 8-hour CO concentration levels. If the CO concentrations at potentially impacted intersections with the project are lower than the standards, then there is no significant impact. If future CO concentrations with the project are above the standard, then the project would have a significant local air quality impact.

Cumulative Emissions

The SCAQMD's 2016 AQMP was prepared to accommodate growth, meet state and federal air quality standards, and minimize the fiscal impact that pollution control measures have on the local economy. According to the SCAQMD *CEQA Air Quality Handbook*, project-related emissions that fall below the established construction and operational thresholds should be considered less than significant unless there is pertinent information to the contrary.

If a project exceeds these emission thresholds, the SCAQMD *CEQA Air Quality Handbook* states that the significance of a project's contribution to cumulative impacts should be determined based on whether the rate of growth in average daily trips exceeds the rate of growth in population.

CEQA SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (refer to Impact Statement AQ-1 and AQ-2).
- Expose sensitive receptors to substantial pollutant concentrations (refer to Impact Statement AQ-3).
- Conflict with or obstruct implementation of the applicable air quality plan (refer to Impact Statement AQ-4).
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people (refer to Impact Statement AQ-5).

Based on these significance thresholds and criteria, the project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

The standards used to evaluate the significance of impacts are often qualitative rather than quantitative because appropriate quantitative standards are either not available for many types of impacts or are not applicable for some types of projects.

5.2.4 IMPACTS AND MITIGATION MEASURES

SHORT-TERM (CONSTRUCTION) AIR EMISSIONS

AQ-1 SHORT-TERM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT COULD RESULT IN AIR POLLUTANT EMISSION IMPACTS.

Impact Analysis:

Original Northeast Pump Station

Short-term air quality impacts are predicted to occur during grading and construction operations associated with implementation of the proposed project. Temporary construction air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading and building construction; and
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew.

Potential odors could arise from the diesel construction equipment used on-site, as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Additionally, odors generated during construction activities would be temporary and are not considered to be a significant impact.

The project proposes the construction of a new pump station, pump station facilities, and associated force mains. The existing pump station would remain in service and fully operational while the new pump station, generator, and odor control facilities would be constructed in the northeast corner of the Bayside Village Marina property. Once the new pump station and pump station facilities are completed and commissioned, the existing force mains would be abandoned and the existing pump station would be taken out of service, demolished, and redeveloped with future mixed use residential and commercial development. Construction activities would consist of grading, demolition, excavation, cut-and-fill, open cut trenching, and a remotely-controlled guided, pipe jacking process called microtunneling and a trenchless construction process called horizontal directional drilling (HDD) for the force main improvements and would include demolition, grading, construction of buildings, and painting for the pump station improvements. The total area disturbed would be approximately 0.57 acres. Grading activities could include the export of approximately 1,210 cubic yards of soil for the bore pits for the Newport Channel force main improvements, the import and export of approximately 3,022 cubic yards of soil for open cut trenching through the area within the southern portion of Castaways Park, the export of 542 cubic yards of a reception shaft and connections for the PCH force main improvements, the import of approximately 1,400 cubic yards of soil for the construction of the pump station improvements, and the import and export of approximately 1,200 cubic yards of soil for gravity sewer reroutes to the new pump station. Construction of the proposed project is anticipated to occur in one phase over a 44-month period.

Project construction would require tractors/loaders/backhoes, excavators, a generator set, a paver, a crane, and other construction equipment during grading; concrete/industrial saws, rubber tired dozers, and tractors/loaders/backhoes during demolition; tractors/loaders/backhoes, cranes, forklifts, generator sets, welders, and other construction equipment during building construction. Emissions for each construction phase have been quantified based upon the phase durations and equipment types. The analysis of daily construction emissions has been prepared utilizing CalEEMod. Refer to Appendix 11.2, *Air Quality/Greenhouse Gas Emissions/Energy Data*. for the CalEEMod outputs and results. Table 5.2-5, *Maximum Daily Construction Emissions*, presents the anticipated daily short-term construction emissions.

Table 5.2-5
Maximum Daily Construction Emissions

Emissions Source	Daily Pollutant Emissions (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Year 1						
Unmitigated	5.12	46.78	41.78	0.07	9.39	5.34
Mitigated[2]	5.12	46.78	41.78	0.07	5.43	3.59
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 2						
Unmitigated	4.15	38.49	38.54	0.06	2.19	1.97
Mitigated[2]	4.15	38.49	38.54	0.06	2.16	1.96
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 3						
Unmitigated	3.73	34.37	38.11	0.06	1.88	1.67
Mitigated[2]	3.73	34.37	38.11	0.06	1.85	1.67
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 4						
Unmitigated	4.17	37.32	45.84	0.08	3.43	2.00
Mitigated[2]	4.17	37.32	45.84	0.08	2.62	1.87
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Year 5						
Unmitigated	3.24	29.55	37.79	0.06	1.49	1.30
Mitigated[2]	3.24	29.55	37.79	0.06	1.46	1.30
SCAQMD Construction Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Mitigated Emissions Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***

VOC = volatile organic compounds; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides; PM_{10} = particulate matter smaller than 10 microns; $PM_{2.5}$ = particulate matter smaller than 2.5 microns

Notes:

1. Emissions were calculated using CalEEMod version 2016.3.1.
2. The reduction/credits for construction emission mitigations are based on mitigation included in CalEEMod. The mitigation includes the following: properly maintain mobile and other construction equipment; replace ground cover in disturbed areas quickly; water exposed surfaces twice daily; cover stock piles with tarps; water all haul roads three times daily; limit speeds on unpaved roads to 15 miles per hour; and use CARB certified engines.
3. Regional daily construction thresholds are based on the SCAQMD significance thresholds.

Refer to Appendix 11.2, *Air Quality/Greenhouse Gas Emissions/Energy Data*, for assumptions used in this analysis.

Fugitive Dust Emissions

Fugitive dust (PM_{10} and $PM_{2.5}$) from grading and construction is expected to be short-term and would cease following project completion. Most of this material is composed of inert silicates, which are less harmful to health than the complex organic particulates released from combustion sources. These particles are either directly emitted or are formed in the atmosphere from the combustion of gases such as NO_X and SO_X combining with ammonia. The greatest amount of fugitive dust generated is expected to occur during site grading and excavation. Dust generated by such activities usually becomes more of a local nuisance than a serious health problem. Of particular concern is the amount of PM_{10} generated as a part of fugitive dust emissions.

CalEEMod was used to calculate PM_{10} and $PM_{2.5}$ fugitive dust emissions as part of the site earthwork activities. These calculations are included in Table 5.2-5. Maximum particulate matter emissions would occur during the initial stages of construction, when grading activities would occur. Mitigation Measure AQ-1 requires that construction activities comply with SCAQMD Rule 403, such that

excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures. In addition, SCAQMD Rule 402 is required for implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site and after implementation would reduce short-term fugitive dust impacts on nearby sensitive receptors. Mitigation Measure AQ-2 requires that construction activities comply with the State Vehicle Code Section 23114 and Sections 23114(b)(F) and e(4) in order to prevent excavated or graded material from spilling onto public streets and roads. With adherence to Mitigation Measures AQ-1 and AQ-2, the maximum mitigated particulate matter concentration would be 5.43 pounds per day (lbs/day) for PM_{10} and 3.59 lbs/day for $PM_{2.5}$ in construction Year 1. Therefore, emissions in each year are below SCAQMD thresholds of 150 lbs/day for PM_{10} and 55 lbs/day for $PM_{2.5}$. Although the unmitigated particulate matter levels are below the SCAQMD thresholds in the absence of specific dust reduction measures, Mitigation Measures AQ-1 and AQ-2 have been implemented to further reduce impacts as the Basin is nonattainment for PM_{10} and $PM_{2.5}$.

ROG Emissions

In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates reactive organic gases (ROG) emissions, which are O_3 precursors. As shown in Table 5.2-5, ROG emissions would be below the applicable thresholds and impacts would be less than significant.

Construction Exhaust Emissions

Exhaust emissions would be generated by the operation of vehicles and equipment on the construction site, such as tractors, dozers, backhoes, cranes, and trucks. The majority of construction equipment and vehicles would be diesel powered, which tends to be more efficient than gasoline-powered equipment. Diesel-powered equipment produces lower carbon monoxide and hydrocarbon emissions than gasoline equipment, but produces greater amounts of NO_X, SO_X, and particulates per hour of activity. The transportation of machinery, equipment and materials to and from the project site, as well as construction worker trips, would also generate vehicle emissions during construction. Standard SCAQMD regulations, such as maintaining all construction equipment in proper tune, shutting down equipment when not in use for extended periods of time, and implementing SCAQMD Rule 403 would be adhered to. As noted in Table 5.2-5, construction equipment exhaust would not exceed SCAQMD thresholds. Therefore, impacts are less than significant in this regard.

Asbestos

Pursuant to guidance issued by the Governor's Office of Planning and Research, State Clearinghouse, lead agencies are encouraged to analyze potential impacts related to naturally occurring asbestos (NOA). Asbestos is a term used for several types of naturally occurring fibrous minerals that are a human health hazard when airborne. The most common type of asbestos is chrysotile, but other types such as tremolite and actinolite are also found in California. Asbestos is classified as a known human carcinogen by State, Federal, and international agencies and was identified as a toxic air contaminant by the CARB in 1986.

Asbestos can be released from serpentinite and ultramafic rocks when the rock is broken or crushed. At the point of release, the asbestos fibers may become airborne, causing air quality and human health hazards. These rocks have been commonly used for unpaved gravel roads, landscaping, fill projects, and other improvement projects in some localities. Asbestos may be released to the atmosphere due

to vehicular traffic on unpaved roads, during grading for development projects, and at quarry operations. All of these activities may have the effect of releasing potentially harmful asbestos into the air. Natural weathering and erosion processes can act on asbestos bearing rock and make it easier for asbestos fibers to become airborne if such rock is disturbed.

Serpentinite and/or ultramafic rock are known to be present in 44 of California's 58 counties. These rocks are particularly abundant in the counties of the Sierra Nevada foothills, the Klamath Mountains, and Coast Ranges. According to the Department of Conservation Division of Mines and Geology, *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos Report* (dated August 2000), the proposed project is not located in an area where NOA is likely to be present. Therefore, impacts would be less than significant.

It is also possible that asbestos-containing materials may exist within older existing buildings that may be modified or demolished. Therefore, the possibility exists that asbestos fibers may be released into the air should no asbestos assessment or removal (if needed) take place prior to demolition. SCAQMD Rule 1403 establishes Survey Requirements, notification, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities. Rule 1403 incorporates the federal asbestos requirements found in National Emission Standards for Hazardous Air Pollutants (NESHAP) found in the Code of Federal Regulations (CFR) Title 40, Part 61, Subpart M. The EPA delegated to SCAQMD the authority to enforce the federal asbestos NESHAP and the SCAQMD is the local enforcement authority for asbestos. Additionally, standard practice pursuant to SCAQMD Rule 403 is to conduct an asbestos assessment for candidate buildings to determine the presence of asbestos. If identified, an asbestos abatement contractor would be retained to develop an abatement plan and remove the asbestos containing materials, in accordance with local, State, and Federal requirements. After removal, demolition may proceed without significant concern to the release of asbestos fibers into the air. Also refer to Section 5.7, *Hazards and Hazardous Materials*, for an additional discussion of asbestos and asbestos containing materials.

Summary - Total Daily Construction Emissions

In accordance with the SCAQMD Guidelines, CalEEMod was utilized to model construction emissions for ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Construction would occur over five years, with the greatest emissions being generated during the first year of construction. CalEEMod allows the user to input mitigation measures such as watering the construction area to limit fugitive dust and applying soil stabilizers to the project area. Mitigation measures inputted within CalEEMod allow for certain reduction credits and result in a decrease of pollutant emissions. Reduction credits are based upon studies developed by CARB, SCAQMD, and other air quality management districts throughout California, and were programmed within CalEEMod. As indicated in Table 5.2-5, CalEEMod calculates the reduction associated with recommended mitigation measures.

Short-term construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment. As discussed under Section 5.2.3, *Impact Thresholds and Significance Criteria*, the project region is currently in nonattainment status with State standards for O_3, $PM_{2.5}$, and PM_{10}, as well as Federal O_3 and $PM_{2.5}$ standards. SCAQMD thresholds were established to determine whether or not the proposed project would violate an air quality standard or contribute to an existing violation during construction. As shown in Table 5.2-5, criteria pollutant emissions would not exceed SCAQMD thresholds. As such, the proposed project would not violate an air quality standard or contribute to an existing violation during construction. Although

the unmitigated particulate matter levels are below the SCAQMD thresholds in the absence of specific dust reduction measures, Mitigation Measures AQ-1 and AQ-2 have been implemented to further reduce impacts as the Basin is nonattainment for PM_{10} and $PM_{2.5}$. These measures call for the maintenance of construction equipment, the use of non-polluting and non-toxic building equipment, and minimizing fugitive dust. Therefore, construction related air emissions would not result in a cumulatively considerable net increase of any criteria pollutant with implementation of Mitigation Measures AQ-1 and AQ-2, and impacts would be less than significant in this regard.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the construction activities required would be similar to those proposed under the Original Northeast Pump Station. However, construction of the Modified Northeast Pump Station proposes an alternative dredging construction method for force main improvements. As such, the project may require alternative construction equipment and would be shorter in duration than the Original Northeast Pump Station. HDD would not be an option for the Modified Northeast Pump Station. Modified Northeast Pump Station construction variations are discussed in more detail below.

Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station proposes microtunneling as a potential construction method to install the force main improvements across the Newport Bay Channel to the south of Bay Bridge. However, the Modified Northeast Pump Station also proposes dredging as a potential construction method, as opposed to microtunneling, across the Newport Bay Channel. Dredging activities would require the use of excavator clamshell dredge/backfill equipment and approximately 3,870 cubic yards of cut and 3,730 cubic yards of fill. As such, dredging activities would result in approximately 140 cubic yards of export which would increase the Original Northeast Pump Station construction emissions by approximately two percent. When compared to the Original Northeast Pump Station, a two percent increase in construction emissions would not result in exceedances above SCAQMD thresholds; refer to Appendix 11.2.

Short-term construction of the Modified Northeast Pump Station would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment as construction emissions would not result in exceedances above SCAQMD thresholds. As such, the Modified Northeast Pump Station would not violate an air quality standard or contribute to an existing violation during construction. Further, construction would be required to implement Mitigation Measures AQ-1 and AQ-2 which would further reduce construction air emissions. Therefore, as Modified Northeast Pump Station construction emissions would not exceed SCAQMD thresholds, construction related air emissions would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant with implementation of Mitigation Measures AQ-1 and AQ-2.

South Pump Station

The analyses for the Original Northeast Pump Station and Modified Northeast Pump Station are also applicable to the South Pump Station. Development of the South Pump Station would involve shifting and expanding the existing pump station facility site approximately 200 feet to the west and constructing a new pump station building. Pump station improvements construction activities for the South Pump Station would be similar to that of the Original Northeast Pump Station and Modified Northeast Pump Station. The South Pump Station improvements would require approximately 2,800

cubic yards of cut and 500 cubic yards of fill. Similar to the Modified Northeast Pump Station, the South Pump Station would install force mains across the Newport Bay Channel via either dredging or microtunneling. Thus, the analyses for the Original Northeast Pump Station and Modified Northeast Pump Station would be applicable to the South Pump Station. Therefore, the South Pump Station's construction related air emissions would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant with implementation of Mitigation Measures AQ-1 and AQ-2.

Mitigation Measures: The following mitigation measures apply to all site plan concepts:

AQ-1 Prior to ground disturbance associated with the project, the Orange County Sanitation District shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with SCAQMD Rule 403, excessive fugitive dust emissions shall be controlled by regular watering or other dust prevention measures, as specified in the SCAQMD's Rules and Regulations. In addition, SCAQMD Rule 402 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered during daily construction activities when dust is observed migrating from the project site to prevent excessive amounts of dust;
- Apply non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas to reduce the need for watering after dust is observed to be migrating from the site. More frequent watering shall occur if dust is observed migrating from the site during site disturbance;
- Any on-site stockpiles of debris, dirt, or other dusty material shall be enclosed, covered, or watered twice daily, or non-toxic soil binders shall be applied;
- All grading and excavation operations shall be suspended when wind speeds exceed 25 miles per hour;
- Disturbed areas shall be replaced with ground cover or paved immediately after construction is completed in the affected area;
- Track-out devices such as gravel bed track-out aprons shall be installed to reduce mud/dirt trackout from unpaved truck exit routes. Alternatively, a wheel washer shall be used at truck exit routes;
- On-site vehicle speed shall be limited to 15 miles per hour;
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site; and
- Trucks associated with soil-hauling activities shall avoid all residential streets, except Bayside Drive, and utilize City-designated truck routes.

AQ-2 The Orange County Sanitation District, or designee, shall require that all trucks that are to haul excavated or graded material off-site shall comply with State Vehicle Code Section 23114 (Spilling Loads on Highways), with special attention to Sections 23114(b)(F) and (e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads. This requirement shall be included in plans and specifications for the proposed project.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

LONG-TERM (OPERATIONAL) AIR EMISSIONS

AQ-2 IMPLEMENTATION OF THE PROPOSED PROJECT WOULD RESULT IN INCREASED IMPACTS PERTAINING TO OPERATIONAL AIR EMISSIONS.

Impact Analysis:

Original Northeast Pump Station

Long-term air quality impacts occur from mobile source emission generated from project-related traffic and from stationary source emissions generated from natural gas. The proposed project would involve the construction of pump station and force main improvements. Mobile emissions would be generated by the motor vehicles traveling to and from the project site. However, the project would generate a nominal number of traffic trips, with up to 15 trips per week for periodic maintenance and inspections by OCSD staff, and would not generate any new traffic trips resulting in new long-term emissions. Stationary area source emissions are typically generated by the consumption of natural gas for space and water heating devices and the use of consumer products. As this project involves pump station and force main improvements, heating and consumer products would not be used. Stationary energy emissions would result from energy consumption associated with the proposed project. All pumps and generators associated with the project would be electrically-powered, and would not directly generate air emissions. However, the proposed project would include the use of an emergency diesel generator, paired with a 66 gallon fuel tank, allowing the pump station to run on backup power for approximately 11 hours of operational redundancy. As the backup generator would be installed on-site, the project Applicant would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and California ambient air quality standards in the Basin.

The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. Backup generators would be used only in emergency situations and for routine testing and maintenance purposes, and would not contribute a substantial amount of emissions capable of exceeding SCAQMD thresholds. As project operations would not exceed SCAQMD thresholds, the project would not violate an air quality standard or contribute to an existing violation. Therefore, project operations would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Therefore, project operations would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Therefore, project operations would not result in a cumulatively considerable net increase of any criteria pollutant and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

LOCALIZED EMISSIONS

AQ-3 IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN LOCALIZED EMISSIONS THAT MAY EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.

Impact Analysis:

Original Northeast Pump Station

Localized Significance Thresholds

LSTs were developed in response to SCAQMD Governing Boards' Environmental Justice Enhancement Initiative (I-4). The SCAQMD provided the *Final Localized Significance Threshold Methodology* (dated June 2003 [revised 2008]) for guidance. The LST methodology assists lead agencies in analyzing localized impacts associated with proposed projects. The SCAQMD provides LST lookup tables for one-, two-, and five-acre projects emitting NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The LST methodology and associated mass rates are not designed to evaluate localized impacts from mobile sources traveling over roadways. The project site is located within Sensitive Receptor Area (SRA) 18, North Coastal Orange County.

Construction LST

The SCAQMD guidance on applying CalEEMod to LSTs specifies the number of acres a particular piece of equipment would likely disturb per day. Based on the SCAQMD guidance, the project would disturb approximately 1.5 acres of land per day during the grading phase. Therefore, the LST thresholds for two acres were utilized for the construction LST analysis. The closest sensitive receptors are residential uses located approximately 25 feet to the north, east, and south of the project site. These sensitive land uses may be potentially affected by air pollutant emissions generated during

on-site construction activities. LST thresholds are provided for distances to sensitive receptors of 25, 50, 100, 200, and 500 meters. As the nearest sensitive uses are approximately 25 feet to the north, east, and south of the project site, the lowest available LST values for 25 meters were used.

Table 5.2-6, *Localized Significance of Emissions*, shows the localized unmitigated and mitigated construction-related emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ compared to the LSTs for SRA 18, North Coastal Orange County. It is noted that the localized emissions presented in Table 5.2-6 are less than those in Table 5.2-5 because localized emissions include only on-site emissions (i.e., from construction equipment and fugitive dust), and do not include off-site emissions (i.e., from hauling activities).

Table 5.2-6
Localized Significance of Emissions

On-Site Sources	Pollutant (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction				
Year 1 [1]				
Total Unmitigated On-Site Emissions	37.18	31.36	6.62	4.44
Total Mitigated On-Site Emissions	37.18	31.36	3.77	2.88
Localized Significance Threshold [2]	*131*	*945*	*7*	*5*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 2 [1]				
Total Unmitigated On-Site Emissions	38.08	38.10	2.06	1.93
Total Mitigated On-Site Emissions	38.08	38.10	2.06	1.93
Localized Significance Threshold [2]	*131*	*945*	*7*	*5*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 3 [1]				
Total Unmitigated On-Site Emissions	33.98	37.71	1.74	1.64
Total Mitigated On-Site Emissions	33.98	37.71	1.74	1.64
Localized Significance Threshold [2]	*131*	*945*	*7*	*5*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 4 [1]				
Total Unmitigated On-Site Emissions	31.20	37.50	1.52	1.43
Total Mitigated On-Site Emissions	31.20	37.50	1.52	1.43
Localized Significance Threshold [2]	*131*	*945*	*7*	*5*
Thresholds Exceeded?	***No***	***No***	***No***	***No***
Year 5 [1]				
Total Unmitigated On-Site Emissions	29.26	37.44	1.35	1.27
Total Mitigated On-Site Emissions	29.26	37.44	1.35	1.27
Localized Significance Threshold [2]	*131*	*945*	*7*	*5*
Thresholds Exceeded?	***No***	***No***	***No***	***No***

Notes:
1. The highest on-site NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions for Year 1 are from the Grading phase. The highest on-site NO_X, CO, PM_{10}, and $PM_{2.5}$ emissions for Years 2 through 4 are from the Building Construction phase.

Table 5.2-6 Notes [continued]
2. The Localized Significance Threshold was determined using Appendix C of the SCAQMD Final Localized Significant Threshold Methodology guidance document for pollutants NOX, CO, PM10, and PM2.5. The Localized Significance Threshold conservatively uses the 1 acre threshold, the distance to sensitive receptors (25 meters), and the source receptor area (SRA 18).

Operational LST

According to SCAQMD localized significance threshold methodology, LSTs would apply to the operational phase of a proposed project if the project includes stationary sources or attracts mobile sources that may spend extended periods queuing and idling at the site (e.g., warehouse or transfer facilities). As previously discussed under Impact Statement AQ-2, the project would generate a nominal number of traffic trips, with up to 15 trips per week for periodic maintenance and inspections by OCSD staff, and would not generate any new traffic trips resulting in new mobile source emissions. Additionally, all pumps associated with the project would be electrically-powered, and would not directly generate air emissions. However, the proposed project would include the use of an emergency diesel generator, paired with a 66 gallon fuel tank, allowing the pump station to run on backup power for approximately 11 hours of operational redundancy. As the backup generator would be installed on-site, the project Applicant would be required to obtain the applicable permits from SCAQMD for operation of such equipment. The SCAQMD is responsible for issuing permits for the operation of stationary sources in order to reduce air pollution, and to attain and maintain the national and California ambient air quality standards in the Basin.

The Original Northeast Pump Station would not expose sensitive receptors to substantial pollutant concentrations during operations. Upon compliance with SCAQMD permitting procedures, localized emissions from the proposed diesel generator would not result in substantial pollutant concentrations capable of exceeding operational LST thresholds. Therefore, operation of the Original Northeast Pump Station would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant.

Carbon Monoxide Hotspots

CO emissions are a function of vehicle idling time, meteorological conditions and traffic flow. Under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels (i.e., adversely affect residents, school children, hospital patients, the elderly, etc.).

The Basin is designated as an attainment/maintenance area for the Federal CO standards and an attainment area for State standards. There has been a decline in CO emissions even though vehicle miles traveled on U.S. urban and rural roads have increased. On-road mobile source CO emissions have declined 24 percent between 1989 and 1998, despite a 23 percent rise in motor vehicle miles traveled over the same 10 years. California trends have been consistent with national trends; CO emissions declined 20 percent in California from 1985 through 1997 while vehicle miles traveled increased 18 percent in the 1990s. Three major control programs have contributed to the reduced per-vehicle CO emissions: exhaust standards, cleaner burning fuels, and motor vehicle inspection/maintenance programs.

The SCAQMD requires a quantified assessment of CO hotspots when a project increases the volume-to-capacity ratio (also called the intersection capacity utilization) by 0.02 (two percent) for any intersection with an existing level of service LOS D or worse. Based on the *Draft Environmental Impact*

Report General Plan 2006 Update, the nearest intersection to the project site has an existing LOS B (i.e. Bayside Drive and Coast Highway intersection).[2] Therefore, a quantified assessment of CO hotspots is not required as the existing LOS is not worse than LOS D.

Further, according to the SCAQMD *CEQA Air Quality Handbook*, a potential CO hotspot may occur at any location where the background CO concentration already exceeds 9.0 parts per million (ppm), which is the 8-hour California ambient air quality standard. As previously discussed, the project site is located in SRA 18, North Coastal Orange County. Communities within SRAs are expected to have similar climatology and ambient air pollutant concentrations. The monitoring station representative of SRA 18 is the Costa Mesa monitoring station, which is located approximately 4.1 miles north of the project site. The highest CO concentration at the Costa Mesa monitoring station was measured at 3.84 ppm in 2017; refer to Table 5.2-1. As such, the background CO concentration does not exceed 9.0 ppm and a CO hotspot would not occur. Therefore, CO hotspot impacts would be less than significant in this regard and sensitive receptors would not be exposed to substantial pollutant concentrations.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as operation and construction activities required would be similar to those proposed under the Original Northeast Pump Station. However, as previously stated, construction of the Modified Northeast Pump Station proposes an alternative dredging construction method for force main improvements. As such, the project may require alternative construction equipment and would be shorter in duration than the Original Northeast Pump Station. Dredging activities would require the use of excavator clamshell dredge/backfill equipment and approximately 3,870 cubic yards of cut and 3,730 cubic yards of fill. As such, dredging activities would result in approximately 140 cubic yards of export which would increase the Original Northeast Pump Station construction emissions by approximately two percent. The increase in construction emissions of approximately of two percent, when compared to the Original Northeast Pump Station, would not result in exceedances above SCAQMD LST thresholds; refer to Appendix 11.2. Further, construction would be required to implement Mitigation Measures AQ-1 and AQ-2. Therefore, operation and construction of the Modified Northeast Pump Station would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant with implementation of Mitigation Measures AQ-1 and AQ-2.

South Pump Station

The analyses for the Original Northeast Pump Station and Modified Northeast Pump Station are also applicable to the South Pump Station. Thus, operation and construction of the South Pump Station would not expose sensitive receptors to substantial pollutant concentrations and impacts would be less than significant with implementation of Mitigation Measures AQ-1 and AQ-2.

Mitigation Measures: Refer to Mitigation Measures AQ-1 and AQ-2 for all site plan concepts.

[2] City of Newport Beach, *Draft Environmental Impact Report General Plan 2006 Update*, *Section 4.13*, *Transportation/Traffic*, *Table 4.13-3*, http://newportbeachca.gov/PLN/General_Plan/GP_EIR/Volume_1/18_Sec4.13_Transportation_Traffic.pdf, accessed May 9, 2019.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

CONSISTENCY WITH REGIONAL PLANS

AQ-4 IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN.

Impact Analysis:

Original Northeast Pump Station

On March 3, 2017, the SCAQMD Governing Board adopted the 2016 AQMP, which incorporates the latest scientific and technical information and planning assumptions, including the latest applicable growth assumptions, SCAG's *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS), and updated emission inventory methodologies for various source categories. Consistency with the 2016 AQMP means that a project is consistent with the goals, objectives, and assumptions set forth in the 2016 AQMP that are designed to achieve Federal and State air quality standards. According to the SCAQMD's CEQA Air Quality Handbook, two main criteria must be addressed.

Criterion 1

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis for a project include forecasts of project emissions in relation to contributing to air quality violations and delay of attainment.

a) Would the project result in an increase in the frequency or severity of existing air quality violations?

Air quality violations would occur if a project interfered with attainment of the Federal or State ambient air quality standards. As discussed under Impact Statement AQ-3, LSTs represent the maximum project emissions that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State ambient air quality standard (i.e. CAAQS and NAAQS). The proposed project would not exceed LST thresholds and localized concentrations of CO, NO_X, PM_{10}, and $PM_{2.5}$ would be less than significant during project operations and construction. Therefore, the proposed project would not result in an increase in the frequency or severity of existing air quality violations.

b) Would the project cause or contribute to new air quality violations?

As discussed under Criterion 1(a), localized emissions would not result in an air quality violation as localized emissions would not cause or contribute to an exceedance of the applicable Federal and State ambient air quality standards. Further, as noted under Impact Statement AQ-1 and AQ-2, project construction and operational emissions would not exceed SCAQMD thresholds. Because the project would not exceed SCAQMD thresholds, the project would not violate an air quality standard or regionally contribute to an existing or new air quality violation. Therefore, the proposed project would not have the potential

to cause or affect a violation of the ambient air quality standards, and the project would not conflict with or obstruct implementation of the AQMP in this regard.

c) *Would the project delay timely attainment of air quality standards or the interim emissions reductions specified in the AQMP?*

As noted under Criterion 1(a) and Criterion 1(b), the proposed project would result in less than significant impacts with regard to localized and regional concentrations during operations and construction. As such, the proposed project would not delay the timely attainment of air quality standards or 2016 AQMP emissions reductions.

Criterion 2

With respect to the second criterion for determining consistency with SCAQMD and SCAG air quality policies, it is important to recognize that air quality planning within the Basin focuses on attainment of ambient air quality standards at the earliest feasible date. Projections for achieving air quality goals are based on assumptions regarding population, housing, and growth trends. Thus, the SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented in the 2016 AQMP. Determining whether or not a project exceeds the assumptions reflected in the 2016 AQMP involves the evaluation of the three criteria outlined below. The following discussion provides an analysis of each of these criteria.

a) *Would the project be consistent with the population, housing, and employment growth projections utilized in the preparation of the AQMP?*

In the case of the 2016 AQMP, three sources of data form the basis for the projections of air pollutant emissions: the *City of Newport Beach General Plan* (General Plan), SCAG's *Growth Management* Chapter of the *Regional Comprehensive Plan* (RCP), and the RTP/SCS. The RTP/SCS also provides socioeconomic forecast projections of regional population growth.

The project proposes improvements to pump station facilities and associated force mains to bring the pump station facilities and force mains to current design and reliability standards and ensure continuous service for the OCSD service area. The proposed project is considered consistent with the General Plan as the project does not involve any uses that would increase population beyond that considered in the General Plan and, therefore, would not affect City-wide plans for population growth at the project site. Thus, the proposed project is consistent with the types, intensity, and patterns of land use envisioned for the site vicinity in the RCP. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on the local plans and policies applicable to the City; these are used by SCAG in all phases of implementation and review. Additionally, as the SCAQMD has incorporated these same projections into the 2016 AQMP, it can be concluded that the proposed project would be consistent with the projections and would not conflict with or obstruct implementation of the AQMP.

b) Would the project implement all feasible air quality mitigation measures?

The proposed project will implement all feasible emission reduction measures identified by the SCAQMD and that apply to this project. These measures have been included as Mitigation Measures AQ-1 and AQ-2. As such, the proposed project meets this AQMP consistency criterion.

c) Would the project be consistent with the land use planning strategies set forth in the AQMP?

The project proposes improvements to the pump station facilities and force mains to ensure current design and reliability standards are met and to bring continuous service for the OCSD service area. Construction activities would consist of demolition, grading, excavation, cut-and-fill, open cut trenching, microtunneling, HDD, and building construction. The proposed project does not involve land use planning strategies. Therefore, there would be no conflicts with the AQMP in this regard.

In conclusion, the project would not conflict with or obstruct implementation of the 2016 AQMP. The determination of 2016 AQMP consistency is primarily concerned with the long-term influence of a project on air quality in the Basin. The proposed project would not result in a long-term impact on the region's ability to meet State and Federal air quality standards. As discussed above, the proposed project's long-term influence would also be consistent with the goals and policies of the SCAQMD. Implementation of Mitigation Measures AQ-1 and AQ-2 would ensure the project complies with SCAQMD emission reduction measures in an effort to further reduce impacts as the Basin is nonattainment for PM10 and PM2.5. Therefore, the project would be consistent with the 2016 AQMP and impacts would be less than significant with implementation of Mitigation Measures AQ-1 and AQ-2.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, the Modified Northeast Pump Station would not conflict with or obstruct implementation of the 2016 AQMP.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station would not conflict with or obstruct implementation of the 2016 AQMP.

Mitigation Measures: Refer to Mitigation Measures AQ-1 and AQ-2 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

ODOR IMPACTS

AQ-5 CONSTRUCTION AND OPERATION OF THE PROPOSED PROJECT COULD CREATE OBJECTIONABLE ODORS AFFECTING A SUBSTANTIAL NUMBER OF PEOPLE.

Impact Analysis:

Original Northeast Pump Station

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. OCSD has received no odor complaints associated with the existing Bay Bridge Pump Station. The project site includes a pump station facility. The proposed project would result in similar wastewater infrastructure to upgrade pump station facilities that would not increase odor emissions in the project vicinity. The project proposes a new 620-square foot odor control facility, connected to the generator building. The odor control facility would house a vapor-phase odor control scrubber system, which would remove odorous vapors from the incoming waste system. The project site would provide space for two 10-foot diameter tanks should OCSD prefer to include liquid phase odor control. OCSD currently implements liquid phase odor control at the existing pump station using one 5,200 gallon tank containing magnesium hydroxide, and a 6,700 gallon tank containing calcium nitrate. As such, the project would be required to deliver a fully functioning vapor-phase odor control system. Therefore, operation of the proposed project would not create objectionable odors affecting a substantial number of people and any long-term odor impacts would be less than significant.

Construction activities associated with the proposed project may generate detectable odors from heavy-duty equipment exhaust and asphalt off-gassing. These construction-related odors would be short-term in nature and cease upon construction completion. Construction of the proposed project would not create objectionable odors affecting a substantial number of people and any construction odors would be short-term, would disperse rapidly, and are considered less than significant.

Modified Northeast Pump Station

Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station proposes microtunneling as a potential construction method to install the force main improvements across the Newport Bay Channel to the south of Bay Bridge. However, the Modified Northeast Pump Station also proposes dredging as a potential construction method (as opposed to microtunneling) across the Newport Bay Channel. The construction equipment used for dredging operations would result in similar odors from the equipment, compared to that considered for the Original Northeast Pump Station. As such, the construction odor analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, construction and operation of the Modified Northeast Pump Station would not create objectional odors affecting a substantial number of people and impacts would be less than significant.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, construction and operation of the South Pump Station would not create objectional odors affecting a substantial number of people and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

5.2.5 CUMULATIVE IMPACTS

Table 4-1, *Cumulative Projects List*, identifies the related projects and other possible development in the area determined as having the potential to interact with the proposed project to the extent that a significant cumulative effect may occur. The following discussions are included per topic area to determine whether a significant cumulative effect would occur.

SHORT-TERM (CONSTRUCTION) AIR EMISSIONS

SHORT-TERM CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN INCREASED AIR POLLUTANT EMISSION IMPACTS.

Impact Analysis:

Original Northeast Pump Station

The SCAQMD neither recommends quantified analyses of cumulative construction emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction impacts. The SCAQMD significance thresholds for construction are intended to meet the objectives of the 2016 AQMP to ensure the Federal and California ambient air quality standards are not exceeded. As the project Applicant has no control over the timing or sequencing of the related projects, any quantitative analysis to ascertain the daily construction emissions that assumes multiple, concurrent construction would be speculative. The project's construction emissions would not exceed SCAQMD thresholds, are temporary in nature, and would cease following project completion. In addition, project compliance with SCAQMD rules and regulations and Mitigation Measures AQ-1 and AQ-2 would reduce construction-related impacts to less than significant levels. Per SCAQMD rules and mandates, as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., Rule 403 compliance, the implementation of all feasible mitigation measures, and compliance with adopted AQMP emissions control measures) would also be imposed on construction projects throughout the Basin, which would include each of the related projects listed in Section 4.0, *Basis of Cumulative Analysis*. Therefore, as cumulative projects would be required to reduce their emissions per SCAQMD rules and mandates and the project's construction emissions would be below SCAQMD thresholds, the project would not contribute to an exceedance of the Federal or California ambient air quality standards and would comply with the 2016 AQMP goals. Thus, it can be reasonably inferred that project-related construction activities would not result in a cumulatively considerable net increase of any criteria pollutant. Therefore, the Original Northeast

Pump Station's construction-related incremental contribution to cumulative impacts would be less than cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, the Modified Northeast Pump Station's construction-related incremental contribution to cumulative impacts would be less than cumulatively considerable.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station's construction-related incremental contribution to cumulative impacts would be less than cumulatively considerable.

Mitigation Measures: Refer to Mitigation Measures AQ-1 through AQ-2 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

LONG-TERM (OPERATIONAL) AIR EMISSIONS

PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN INCREASED IMPACTS PERTAINING TO OPERATIONAL AIR EMISSIONS.

Impact Analysis:

Original Northeast Pump Station

The SCAQMD has set forth both a methodological framework as well as significance thresholds for the assessment of a project's cumulative operational air quality impacts. The SCAQMD's approach for assessing cumulative impacts is based on the 2016 AQMP forecasts of NAAQS attainment in accordance with FCAA and CCAA requirements. This forecast also takes into account the 2016 AQMP forecasted future regional growth. As such, the analysis of cumulative impacts focuses on determining whether the proposed project is consistent with the growth assumptions upon which the 2016 AQMP is based. If the project is consistent with the growth assumptions, then future development would not impede the attainment of NAAQS and a significant cumulative air quality impact would not occur.

As discussed under Impact Statement AQ-2, the Original Northeast Pump Station would not result in long-term air quality impacts, as the operational emissions would not exceed SCAQMD regional thresholds. In addition, the proposed project would be consistent with what is anticipated in the General Plan and Zoning Code. Further, emissions reduction technology, strategies, and plans are constantly being developed which would further reduce cumulative air emissions in the Basin. As a result, the Original Northeast Pump Station's incremental contribution to cumulative impacts for any nonattainment criteria pollutant would be less than cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, the Modified Northeast Pump Station's incremental contribution to cumulative impacts of any nonattainment criteria pollutant would be less than cumulatively considerable.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station's incremental contribution to cumulative impacts of any nonattainment criteria pollutant would be less than cumulatively considerable.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

LOCALIZED EMISSIONS

IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN LOCALIZED EMISSIONS THAT WOULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS.

Impact Analysis:

Original Northeast Pump Station

As stated above under Impact Statement AQ-3, the LST methodology assists lead agencies in analyzing localized air quality impacts. The SCAQMD provides the LST screening lookup tables for one-, two-, and five-acre projects emitting CO, NO_X, $PM_{2.5}$, or PM_{10}. Because the disturbed acreages for each cumulative project site can vary, the LST thresholds utilized also vary on a project-by-project basis. Localized emissions only affect the areas immediately adjacent to the project site. As discussed under Impact Statement AQ-3, construction and operational source emissions for the project would not exceed the applicable LSTs. Thus, the Original Northeast Pump Station's localized emissions would not expose sensitive receptors to substantial pollutant concentrations and the Original Northeast Pump Station's incremental contribution to cumulative impacts would be less than cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, the Modified Northeast Pump Station's incremental contribution to cumulative impacts would be less than cumulatively considerable.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station's incremental contribution to cumulative impacts would be less than cumulatively considerable.

Mitigation Measures: Refer to Mitigation Measures AQ-1 and AQ-2 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

CONSISTENCY WITH APPLICABLE AIR QUALITY PLANS

DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT COULD CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE APPLICABLE AIR QUALITY PLAN.

Impact Analysis:

Original Northeast Pump Station

The City of Newport Beach is subject to the SCAQMD's 2016 AQMP. Additionally, the City is located within the Orange County subregion of the SCAG RTP/SCS, which governs population growth. The General Plan is consistent with the RTP/SCS, and since the RTP/SCS is consistent with the 2016 AQMP, growth under the General Plan is consistent with the 2016 AQMP. The proposed project does not involve land use planning strategies. As stated above, the project proposes improvements to pump station facilities and associated force mains to meet current design and reliability standards and ensure continuous service for the OCSD service area. The site has been utilized as a pump station and currently includes wastewater infrastructure facilities. In addition, as operational emissions associated with the Original Northeast Pump Station would be below SCAQMD thresholds, the project would not conflict or obstruct the 2016 AQMP. As such, the Original Northeast Pump Station's incremental contribution to impacts in this regard would be less than cumulatively considerable, and a less than significant impact would occur. It is noted that all applicable construction emission reduction measures would be required for the project even though impacts are less than significant (refer to Mitigation Measures AQ-1 and AQ-2).

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, the Modified Northeast Pump Station's incremental contribution to impacts in this regard would be less than cumulatively considerable, and a less than significant impact would occur.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station's incremental contribution to impacts in this regard would be less than cumulatively considerable, and a less than significant impact would occur.

Mitigation Measures: Refer to Mitigation Measures AQ-1 and AQ-2 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

ODOR IMPACTS

DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT COULD RESULT IN INCREASED IMPACTS PERTAINING TO ODORS.

Impact Analysis:

Original Northeast Pump Station

As discussed above, the proposed project would result in similar wastewater infrastructure by upgrading pump station facilities and force main improvements, and would not increase odor emissions in the project vicinity. In addition, the project proposes a new 620 square foot odor control facility, which houses a vapor-phase odor control scrubber system that would remove odorous vapors from the incoming waste system. As such, the Original Northeast Pump Station's incremental contribution to impacts in this regard would be less than cumulatively considerable, and a less than significant impact would occur.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, the Modified Northeast Pump Station's incremental contribution to impacts in this regard would be less than cumulatively considerable, and a less than significant impact would occur.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station's incremental contribution to impacts in this regard would be less than cumulatively considerable, and a less than significant impact would occur.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

5.2.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No unavoidable significant impacts related to air quality have been identified following implementation of mitigation measures referenced in this section.

5.3 BIOLOGICAL RESOURCES

This section describes the biological resources on the project site and potential adverse impacts resulting from project implementation. Review and analysis of compliance with applicable Federal, State, and local laws, regulations, and policies regarding biological resources have also been conducted. The analysis in this section is based on information provided by the City of Newport Beach General Plan EIR as well as the following technical studies provided in Appendix 11.3, *Biological Resources Reports:*

- *Bay Bridge Pump Station Marine Resources Technical Study* (Marine Resources Study) prepared by Pi Environmental, dated March 21, 2019;
- *Biological Resources Assessment for the Bay Bridge Pump Station and Force Mains Replacement Project* (Biological Resources Assessment), prepared by Michael Baker International, dated March 20, 2019; and
- *Delineation of State and Federal Jurisdictional Waters Report* (Delineation) performed by Michael Baker International, dated March 2019.

5.3.1 EXISTING SETTING

EXISTING CONDITIONS

The proposed project site is located within a fully developed area of the City of Newport Beach and within the Newport Bay Channel. The existing Bay Bridge Pump Station facility is located immediately north of East Coast Highway and is bounded by a recreational vehicle (RV) storage area and mobile home park to the north, east, and west on an approximate 31.4-acre parcel owned by Bayside Village Marina, LLC as indicated in Exhibit 3-4, *Proposed Conceptual Designs*. Accordingly, the project proposes pump station improvements primarily within the currently developed Bayside Village Marina, LLC Parcel. Areas potentially impacted by construction improvements would include the current Bayside Village Marina, LLC property, a disturbed vacant area in the southern portion of Castaways Park, Newport Bay Channel, Bayside Drive, West Coast Highway, East Coast Highway, and West Road, as well as construction easement areas south of Coast Highway. The surrounding land is urbanized, consisting of roadways, residential areas, and commercial uses.

VEGETATION

Terrestrial

Several different plant communities/habitats occur within the City. The plant communities known to exist within the City include scrub habitats, chaparral habitats, riparian and wetland habitats, grassland habitats, ornamental, and disturbed. Pump station improvements and portions of the force main improvements outside of the Newport Bay Channel would occur in developed paved areas or ornamental landscaping. According to the Biological Resources Assessment, the project site includes five (5) relatively distinct vegetation communities within the project site: developed areas, ornamental vegetation, disturbed habitat, bare ground, and open water. In the project vicinity, Castaways Park (situated to the north of the project site) is an Environmental Study Area (ESA). ESAs may contain one or more sensitive plant communities, endangered species, and other wildlife species. Although

Castaways Park is designated as an ESA within the City's General Plan EIR, the southerly disturbed portion of the park (where construction improvements for force main implementation would occur) is excluded from the ESA. No special-status plant species have been observed at the project site due to the developed nature of the terrestrial portions of the project site and lack of suitable habitat for special-status terrestrial plant species.

Marine

The project site extends across the Newport Bay Channel to the north and south of the Bay Bridge. According to the Delineation report, Newport Bay is described as an estuarine and marine deep-water tidal habitat. According to the Marine Resources Study , the project site is surrounded by the Upper Newport Bay to the north which is designated as a State Marine Conservation Area (SMCA). Newport Bay is home to Eelgrass species (*Zostera marina and Z. pacifica*), which are rooted aquatic plants that inhabit shallow soft-bottom habitats in quiet waters of bays and estuaries, as well as sheltered coastal areas. According to Figure 4.3-1, *Biological Resources, of the General Plan EIR,* eelgrass is considered a sensitive marine resource due to its nursery function for invertebrates and fishes, and because it is considered critical foraging habitat for the Federal- and State-listed California least tern. Eelgrass is protected by the Southern California Eelgrass Mitigation Policy, which requires impacts to this species be avoided, minimized, or compensated. Eelgrass also warrants protection due to the essential fish habitat (EFH) it provides to managed species under the Magnuson-Stevens Fishery Conservation and Management Act (MSA).

WILDLIFE

Terrestrial

According to the Biological Resources Assessment, 18 terrestrial wildlife species common to developed and disturbed areas were detected during the on-site terrestrial survey and 52 special-status wildlife species have been recorded by the California Natural Diversity Data Base (CNDDB) and the United Sates Fish and Wildlife Service (USFWS) within the vicinity of the project site. No special-status wildlife species were observed on-site. All but one of these recorded special-status species either have a low potential or are not expected to occur on-site due to significant site disturbance and lack of suitable habitat.

Birds

Ornamental landscaping is present within parking lot facilities and East Coast Highway within areas of proposed disturbance. Considering the disturbed nature of this ornamental vegetation and the surrounding development, it is not anticipated to provide suitable nesting opportunities for avian species, including special status species. In addition, vegetation, including mature trees, are present within the surrounding area, including Castaways Park, De Anza Bayside Marsh Peninsula, Upper Newport Bay Nature Preserve, and Upper Newport Bay State Marine Park located north of the project site. These off-site areas of vegetation have the potential to provide suitable nesting opportunities for avian species, including special status species. According to the Biological Resources Assessment, the project site contains habitat suitable to support a variety of nesting bird species, including ornamental trees and shrubs, bare ground, and disturbed areas. Within the project site, there is a high potential for

occurrence of osprey (*Pandion haliaetus*), a special-species on the CDFW Watch List. Osprey is found along ocean shores, bays, freshwater lakes, and larger streams.

According to Table 1, *Potential Special Status Avian Species Found Near the Project Area*, of the Marine Resources Technical Study, sensitive or protected bird species that potentially may occur in the project site vicinity include California Brown Pelican (*Pelecanus occidentalis californicus)*, Osprey (*Pandion haliaetus carolinensis),* American Peregrine Falcon *(Falco peregrinus anatum),* California Least Tern (*Sterna antillarum browni*), and Light-footed Ridgway's Rail (*Rallus obsoletus levipes*). Although the California Least Tern and Light-footed Ridgway's Rail have potential to occur at the project site their presence is assumed to be unlikely or rare.

Marine

Marine Mammals

According to Table 2, *Potential Marine Mammals Found Near the Project Area,* of the Marine Resources Technical Study*,* there are two potential marine mammals found near the project site including the California Sea Lion (*Zalophus californianus)* and the Pacific Harbor Seal (*Phoca vitulina richardii)*. Both marine mammals are covered under the Marine Mammal Protection Act (MMPA) administered by the USFWS and the National Marine Fisheries Service (NMFS). Harbor Seals and Sea Lions are found within Newport Bay and are occasionally present near the project site. These marine mammals are often seen feeding and foraging near bait docks or following fishing boats to their respective marinas to eat discarded baitfish.

Fish

Roughly 80 species of fish have been found within Newport Bay and many of those species are associated with the eelgrass habitat. Due to the lack of habitat variety and restricted water circulation only 11 species would be expected in the vicinity of the project site. According to Table 3, *Potential FMB Manages Fish Species Found Near the Project* area, of the Marine Resources Technical Study Northern Anchovy (*Engraulis mordax*), Top Smelt (*Atherinops affinis*), Pacific Sardine (*Sardinops sagax*), Black-and-yellow Rockfish (*Sebastes chrysomelas*), Grass Rockfish (*Sebastes rastrelliger*), Lingcod *(Ophiodon elongates),* Leopard Shark (*Triakis semifasciata),* Brown Rockfish, *(Sebastes auriculatus*), California Scorpionfish *(Scorpaena guttata),* Kelp Greenling *(Hexagrammos decagrammus),* and Treefish (*Sebastes serriceps*) have potential to occur at the project site.

Sea Turtles

All Green Sea Turtle populations in the United States are listed as either endangered or threatened on the Federal endangered species list. Although marine reptiles are rarely seen within Newport Bay the Bolsa Chica Green Sea Turtle (Chelonia mydas) population is located approximately 20 miles away from the Newport Bay. Green Sea Turtles may utilize the nearby eelgrass beds within Newport Bay as one source of nutrition; however, given the distance from the known population, their presence at the project site is highly unlikely.

MIGRATORY CORRIDORS AND LINKAGES

Wildlife corridors link areas of suitable habitat that are otherwise separated by areas of nonsuitable habitat such as rugged terrain, changes in vegetation, or human disturbance. Wildlife corridors are essential to the regional ecology of a species because they provide avenues of genetic exchange and allow animals to access alternative territories as dictated by fluctuating population densities. Fragmentation of open space areas by urbanization creates "islands" of wildlife habitat that are more or less isolated from each other. In the absence of habitat linkages that allow movement between habitat islands, studies have concluded that some wildlife species, especially the larger and more mobile mammals, would not persist over time because fragmentation limits infusion of new individuals and erodes genetic diversity. Corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events (such as fire or disease) that could lead to local extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and shelter. Wildlife corridors are typically relatively small, linear habitats that connect two or more habitat patches that would otherwise be fragmented or isolated from one another.

Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as "habitat or landscape linkages") can provide both transitory and resident habitat for a variety of species. Although it is commonly used as a synonym for wildlife corridor, a habitat linkage refers to a more substantial, or wider, land connection between two habitat areas. Habitat linkages allow for the periodic exchange of animals between habitat areas, which is essential to maintain adequate gene pools. This linkage is most notable among populations of medium-sized and larger animals.

The existing waterways present within the project vicinity, including Newport Bay, Newport Bay Channel, and marina, may serve as a movement corridor for coastal wildlife species. Birds and other wildlife may use the wetlands, parks, and preserves along the Newport Bay as a wildlife movement corridor (i.e., Castaways Park, De Anza Bayside Marsh Peninsula, Upper Newport Bay Nature Preserve, and Upper Newport Bay State Marine Park).

5.3.2 REGULATORY SETTING

Threatened and endangered species are listed by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW). In California, three agencies generally regulate activities within inland streams, wetlands, and riparian areas: the U.S. Army Corps of Engineers (Corps); the CDFW; and the State Water Resources Control Board (SWRCB) which supports the nine Regional Water Quality Control Boards (RWQCB). The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. The CDFW regulates activities under California Fish and Game Code Sections 1600-1607. The SWRCB and the RWQCB regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Act. The California Coastal Commission (CCC) regulates land and water within the Coastal Zone including environmentally sensitive habitat areas (ESHA) pursuant to the California Coastal Act.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 (16 U.S.C. § 1531 et seq., and accompanying regulations at 50 CFR Part 17) is intended to protect plants and wildlife that have been identified as being at risk of extinction and classified as either threatened or endangered. FESA also regulates the "taking" of any endangered fish or wildlife species, per Section 9 of the Act. A responsible agency or individual landowners are required to submit to a formal consultation with the USWFS to assess potential impacts to listed species as the result of a development project, pursuant to FESA Sections 7 and 10. The USFWS is required to make a determination as to the extent of impact to a particular species a project would have. If it is determined that potential impacts to a species would likely occur, measures to avoid or reduce such impacts must be identified.

Federal Clean Water Act

Section 404

The Corps maintains regulatory authority over the discharge of dredged or fill material into the waters of the United States, pursuant to Section 404 of the CWA. The Corps and United States Environmental Protection Agency (EPA) defines "fill material" as any "material placed in waters of the United States where the material has the effect of: (i) Replacing any portion of a water of the United States with dry land; or (ii) Changing the bottom elevation of any portion of the waters of the United States." Fill material may include sand, rock, clay, construction debris, wood chips, or other similar "materials used to create any structure or infrastructure in the waters of the United States."

In 2015, the Corps and EPA published the "Clean Water Rule" clarifying the scope of coverage of the CWA. Upon issuance however, numerous lawsuits were filed and consolidated in the Sixth Circuit, immediately putting a "stay" on its implementation. In January 2018, the U.S. Supreme Court ruled that the Sixth Circuit did not have jurisdiction over the case, and in February 2018, dismissed it and dissolved the stay. Also, in February 2018, the Corps and EPA suspended the rule for two years. However, in August 2018, a Federal judge found that the suspension failed to give an adequate public notice and therefore violated the Administrative Procedure Act. Pursuant to the court's order, the 2015 Clean Water Rule is now in effect in 22 states, including California, the District of Columbia, and the U.S. territories. On June 29, 2018, the Corps and EPA signed a supplemental notice of proposed rulemaking to permanently repeal the 2015 Clean Water Rule. Public comment on the proposed rulemaking closed on August 13, 2018 and on December 11, 2018 the Corps and EPA proposed a revised definition of waters of the United States. The proposed rule was published in the Federal register on February 14, 2019 and the 60-day public comment period closed on April 15, 2019. Currently, in the State of California the term "waters of the United States" includes the following:

(1) All waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide;

(2) All waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;

(3) Territorial seas;

(4) Impoundments of jurisdictional waters;

(5) Tributaries to types 1 through 3 (i.e., bed, bank, and ordinary high-water mark [OHWM]);

(6) All waters, including wetlands, adjacent to a water identified in types 1 through 5 including neighboring waters defined as:

a. Waters located within 100 feet of the OHWM of types 1 through 5;

b. Waters located in whole or in part in the 100-year floodplain and that are within 1,500 feet of the OHWM of types 1 through 5; and

c. Waters located within 1,500 feet of the high tide line of type 1 or 3;

(7) Five subcategories of isolated waters considered critical resources for the surrounding communities, such as vernal pools in California, for example; and

(8) All waters located within the 100-year floodplain of types 1 through 3 and all waters located within 4,000 feet of the high tide line or OHWM of types 1 through 5 where there is a significant nexus (determined on a case-specific basis) to types 1 through 3.

In the absence of wetlands, the Corps' jurisdiction in non-tidal waters extends to the OHWM, which is defined as *"…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area (33 CFR 328.3(e))."*

Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands are jointly defined by the Corps and EPA as *"those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3(b))."*

On January 9, 2001, the U.S. Supreme Court issued the decision, Solid Waste Agency of Northern Cook County v. U.S. Army Corp of Engineers. As a result of this case, the scope of the Corps' Section 404 CWA regulatory permitting program was limited, restricting Corps' jurisdictional authority over isolated, non-navigable, intrastate waters that are not tributary or adjacent to navigable waters or tributaries (i.e., wetland conditions). The Supreme Court held that Congress did not intend for isolated, non-navigable water conditions to be covered within Section 404 of the CWA, as they are not considered to be true "waters of the U.S."

Section 401

The SWRCB is the primary agency responsible for protecting water quality in California. The SWRCB protects water quality by setting statewide policy, coordinating and supporting the nine RWQCBs throughout California. In the vicinity of the project site the Santa Ana RWQCB regulates discharges to surface waters under the Federal CWA and the California Porter-Cologne Water Quality Control

Act. The RWQCB's jurisdiction extends to all waters of the State and to all waters of the United States, including wetlands (isolated and non-isolated conditions).

Through 401 Certification, Section 401 of the CWA allows the RWQCB to regulate any proposed Federally permitted activity that may affect water quality. Such activities include the discharge of dredged or fill material, as permitted by the Corps, pursuant to Section 404 of the CWA. The RWQCB is required to provide "certification that there is reasonable assurance that an activity which may result in the discharge to waters of the United States will not violate water quality standards," pursuant to Section 401. The Water Quality Certification must be based on the finding that the proposed discharge will comply with applicable water quality standards, which are given as objectives in each of the RWQCB's Basin Plans.

In addition, pursuant to the Porter-Cologne Water Quality Control Act, the State is given authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if a Section 404 does not apply. "Waste" is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

Rivers and Harbors Act Section 10

The Rivers and Harbors Appropriations Act of 1899 authorizes the Corps to exercise control over all construction projects that occur within navigable waters of the U.S. The Rivers and Harbors Act was intended for the protection of navigation and navigable capacity and was later amended to include protection of the environment. Section 10 of the Act regulates work and structures occurring in, over, and under navigable waters that affect the course, location, condition, or capacity of navigable waters of the U.S., including dredging, wharf improvements, overwater cranes, and artificial islands and installations on the outer continental shelf. Under Section 13 of the Act, discharge of refuse into any navigable water is prohibited without Corps approval.

Marine Mammal Protection Act

Congress passed the Marine Mammal Protection Act (MMPA) in 1972 in response to increasing concerns that significant declines in some species of marine mammals were caused by human activities. The MMPA prohibits, with certain exceptions, the take of marine mammals in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States. The USFWS, NMFS, and the Marine Mammal commission share the responsibility of implementing the MMPA.[1]

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) is the primary law governing marine fisheries management in U.S. federal waters out to 200 nautical miles from shore. Passed in 1976, the MSA fosters long-term biological and economic sustainability of the nation's marine fisheries and places management within eight regional fishery management councils

[1] National Oceanic and Atmospheric Administration Fisheries, *Marine Mammal Protection*, https://www.fisheries.noaa.gov/topic/marine-mammal-protection, accessed on March 18, 2019.

throughout the coastal U.S., including the North Pacific, Western Pacific, Pacific, Gulf of Mexico, Caribbean, South Atlantic, Mid-Atlantic, and New England. Through MSA Section 303, the National Oceanic and Atmospheric Administration (NOAA) is required to work with regional Fishery Management Councils to develop Fishery Management Plans (FMPs) for the protection of fisheries under their jurisdiction. NMFS, a part of the NOAA, is the federal agency responsible for implementing the MSA.[2]

Migratory Bird Treaty Act of 1918

The Federal Migratory Bird Treaty Act (MBTA) was originally drafted to end the commercial trade in bird feathers popular in the latter part of the 1800s. The MBTA makes it illegal to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 C.F.R. Part 10, including feathers, nests, eggs, or other avian products. The USFWS is responsible for enforcing the MBTA.

California Eelgrass Mitigation Policy

The purpose of California Eelgrass Mitigation Policy (CEMP) is to promote consistent eelgrass management in California based on the best available science to achieve no net loss in eelgrass habitat function. The CEMP serves as guidance for National Marine Fisheries Service (NMFS) biologists and managers for developing recommendations concerning eelgrass impacts through Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Fish and Wildlife Coordination Act (FWCA) consultations and National Environmental Policy Act (NEPA) reviews throughout California. This policy informs NMFS's position on eelgrass issues for California in other roles as a responsible, advisory, or funding agency or trustee. The CEMP defines eelgrass habitat as areas of vegetated eelgrass cover (any eelgrass within 1 square meter quadrat and within 1 meter (3.3 feet) of another shoot) bounded by a 5 meter (16.4 feet) wide perimeter of unvegetated area. The definition excludes areas of unsuitable environmental conditions such as hard bottom substrates, shaded locations, or areas that extend to depths below those supporting eelgrass.[3]

STATE

California Coastal Act

The project site is located within the City of Newport Beach's Coastal Zone. California Coastal Act Chapter 3 contains policies to: protect water quality and the biological productivity of coastal waters (Public Resources Code [PRC] Section 30231); avoid and minimize dredging, diking, and filling sediments (PRC Section 30233); and mitigate wetland impacts (PRC Section 30607.1).

In addition, under the California Coastal Act "environmentally sensitive area means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature

[2] National Oceanic and Atmospheric Administration, *Magnuson-Stevens Fisheries Conservation & Management Act*, https://www.westcoast.fisheries.noaa.gov/whatwedo/msa/magnuson_stevens_act.html, accessed on March 18, 2019.

[3] National Oceanic and Atmospheric Administration Fisheries, *California Eelgrass Mitigation Policy and Implementing Guidelines Frequently Asked Questions*, https://www.westcoast.fisheries.noaa.gov/publications/habitat/california_eelgrass_mitigation/Final%20CEMP%20October%202014/eel_grass_cemp_faq_112014.pdf, accessed on March 22, 2019.

or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (PRC Section 30107.5).

The California Coastal Act requires that jurisdictions protect Environmentally Sensitive Habitat Areas (ESHA). Specifically, PRC Section 30240 states that:

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

The Coastal Act generally protects ESHAs where they exist and also protects "against any significant disruption of habitat values." Coastal Act Section 30007.5 states that where there is a conflict between policies that it:

> *…be resolved in a manner, which on balance is the most protective of significant coastal resources. In this context, the Legislature declares that broader policies which, for example, serve to concentrate development in close proximity to urban and employment centers may be more protective, overall, than specific wildlife habitat and other similar resource policies.*

California Endangered Species Act

The California Endangered Species Act (CESA) of 1984, in combination with the California Native Plant Protection Act of 1977, regulates the listing and take of plant and wildlife species designated as endangered, threatened, or rare within the State. The State of California also lists Species of Special Concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The State gives the CDFW the responsibility to assess development projects for their potential to impact listed species and their habitats. State listed special-status species are also addressed through the issuance of a 2081 permit (Memorandum of Understanding).

California Fish and Game Code

Within the State of California, fish, wildlife, and native plant resources are protected and managed by the CDFW. The Fish and Game Commission and/or the CDFW are responsible for issuing permits for the take or possession of protected species. The following sections of the Code address the protected species: Section 3511 (birds); Section 4700 (mammals); Section 5050 (reptiles and amphibians); and, Section 5515 (fish).

California Department of Fish and Wildlife

Historically, the State of California regulated activities in rivers, streams, and lakes pursuant to *California Fish and Game Code* Sections 1600-1607; however, on January 1, 2004, legislation went into effect that repealed Fish and Game Code Sections 1600-1607 and instead, added *Fish and Game Code* Sections 1600-1616. This action eliminated the separation between private/public notifications (previously 1601/1603).

Lake and Streambed Alteration Agreements

Section 1602 of the *Fish and Game Code* requires any person, state, or local governmental agency, or public utility to notify the CDFW before commencing any activity that would result in one or more of the following:

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

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes within the State of California. While the jurisdictional limits are similar to the limits defined by Corps regulations, CDFW jurisdiction includes riparian habitat supported by a river, stream, or lake with or without the presence or absence of saturated soil conditions or hydric soils. CDFW jurisdiction generally extends to the top of bank of the stream, or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Any project that occurs within or in the vicinity of a river, stream, lake, or their tributaries typically requires notification of the CDFW, including rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life, and watercourses having a surface or subsurface flow that supports or has supported riparian vegetation.

Upper Newport Bay State Marine Conservation Area

The Upper Newport Bay (i.e., areas north of the existing Bay Bridge) is designated as a State Marine Conservation Area (SMCA) by the CDFW. This area is intended to set aside marine or estuarine waters primarily to protect or conserve marine life and associated habitats. The SMCA aims to protect resources by allowing for only specific types of recreational and/or commercial take to occur. The Upper Newport Bay SMCA is 1.24 square miles in size, with 5.68 miles of tidal flats, 8.09 miles of coastal marsh, 0.73 square miles of marsh, and 1.21 square miles of estuary. The SMCA limits recreational takes to hook-and-line fishing from shore for finfish only. Swimming is only allowed in certain areas, boats are limited to less than five miles per hour, and shoreline access is limited to established trails, paths and other designated areas. The proposed Original Northeast Pump Station Newport Bay Channel crossing occurs north of the Bay Bridge, and thus, is within the boundaries of the SMCA.

California Environmental Quality Act

In addition to specific Federal and State statutes for the protection of threatened and endangered species, *California Environmental Quality Act* (*CEQA*) *Guidelines* Section 15380(b) provides that a species not listed on the Federal or State list of protected species may be considered rare or endangered if it can be shown that the species meets certain specified criteria. Modeled after definitions in the FESA and the section of the *California Fish and Game Code* dealing with rare or endangered plants and wildlife, these criteria are given in *CEQA Guidelines* Section 15380(b). The effect of Section 15380(b) is to require public agencies to undertake reviews to determine if projects would result in significant effects on species not listed by either the USFWS or CDFW (i.e., candidate species). Through this process,

agencies are provided with the authority to protect additional species from the potential impacts of a project until the appropriate government agencies have an opportunity to designate the species as protected, if deemed appropriate.

Marine Life Protection Act

The Marine Life Protection Act (MLPA) was adopted in 1999 to protect the natural diversity and abundance of marine life and marine ecosystems. The MLPA directs the State to redesign the system of marine protected areas (MPAs) to function as a coordinated network aimed at increasing its ability to provide protection for marine life and habitat, marine ecosystems, and marine natural heritage. Additionally, the MLPA is aimed at improving recreational, educational, and study opportunities offered by marine ecosystems that may be potentially subject to minimal human disturbance.[4] MPAs are separate geographic marine or estuarine areas designed to protect or conserve marine life and habitat. Three types of designated (or recognized) MPAs occur in California: state marine reserves (SMRs), state marine parks (SMPs), and SMCAs.

In December 2009, the California Fish and Game Commission (CFGC) initiated the regulatory process for creation of 35 South Coast Region MPAs located between Point Conception and the U.S./Baja California border including the offshore Channel Islands. Additionally, a SMCA and SMR at Point Dume in the Malibu region, and a SMR and a SMCA at the Palos Verdes Peninsula, were established in 2012.

LOCAL

City of Newport Beach Local Coastal Program

One of the highest priorities of the California Coastal Commission's (Coastal Commission) is to protect and restore sensitive coastal resources within the Coastal Zone. The Coastal Commission develops and implements policies to protect and restore environmentally sensitive habitats areas (ESHA), wetlands, and the marine environment. As much of the City of Newport Beach is located within the Coastal Zone, the City, in partnership with the Coastal Commission, developed the City's Local Coastal Program (LCP) which received certification by the Coastal Commission on January 30, 2017. After certification of the LCP, the City obtained authority to issue coastal development permits (CDPs) for development not located within the Coastal Commission's permit jurisdiction.

City of Newport Beach Municipal Code Chapter 21.52, *Coastal Development Review Procedures*, provides procedures to ensure that all public and private development in the coastal zone is consistent with the California Coastal Act of 1976 as amended, in accordance with the City's Local Coastal Land Use Plan and the City's Local Coastal Program (LCP). Municipal Code Section 21.52.015, Coastal Development Permits (CDP), states that any development in the coastal zone shall require a coastal development permit issued by the City pursuant to Chapter 21.50, or the Coastal Commission, unless exempt or excluded from coastal development permitting requirements. Municipal Code Chapter 21.50, *Permit Application Filing and Processing*, provides the procedures for filing and processing of a CDP

[4] California Department of Fish and Wildlife, *Marine Life Protection Act*, https://www.wildlife.ca.gov/Conservation/Marine/MPAs/MLPA, accessed on March 18, 2019.

and Section 21.52.035, Projects Exempt from Coastal Development Permit Requirements, identifies those development activities that may be otherwise exempted from the requirements of a CDP.

City of Newport Beach General Plan

The General Plan Natural Resources Element provides for the conservation, development, and utilization of natural resources including water, wildlife, minerals, and other natural resources. In addition, the Element details goals and policies for resource conservation. These goals include, but are not limited to:

Natural Resources Element

Goals:

NR 10: Protection of sensitive and rare terrestrial and marine resources from urban development.

NR 11: Protection of environmental resources in Newport Harbor while preserving and enhancing public recreational boating activities.

NR 12: Protection of coastal dune habitats.

NR 13: Protection, maintenance, and enhancement of Southern California wetlands.

NR 14: Maintain and enhance deep water channels and ensure they remain navigable by boats.

NR 15: Proper disposal of dredge spoils to avoid disruption to natural habitats.

NR 16: Protection and management of Upper Newport Bay commensurate with the standards applicable to our nation's most valuable natural resources.

NR 17: Maintenance and expansion of designated open space resources.

5.3.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

THRESHOLDS OF SIGNIFICANCE

Environmental impacts relative to biological resources are assessed using impact significance threshold criteria, which reflect the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State of California to:

> *"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."*

Determining whether a project may have a significant effect or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7 (Thresholds of Significance), each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds

of significance for the agency to use when determining the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> *"The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or wildlife community, reduce the number or restrict the range of an endangered, rare, or threatened species ..."*

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. Substantial impacts would be those that would substantially diminish, or result in the loss of, an important biological resource or those that would obviously conflict with local, State, or Federal resource conservation plans, goals, or regulations. Impacts are sometimes locally adverse but not significant because, although they would result in an adverse alteration of existing conditions, they would not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

CEQA Guidelines Section 15380, *Endangered, Rare or Threatened Species*, states that a lead agency can consider a non-listed species to be Rare, Threatened, or Endangered for the purposes of CEQA if the species can be shown to meet the criteria in the definition of Rare, Threatened, or Endangered. For the purposes of this discussion, the current scientific knowledge on the population size and distribution for each special status species was considered according to the definitions for Rare, Threatened, and Endangered listed in CEQA Guidelines Section 15380.

Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following criteria discussed below would result from implementation of the proposed project.

SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Services (refer to Impact Statement BIO-1).
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Services (refer to Impact Statement BIO-2).

- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (refer to Impact Statement BIO-3).
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (refer to Impact Statement BIO-4).
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (refer to Impact Statement BIO-5).
- Conflict with provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (refer to Section 8.0, *Effects Found Not To Be Significant*).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.3.4 IMPACTS AND MITIGATION MEASURES

SPECIAL STATUS PLANT AND WILDLIFE SPECIES

BIO-1 PROJECT IMPLEMENTATION COULD HAVE AN ADVERSE EFFECT, EITHER DIRECTLY OR THROUGH HABITAT MODIFICATIONS, ON SPECIAL STATUS PLANT OR WILDLIFE SPECIES.

Impact Analysis:

Original Northeast Pump Station

The construction of the new pump station would occur on the Bayside Village Marina property, within and adjacent to previously disturbed areas. The associated force mains would extend westerly from the proposed pump station across the Bayside Village Marina property, under the Newport Bay Channel to a disturbed area within the southern portion of Castaways Park. From there, the force mains would head south under West Coast Highway to connect to an existing OCSD vault to tie in to the existing OCSD conveyance system. The majority of the proposed dual force mains would be constructed by HDD/microtunneling to avoid impacts related to open cut trenching (refer to Exhibit 3-6, *Northeast Pump Station Layout*). HDD/microtunneling would require a 24 hour operation for approximately two weeks. Trenching would be utilized for short spans of the force mains within the paved Bayside Village Marina parcel and disturbed area within Castaways Park. Microtunneling would be utilized for the construction of the force mains under West Coast Highway (refer to Exhibit 3-7, *South Pump Station Layout*). Modifications to existing gravity sewers would also be required within short segments of Bayside Drive and East Coast Highway.

All areas of proposed disturbance would occur within existing paved areas or areas that have been highly disturbed and consist of only bare soils. No direct impacts to the Newport Bay Channel would

occur as a result of the proposed HDD/microtunneling. However, proposed HDD/microtunneling could potentially result in temporary increased noise/vibration impacts during construction, would could temporarily disrupt marine mammals. Likely, construction activities would deter any individuals from attempting to enter the project area. Thus, although temporary impacts may result, these impacts would cease upon completion and individuals would return to the area. Thus, impacts to special status plant or wildlife species that occur on-site would be less than significant.

Although no vegetation would be disturbed, construction activities could impact nesting birds, including special status bird species, in adjacent areas, which are protected by the Migratory Bird Treaty Act (MBTA). The MBTA prohibits activities that result in the direct take (defined as killing or possessing) of a migratory bird. According to the Biological Resources Assessment, there is high potential for occurrence of osprey (*Pandion haliaetus*), a species on the CDFW Watch List, to occur within the project site. Mitigation Measure BIO-1 would require that construction activities occur outside of the nesting season, unless preconstruction surveys for adjacent areas are conducted. Should construction be required during the nesting season and surveys determine that an active avian nest is present within proximity to the construction area, construction activities would be required to stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer is expanded to 500 feet. A biological monitor would be required to be present to delineate the boundaries of the buffer area and to monitor the active nest in order to ensure that nesting behavior is not adversely affected by construction activities. Once the young have fledged, normal construction activities would be allowed to occur. These requirements would reduce impacts to nesting birds, including potential special status bird species, to a less than significant level. As such, no substantial adverse effect, either directly or indirectly, to any endangered or threatened species, or any other special-status plant or wildlife species would occur as a result of project development.

Modified Northeast Pump Station

In regard to pump station improvements, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

Should the Modified Northeast Pump Station propose microtunneling activities, no impacts to the Newport Bay Channel would occur, similar to the Original Northeast Pump Station. However, should dredging occur, 18-foot wide trenching would result in the Newport Bay Channel and shoring of the trench walls within Newport Bay Channel may be required. Accordingly, dredging would result in disturbance to the Newport Bay Channel within the immediate vicinity of the dredged area. The potential biological resource impacts from construction related turbidity, light and noise, and increased workboat activity during dredging activities would result.

Marine mammals and fish located near the dredging activities are anticipated to avoid the area of construction due to the increased noise/vibration and nighttime lighting levels from the trenching machinery. However, if marine mammals are present during dredging operations, Mitigation Measure BIO-2 would require contractor awareness training for all personnel working in the marine environment. The training would include identification of common types of marine wildlife, potential activities which could affect the marine wildlife, an overview, procedures to follow during waterside construction activities; and reporting requirements if marine wildlife are injured. Therefore, impacts to marine mammals from dredging would be reduced to less than significant levels.

Some fish species known to occur in or around the project site which are managed by NMFS. Potential impacts to fish from dredging operations may include the loss of foraging habitat, reduced foraging success from increased turbidity, noise impacts, and reduction of shelter leading to increased predation. The loss of habitat and shelter areas in the active areas of construction would be temporary, but localized increases in turbidity would be a direct result of physical in-water disturbance. During dredging operations, it is anticipated that fish species would relocate due to the sound of the associated construction equipment and away from the turbidity plume. However, standard BMPs for dredging operations and Federal permit requirements pursuant to the CWA administered by the Corps as described in Mitigation Measure HWQ-4 would minimize water quality impacts and turbidity resulting from dredging operations. Therefore, impacts to special status fish species, if present, from increased turbidity would be less than significant.

According to the Marine Resources Study, it is unlikely that Green Sea Turtles would be found at the project site. Water quality impacts from dredging operations would be localized and temporary in nature and with the inclusion of standard dredging BMPs and implementation of Mitigation Measure HWQ-4, impacts to Green Sea Turtle foraging habitat due to impaired water quality would be less than significant.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: The following mitigation measures apply to each site plan concept as specified:

Original Northeast Pump Station

BIO-1 Should construction activities occur within the nesting season (typically February 15 to August 15), all suitable habitat surrounding the project site shall be thoroughly surveyed for the presence of nesting birds by a qualified biologist prior to commencement of site disturbance activities.

If an active avian nest is discovered in proximity to the project site during the nesting bird survey, construction activities (those activities that could result in direct or indirect impacts to active nests either through noise, light, or physical contact) shall stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer shall be expanded to 500 feet. A biological monitor shall be present to delineate the boundaries of the buffer area and to monitor the active nest in order to ensure that nesting behavior is not adversely affected by construction activities. The buffer area and limitations on construction may be reduced upon approval by the California Department of Fish and Wildlife, and only if the nesting behaviors are not disrupted by construction activities. Once the young have fledged, normal construction activities shall be allowed to occur.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

Modified Northeast Pump Station

Refer to Mitigation Measures BIO-1 and HWQ-4, as well as the following:

BIO-2 Prior to dredging operations, if conducted, Orange County Sanitation District, or designee, shall retain a qualified marine mammal biologist to conduct contractor awareness training for all personnel working in the marine environment. The purpose of the training is to educate contractor personnel on the identification of marine wildlife in the project area and to provide an overview of the wildlife mitigation that will be implemented during the project. Specifically, the training seminar shall include, but not be limited to, the following:

- Identification of most common types of marine wildlife likely to be encountered in the project area;
- Activities that have the most potential for affecting the animals;
- Overview of the Marine Mammal Protection Act (MMPA), the designated Environmental Study Area (ESA), agencies responsible for enforcement of the MMPA and ESA, and penalties associated with violations of the acts;
- Procedures to be followed during mobilization/demobilization, and transiting of project vessels, anchoring and throughout waterside construction activities; and
- Reporting requirements in the event of an inadvertent collision and/or injury to marine wildlife.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

South Pump Station

Refer to Mitigation Measures BIO-1 and BIO-2, as well as HWQ-4.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

SENSITIVE NATURAL COMMUNITIES

BIO-2 PROJECT IMPLEMENTATION COULD HAVE AN ADVERSE EFFECT ON RIPARIAN HABITAT OR OTHER SENSITIVE NATURAL COMMUNITY.

Impact Analysis:

Original Northeast Pump Station

Several different plant communities/habitats occur within the City. The plant communities known to exist within the City include scrub habitats, chaparral habitats, riparian and wetland habitats, grassland habitats, ornamental, and disturbed. According to Figure 4, *Bay Bridge Pump Station (BBPS) Survey Map*, of the Marine Resources Study, eelgrass is found within the project boundary. Eelgrass is considered a sensitive marine resource due to its nursery function for invertebrates and fishes, and because it is considered critical foraging habitat for the federal- and state-listed California least tern. Eelgrass is protected by the Southern California Eelgrass Mitigation Policy, which requires impacts to this species be avoided, minimized or compensated.

No riparian vegetation or other sensitive communities are present within the boundaries of the project site. While eelgrass, a sensitive plant community, is known to occur in the Newport Bay Channel, HDD/microtunneling operations would avoid all impacts to the channel. In addition, as noted above, the Newport Bay Channel crossing would occur within the boundaries of the Upper Newport Bay SMCA, as established by the CDFW. Though the crossing alignment would traverse through the SMCA, construction activities would occur entirely subsurface (via HDD or microtunnel), and no permanent or temporary disturbance to the Newport Bay Channel or Upper Newport Bay would occur. There would be no potential for sensitive natural communities protected under the SMCA to be affected. As such, the proposed project would not impact potential eelgrass within Newport Bay Channel or resources protected by the SMCA, and no impact would result in this regard.

Modified Northeast Pump Station

In regard to pump station improvements, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

Should the Modified Northeast Pump Station propose microtunneling activities, no impacts to the Newport Bay Channel would occur, similar to the Original Northeast Pump Station. However, should dredging occur, 18-foot wide trenching would result in the Newport Bay Channel and shoring of the trench walls within Newport Bay Channel may be required. Accordingly, dredging would result in disturbance to the Newport Bay Channel within the immediate vicinity of the dredged area. The potential biological resource impacts from construction related turbidity, light and noise, and increased workboat activity during dredging activities would result.

No riparian habitat or sensitive plant communities or suitable habitat for sensitive plants are present in the developed areas of the project site. Eelgrass species are found in sheltered coastal areas including Newport Bay. Eelgrass beds are often a primary EFH concern in southern California as they serve as nursery grounds for juvenile and sub-adult fish species. Potential impacts to eelgrass within the project site resulting from dredging operations include physical disturbance, reduced light levels due to increased turbidity from channel bottom disturbance, and temporarily increased sedimentation. The effects of shading can limit eelgrass photosynthesis and impact its ability to colonize and sustain a healthy population in a particular area. Mitigation Measure BIO-3 would require pre-construction surveys for eelgrass and kelp. If pre-construction survey results indicate eelgrass or kelp presence within the project site, a qualified marine biologist would recommend appropriate avoidance and protection measures to be implemented during construction activities and coordinate with the appropriate regulatory agencies to implement appropriate compensatory mitigation. Therefore, impacts to eelgrass at the project site from increased turbidity would be less than significant.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: The following mitigation measures apply to each site plan concept as specified:

Original Northeast Pump Station

No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

Modified Northeast Pump Station

BIO-3 The Orange County Sanitation District, or designee, shall retain a qualified marine biologist to conduct a comprehensive pre-construction survey for presence of eelgrass and kelp species within the project site prior to the commencement of in-water construction operations. The pre-construction eelgrass and kelp surveys shall be consistent with current National Marine Fisheries Service (NMFS) California Eelgrass Mitigation Policy (CEMP) survey guidelines. If pre-construction survey results indicate eelgrass or kelp presence within the project site, the qualified marine biologist shall recommend, and OCSD, or designee, shall incorporate, appropriate avoidance measures, protection measures, and/or replacement mitigation (e.g., reseeding for no net loss) to be implemented during construction activities to avoid or reduce impacts to eelgrass or kelp species to the maximum extent practicable. The qualified marine biologist shall coordinate with the appropriate regulatory agencies including the NMFS, U.S. Army Corps of Engineers (Corps), U.S. Fish and Wildlife Service (USFWS), California Coastal Commission (CCC), the California Department of Fish and Wildlife (CDFW), and other resource and regulatory agencies, as necessary, and OCSD, or designee, shall implement compensatory mitigation should the project result in the loss of eelgrass and kelp habitat.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

South Pump Station

Refer to Mitigation Measure BIO-3.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

WETLANDS

BIO-3 PROJECT IMPLEMENTATION COULD HAVE AN ADVERSE EFFECT ON STATE OR FEDERALLY PROTECTED WETLANDS.

Impact Analysis:

Original Northeast Pump Station

Newport Channel is associated with jurisdictional waters, including potential federally protected wetlands. However, proposed HDD/microtunneling operations would avoid all impacts to jurisdictional waters and wetlands. In addition, all areas of the project site are either paved or have been previously disturbed and are void of wetlands or riparian features. Thus, no impacts to wetlands or jurisdictional waters would result.

Modified Northeast Pump Station

According to the Delineation, there are no federally protected wetlands regulated by the Corps nor are there any State protected wetlands regulated by the RWQCB or the CDFW within the areas of

proposed improvements. However, the CCC's regulations (California Code of Regulations Title 14 (14CCR)) establish a "one parameter definition" that only requires evidence of a single parameter to establish wetland conditions. The presence of hydrology within the boundaries of the project site qualifies the Newport Bay Channel as coastal wetland by the CCC. The Newport Bay Channel is associated with jurisdictional waters, including potential State or Federally protected wetlands. Microtunneling operations would avoid all impacts to jurisdictional waters and wetlands. However, dredging operations to install the force mains across the Newport Bay Channel would result in direct impacts to State and Federal jurisdictional waters and CCC wetlands. According to the Delineation, approximately 3.07 acres of Corps and Regional Board non-wetland WoUS and CCC jurisdictional wetlands are located to the south of Bay Bridge where proposed force main improvements could potentially impact jurisdictional waters. Dredging would require trenching approximately 580 linear feet and 10 feet wide across the Newport Bay Channel resulting in approximately 0.15 acre and 647 linear feet of impact to State and Federally protected waters and wetlands.

Impacts to jurisdictional waters and wetlands within the boundaries would be temporary during dredging activities and force main installation. Although dredging activities would result in temporary impacts to the Newport Bay Channel and jurisdictional waters and wetlands, the dredged area would be restored to preconstruction grades after force main installation and no permanent impacts to jurisdictional waters or wetlands would occur. In addition, construction activities within the Newport Bay Channel would be subject to of State and Federal permit requirements from the appropriate regulatory agencies including the Corps, RWQCB, and CCC. Thus, impacts to wetlands or jurisdictional waters would be temporary in nature and are less than significant.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

MIGRATORY WILDLIFE SPECIES

BIO-4 PROJECT IMPLEMENTATION COULD INTERFERE WITH THE MOVEMENT OF A NATIVE RESIDENT OR MIGRATORY WILDLIFE SPECIES.

Impact Analysis:

Original Northeast Pump Station

The project proposes the construction of a new pump station and force mains, as well as replacement of portions of the existing gravity sewer located in Bayside Drive and East Coast Highway. All proposed areas of site disturbance are located within developed or highly disturbed areas and are not associated with the movement of native resident or migratory wildlife species. However, within the project vicinity, the Newport Bay, Newport Bay Channel, and marina may serve as a movement corridor for coastal wildlife species, including birds. As discussed in Impact Statement BIO-1, construction activities could impact nesting birds in nearby areas, which are protected by the MBTA.

The MBTA prohibits activities that result in the direct take (defined as killing or possessing) of a migratory bird. Mitigation Measure BIO-1 would require that construction activities occur outside of the nesting season, unless preconstruction surveys are conducted. Should construction be required during the nesting season and surveys determine that an active avian nest is present adjacent to the construction area, construction activities would be required to stay outside of a 300-foot buffer around the active nest. For raptor species, this buffer is expanded to 500 feet. A biological monitor would be required to be present to delineate the boundaries of the buffer area and to monitor the active nest in order to ensure that nesting behavior is not adversely affected by construction activities. Once the young have fledged, normal construction activities would be allowed to occur. These requirements would reduce impacts to nesting birds to a less than significant level. As such, with implementation of Mitigation Measure BIO-1, potential impacts to migratory wildlife species would be reduced to a less than significant level.

Modified Northeast Pump Station

In regard to pump station improvements, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. With implementation of Mitigation Measure BIO-1, impacts in this regard would be reduced to less than significant levels.

Should the Modified Northeast Pump Station propose microtunneling activities, no impacts to the Newport Bay Channel would occur, similar to the Original Northeast Pump Station. However, should dredging occur, 18-foot wide trenching would result in the Newport Bay Channel and shoring of the trench walls within Newport Bay Channel may be required. Although dredging activities would result in disturbance to the Newport Bay Channel and could interfere with wildlife movement, dredging activities would be temporary and only impede the Newport Bay Channel within the immediate vicinity of active dredging operations. Thus, as dredging activities would be temporary and localized in nature and would not impede the entire Newport Bay channel, impacts to the movement of a native resident or migratory wildlife would be less than significant.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: Refer to Mitigation Measure BIO-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

POLICIES PROTECTING BIOLOGICAL RESOURCES

BIO-5 PROJECT IMPLEMENTATION COULD CONFLICT WITH A CITY POLICY PROTECTING BIOLOGICAL RESOURCES.

Impact Analysis:

Original Northeast Pump Station

As discussed in Table 5.3-1, *Biological Resources Policy Consistency Analysis*, the proposed project would not conflict with applicable policies contained in the City's General Plan, CLUP, and the California

Coastal Act regarding biological resources. As shown in Table 5.3-1, impacts related to consistency with the General Plan, CLUP, and the California Coastal Act regarding biological resources would be less than significant. As such, less than significant impacts would occur in this regard.

Table 5.3-1
Biological Resources Policy Consistency Analysis

Policy	Consistency Analysis
General Plan	
Goal NR 10: Protection of sensitive and rare terrestrial and marine resources from urban development.	Consistent. Although Castaways Park is designated as an ESA within the City's General Plan EIR, the southerly disturbed portion of the park (where construction improvements for force main implementation would occur) is excluded from the ESA. Further, the construction method for the proposed force mains would avoid trenching and associated marine resources within the Channel. For potential impacts to avian species during construction, Mitigation Measure BIO-1 pertaining to the protection of nesting birds would reduce these impacts to a less than significant level.
Goal NR 11: Protection of environmental resources in Newport Harbor while preserving and enhancing public recreational boating activities.	Consistent. As stated in Goal NR 10, the proposed trenchless construction technique would avoid all Newport Bay Channel resources and would not hinder recreational boating activities. No impacts would result in this regard.
Goal NR 13: Protection, maintenance, and enhancement of Southern California wetlands.	Consistent. Refer to Goals NR 10 and NR 11. No wetlands are present within the project site; no impacts would result in this regard.
Goal NR 14: Maintain and enhance deep water channels and ensure they remain navigable by boats.	Consistent. Refer to Goals NR 10 and NR 11. Development of the proposed project would not impact the existing Newport Bay Channel or surrounding waterways. No impacts to boat navigation would result.
Goal NR 15: Proper disposal of dredge spoils to avoid disruption to natural habitats.	Consistent. As stated in Goal NR 10, the project would use trenchless construction techniques under the Newport Bay Channel, and no dredging would be required. However, as discussed in Impact Statement HAZ-1 of Section 5.7, *Hazards and Hazardous Materials*, spoils would result from HDD/microtunneling activities. Mitigation Measure HAZ-3 would ensure that spoils would be properly disposed of. With implementation of the recommended Mitigation Measure HAZ-3, the project would conduct proper disposal of spoils during construction and natural habitats would not be disturbed.
Goal NR 16: Protection and management of Upper Newport Bay commensurate with the standards applicable to our nation's most valuable natural resources.	Consistent. Refer to Goal NR 10.
CLUP Policies	
4.1.1-2. Require a site-specific survey and analysis prepared by a qualified biologist as a filing requirement for coastal development permit applications where development would occur within or adjacent to areas identified as a potential ESHA. Identify ESHA as habitats or natural communities listed in Section 4.1.1 that possess any of the attributes listed in Policy 4.1.1-1. The ESA's depicted on Map 4-1 shall represent a preliminary mapping of areas containing potential ESHA.	Consistent. Refer to Goal NR 10. The project site is not located in an ESA or ESHA. Thus, no survey/analysis would be required. HDD/microtunneling activities and Mitigation Measure BIO-1 pertaining to the protection of nesting birds would reduce impacts in this regard to less than significant levels.
4.1.1-4. Protect ESHAs against any significant disruption of habitat values.	Consistent. Refer to Goal NR 10 and Policy 4.1.1-2.

Table 5.3-1 [continued]
Biological Resources Policy Consistency Analysis

Policy	Consistency Analysis
4.1.1-6. Require development in areas adjacent to ESHAs to be sited and designed to prevent impacts that would significantly degrade those areas, and to be compatible with the continuance of those habitat areas.	Consistent. Refer to Goal NR 10. The site is currently developed, and project implementation would not affect an ESA or ESHA. Construction activities would occur within previously disturbed areas. HDD/microtunneling operations and Mitigation Measure BIO-1 pertaining to the protection of nesting birds would reduce impacts in this regard to a less than significant level.
4.1.1-9. Where feasible, confine development adjacent to ESHAs to low impact land uses, such as open space and passive recreation.	Consistent. Refer to Goals NR 10 and Policy 4.1.1-6.
4.1.1-10. Require buffer areas of sufficient size to ensure the biological integrity and preservation of the habitat they are designed to protect. Terrestrial ESHA shall have a minimum buffer width of 50 feet wherever possible. Smaller ESHA buffers may be allowed only where it can be demonstrated that 1) a 50-foot wide buffer is not possible due to site-specific constraints, and 2) the proposed narrower buffer would be amply protective of the biological integrity of the ESHA given the site-specific characteristics of the resource and of the type and intensity of disturbance.	Consistent. The closest construction activities to sensitive biological areas would be located approximately 85 feet south of sensitive areas within Castaways Park and 100 feet west of the Newport Bay Channel, to the south of West Coast Highway. Further, the construction techniques associated with force main implementation across the Newport Bay Channel would avoid marine impacts. As such, impacts in this regard are less than significant and the proposed project would be consistent with this policy.
4.1.1-13. Shield and direct exterior lighting away from ESHAs to minimize impacts to wildlife.	Consistent. Project implementation would not contribute to lighting impacts within an ESHA as the project site is not within an ESA and construction of the force mains would occur underground. The proposed construction activities are located near Castaways Park. With implementation of the recommended Mitigation Measure AES-3, proposed construction lighting would be required to be directed/shielded away from biologically sensitive areas (including Castaways Park and Newport Bay Channel). Thus, with implementation of Mitigation Measure AES-3 the project would be consistent with this policy.
4.1.2-1. Maintain, enhance, and, where feasible, restore marine resources.	Consistent. Refer to Goal NR 10.
4.1.3-1. Utilize the following mitigation measures to reduce the potential for adverse impacts to ESA natural habitats: C. Prohibit the planting of non-native plant species and require the removal of non-natives in conjunction with landscaping or revegetation projects in natural habitat areas. D. Strictly control encroachments into natural habitats to prevent impacts that would significantly degrade the habitat.	Consistent. Existing areas of vegetation would not be impacted by the project, as construction activities would take place within previously disturbed bare soils and paved areas. Further, proposed development (the new pump station facility), is surrounded by paved surfaces and developed uses. Thus, the project would not encroach on any open space areas.
4.1.4-1. Continue to protect eelgrass meadows for their important ecological function as a nursery and foraging habitat within the Newport Bay ecosystem.	Consistent. Refer to Goal NR 10. As discussed in Impact Statement BIO-3, eelgrass would not be impacted by the proposed project.
4.2.1-1. Recognize and protect wetlands for their commercial, recreational, water quality, and habitat value.	Consistent. Refer to Goal NR 10 and Goal NR 13. No wetlands would be affected by the proposed project.
4.2.1-2. Protect, maintain and, where feasible, restore the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes.	Consistent. Refer to Goal NR 10 and Goal NR 13. No coastal waters are present within the areas of proposed disturbance for the project.

Table 5.3-1 [continued]
Biological Resources Policy Consistency Analysis

Policy	Consistency Analysis
4.2.2-3. Require buffer areas around wetlands of a sufficient size to ensure the biological integrity and preservation of the wetland that they are designed to protect. Wetlands shall have a minimum buffer width of 100 feet wherever possible. Smaller wetland buffers may be allowed only where it can be demonstrated that 1) a 100-foot wide buffer is not possible due to site-specific constraints, and 2) the proposed narrower buffer would be amply protective of the biological integrity of the wetland given the site-specific characteristics of the resource and of the type and intensity of disturbance.	Consistent. Refer to Goal NR 13 and Policy 4.1.1-10.
California Coastal Act	
30230. Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.	Consistent. Refer to Goal NR 10.
30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.	Consistent. Refer to Goal NR 10 and Goal NR 15. Further, as discussed in Section 5.7, *Hazards and Hazardous Materials*, proposed drilling activities would require pumping of water in the tunnel(s) during drilling. However, the project would be required to obtain and comply with the National Pollutant Discharge Elimination System (NPDES) General Permit, *Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activities* (Order No. 2009-0009-DWQ, NPDES Number CAS000002). The NPDES General Permit requires the proper handling and discharge of harmful pollutants that could affect water quality in the area. Therefore, compliance with the NPDES General Permit would ensure that any harmful pollutants contained within the Newport Bay Channel would be properly handled and disposed of to prevent unsafe exposure to construction workers. As discussed in Section 5.8, *Hydrology and Water Quality*, the proposed project would result in less than significant impacts pertaining to runoff, interference with surface waterflow, and alternation of natural streams. As discussed in Impact Statement BIO-1, the proposed project would maintain existing natural vegetation buffer areas. Further, as discussed, project implementation would adhere to Policies 4.1.1-10, and 4.2.2-3 pertaining to buffer areas around terrestrial ESHAs and wetlands. As discussed in Section 8.0, *Effects Found Not To Be Signification*, the proposed project would not result in impacts to groundwater supplies. Impacts pertaining to waste water reclamation are not applicable to the proposed project.

Table 5.3-1 [continued]
Biological Resources Policy Consistency Analysis

Policy	Consistency Analysis
30240. (a) ESHAs shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.	Consistent. Refer to Goal NR 10 and Policy 4.1.1-6.

Modified Northeast Pump Station

In regard to pump station improvements, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

Should the Modified Northeast Pump Station propose microtunneling activities, no impacts to the Newport Bay Channel would occur, similar to the Original Northeast Pump Station. However, should dredging occur, 18-foot wide trenching would result in the Newport Bay Channel and shoring of the trench walls within Newport Bay Channel may be required. Accordingly, dredging would result in disturbance to the Newport Bay Channel within the immediate vicinity of the dredged area. As discussed in Table 5.3-2, *Biological Resources Policy Consistency Analysis*, the proposed project would not conflict with applicable policies contained in the City's General Plan, CLUP, and the California Coastal Act regarding biological resources. As shown in Table 5.3-2, impacts related to consistency with the General Plan, CLUP, and the California Coastal Act regarding biological resources would be less than significant. As such, less than significant impacts would occur in this regard.

Table 5.3-2
Biological Resources Policy Consistency Analysis for Proposed Dredging

Policy	Consistency Analysis
General Plan	
Goal NR 10: Protection of sensitive and rare terrestrial and marine resources from urban development.	Consistent. Although Castaways Park is designated as an ESA within the City's General Plan EIR, the southerly disturbed portion of the park (where construction staging could potentially occur) is excluded from the ESA. Dredging operations would impact marine resources within the Newport Bay Channel. However, construction-related impacts would be temporary and localized around dredging operations. Further, upon completion of force main improvements the dredged area would be restored to preconstruction grades and no permanent impacts to the Newport Bay Channel would occur. Mitigation Measure BIO-1 pertaining to the protection of nesting birds, Mitigation Measure BIO-2 pertaining to the protection of marine mammals, and Mitigation Measure BIO-3 pertaining to the protection and eelgrass and kelp species would reduce these impacts to a less than significant level.

Table 5.3-2 [continued]
Biological Resources Policy Consistency Analysis for Proposed Dredging

Policy	Consistency Analysis
Goal NR 11: Protection of environmental resources in Newport Harbor while preserving and enhancing public recreational boating activities.	Consistent. As stated in Goal NR 10, construction-related impacts to the Newport Bay Channel would be temporary and localized during dredging operations and the dredged area would be restored to preconstruction grades. Impacts to marine environmental resources would be less than significant with the implementation of Mitigation Measures BIO-2 pertaining to the protection of marine mammals and BIO-3 pertaining to the protection of eelgrass and kelp beds. Further, construction activities would not hinder recreational boating activities and no impact would result in this regard.
Goal NR 13: Protection, maintenance, and enhancement of Southern California wetlands.	Consistent. Refer to Goals NR 10 and NR 11. No wetlands regulated by the Corps, RWQCB or CDFW are located within the area of proposed improvements within jurisdictional limits. The Newport Bay Channel qualifies as CCC wetlands and impacts would occur to CCC wetlands. However, impacts to CCC wetlands would be temporary and localized during dredging operations and upon completion of force main improvements the dredged area would be restored to preconstruction grades and no permanent impacts to the Newport Bay Channel or CCC wetlands would occur. Thus, impacts would be less than significant in this regard.
Goal NR 14: Maintain and enhance deep water channels and ensure they remain navigable by boats.	Consistent. Refer to Goals NR 10 and NR 11. Development of the proposed project would temporarily impact the existing Newport Bay Channel during dredging operations within the immediate vicinity of active dredging operations. Dredging activities would not impede the entire channel. Upon completion of force main improvements the dredged area would be restored to preconstruction grades. No permanent impacts to the Newport Bay Channel would occur and impacts to boat navigation would be less than significant.
Goal NR 15: Proper disposal of dredge spoils to avoid disruption to natural habitats.	Consistent. As discussed in Impact Statement HAZ-1 of Section 5.7, *Hazards and Hazardous Materials*, spoils would result from HDD/microtunneling and dredging materials. Mitigation Measure HAZ-3 would ensure that materials would be properly disposed of. With implementation of the recommended Mitigation Measure HAZ-3, the project would conduct proper disposal during construction.
Goal NR 16: Protection and management of Upper Newport Bay commensurate with the standards applicable to our nation's most valuable natural resources.	Consistent. Proposed improvements are located to the south of Bay Bridge and are not located within Upper Newport Bay. No impact would result in this regard.
CLUP Policies	
4.1.1-2. Require a site-specific survey and analysis prepared by a qualified biologist as a filing requirement for coastal development permit applications where development would occur within or adjacent to areas identified as a potential ESHA. Identify ESHA as habitats or natural communities listed in Section 4.1.1 that possess any of the attributes listed in Policy 4.1.1-1. The ESA's depicted on Map 4-1 shall represent a preliminary mapping of areas containing potential ESHA.	Consistent. Refer to Goal NR 10. The project site is not located in an ESA or ESHA. Thus, no survey/analysis would be required. Mitigation Measure BIO-1 pertaining to the protection of nesting birds, Mitigation Measure BIO-2 pertaining to the protection of marine mammals and Mitigation Measure BIO-3 pertaining to the protection of eelgrass and kelp species would reduce impacts in this regard to less than significant levels.
4.1.1-4. Protect ESHAs against any significant disruption of habitat values.	Consistent. Refer to Goal NR 10 and Policy 4.1.1-2.

Table 5.3-2 [continued]
Biological Resources Policy Consistency Analysis for Proposed Dredging

Policy	Consistency Analysis
4.1.1-6. Require development in areas adjacent to ESHAs to be sited and designed to prevent impacts that would significantly degrade those areas, and to be compatible with the continuance of those habitat areas.	Consistent. Refer to Goal NR 10. The site is currently developed and project implementation would not affect an ESA or ESHA. Construction activities would occur within previously disturbed areas. Mitigation Measure BIO-1 pertaining to the protection of nesting birds and Mitigation Measures BIO-2 and BIO-3 pertaining to the protection of marine mammals and eelgrass would reduce impacts in this regard to a less than significant level.
4.1.1-9. Where feasible, confine development adjacent to ESHAs to low impact land uses, such as open space and passive recreation.	Consistent. Refer to Goals NR 10 and Policy 4.1.1-6.
4.1.1-10. Require buffer areas of sufficient size to ensure the biological integrity and preservation of the habitat they are designed to protect. Terrestrial ESHA shall have a minimum buffer width of 50 feet wherever possible. Smaller ESHA buffers may be allowed only where it can be demonstrated that 1) a 50-foot wide buffer is not possible due to site-specific constraints, and 2) the proposed narrower buffer would be amply protective of the biological integrity of the ESHA given the site-specific characteristics of the resource and of the type and intensity of disturbance.	Consistent. The site is currently developed and project implementation would not affect an ESA or ESHA. Construction activities would occur within previously disturbed areas. Mitigation Measure BIO-1 pertaining to the protection of nesting birds and Mitigation Measures BIO-2 and BIO-3 pertaining to the protection of marine mammals and eelgrass would reduce impacts in this regard to a less than significant level.
4.1.1-13. Shield and direct exterior lighting away from ESHAs to minimize impacts to wildlife.	Consistent. Project implementation would not contribute to lighting impacts within an ESHA as the project site is not within an ESA. With implementation of the recommended Mitigation Measure AES-3, proposed construction lighting would be required to be directed/shielded away from biologically sensitive areas (including Newport Bay Channel). Thus, with implementation of Mitigation Measure AES-3 the project would be consistent with this policy.
4.1.2-1. Maintain, enhance, and, where feasible, restore marine resources.	Consistent. Refer to Goal NR 10.
4.1.3-1. Utilize the following mitigation measures to reduce the potential for adverse impacts to ESA natural habitats: C. Prohibit the planting of non-native plant species and require the removal of non-natives in conjunction with landscaping or revegetation projects in natural habitat areas. D. Strictly control encroachments into natural habitats to prevent impacts that would significantly degrade the habitat.	Consistent. Existing areas of vegetation would not be impacted by the project, as construction activities would take place within previously disturbed bare soils and paved areas. Further, proposed development (the new pump station facility), is surrounded by paved surfaces and developed uses. Last, proposed dredging is located outside of an ESA or ESHA.
4.1.4-1. Continue to protect eelgrass meadows for their important ecological function as a nursery and foraging habitat within the Newport Bay ecosystem.	Consistent. Refer to Goal NR 10. As discussed in Impact Statement BIO-3, impacts to eelgrass would be less than significant.
4.2.1-1. Recognize and protect wetlands for their commercial, recreational, water quality, and habitat value.	Consistent. Refer to Goal NR 10 and Goal NR 13. No wetlands would be permanently affected by the proposed project.
4.2.1-2. Protect, maintain and, where feasible, restore the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes.	Consistent. Refer to Goal NR 10.

Table 5.3-2 [continued]
Biological Resources Policy Consistency Analysis for Proposed Dredging

Policy	Consistency Analysis
4.2.2-3. Require buffer areas around wetlands of a sufficient size to ensure the biological integrity and preservation of the wetland that they are designed to protect. Wetlands shall have a minimum buffer width of 100 feet wherever possible. Smaller wetland buffers may be allowed only where it can be demonstrated that 1) a 100-foot wide buffer is not possible due to site-specific constraints, and 2) the proposed narrower buffer would be amply protective of the biological integrity of the wetland given the site-specific characteristics of the resource and of the type and intensity of disturbance.	Consistent. Refer to Goal NR 13 and Policy 4.1.1-10.
California Coastal Act	
30230. Marine resources shall be maintained, enhanced, and, where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.	Consistent. Refer to Goal NR 10.
30231. The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.	Consistent. Refer to Goal NR 10 and Goal NR 15. Further, as discussed in Section 5.7, *Hazards and Hazardous Materials*, proposed drilling activities would require pumping of water in the tunnel(s) during drilling. However, the project would be required to obtain and comply with the National Pollutant Discharge Elimination System (NPDES) General Permit, *Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activities* (Order No. 2009-0009-DWQ, NPDES Number CAS000002). The NPDES General Permit requires the proper handling and discharge of harmful pollutants that could affect water quality in the area. Therefore, compliance with the NPDES General Permit would ensure that any harmful pollutants contained within the Newport Bay Channel would be properly handled and disposed of to prevent unsafe exposure to construction workers. As discussed in Section 5.8, *Hydrology and Water Quality*, the proposed project would result in less than significant impacts pertaining to runoff, interference with surface waterflow, and alternation of natural streams. As discussed in Impact Statement BIO-1, the proposed project would maintain existing natural vegetation buffer areas. Project implementation would adhere to Policies 4.1.1-10, and 4.2.2-3 pertaining to buffer areas around terrestrial ESHAs and wetlands. Per Section 8.0, *Effects Found Not To Be Signification*, the proposed project would not result in impacts to groundwater supplies. Impacts pertaining to waste water reclamation are not applicable to the proposed project.

Table 5.3-2 [continued]
Biological Resources Policy Consistency Analysis for Proposed Dredging

Policy	Consistency Analysis
30240. (a) ESHAs shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.	Consistent. Refer to Goal NR 10 and Policy 4.1.1-6.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: The following mitigation measures apply to each site plan concept as specified:

Original Northeast Pump Station

Refer to Mitigation Measure BIO-1.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

Modified Northeast Pump Station

Refer to Mitigation Measures BIO-1 through BIO-3.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

South Pump Station

Refer to Mitigation Measures BIO-1 through BIO-3.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.3.5 CUMULATIVE IMPACTS

DEVELOPMENT ANTICIPATED BY THE PROJECT COMBINED WITH CUMULATIVE DEVELOPMENT WOULD NOT HAVE ADVERSE EFFECTS ON BIOLOGICAL RESOURCES OR INTERFERE WITH THE MOVEMENT OF MIGRATORY WILDLIFE SPECIES.

Impact Analysis:

Original Northeast Pump Station

For purposes of biological resource impact analysis, cumulative impacts are considered for cumulative development, as outlined in Table 4-1, *Cumulative Projects List*. As concluded above, the project would

result in less than significant impacts on biological resources and/or interference with movement of migratory wildlife species with implementation of Mitigation Measure BIO-1 and adherence to the General Plan, Council Policy G-1, Municipal Code, and State and Federal regulations. Therefore, the project's incremental effects involving biological resources are not cumulatively considerable. Moreover, all cumulative development within the project area would undergo environmental and design review on a project-by-project basis pursuant to CEQA, in order to evaluate potential impacts to biological resources. Future development with potential to impact biological resources would also be required to comply with the established Federal and State regulatory framework. Cumulative impacts to biological resources would continue to be mitigated on a project-by-project basis and in accordance with the established regulatory framework, through the established regulatory review process. Therefore, the project's incremental effect on marine biological resources, would not be cumulatively considerable.

Modified Northeast Pump Station

In regard to pump station improvements, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

Should the Modified Northeast Pump Station propose microtunneling activities, no impacts to the Newport Bay Channel would occur, similar to the Original Northeast Pump Station. However, should dredging occur, trenching would occur in the Newport Bay Channel and shoring of the trench walls within may be required thereby having the potential to contribute to adverse effects on marine biological resources. Dredging activities would result in potential biological resource impacts from construction related turbidity, light and noise, and increased workboat activity. However, potential construction-related impacts to the Newport Bay Channel and marine biological resources would be temporary and localized during dredging operations and the dredged area would be restored to preconstruction conditions. Implementation of Mitigation Measures BIO-2 pertaining to the protection of marine mammals and BIO-3 pertaining to the protection of eelgrass and kelp beds would reduce adverse effects to marine biological resources to less than significant levels. Therefore, with the inclusion of Mitigation Measures BIO-2 and BIO-3, the project's incremental effect on marine biological resources, including potential dredging-related impacts, would not be cumulatively considerable.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: The following mitigation measures apply to each site plan concept as specified:

Original Northeast Pump Station

Refer to Mitigation Measure BIO-1.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

Modified Northeast Pump Station

Refer to Mitigation Measures BIO-1 through BIO-3.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

South Pump Station

Refer to Mitigation Measures BIO-1 through BIO-3.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.3.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts related to biological resources have been identified following implementation of the recommended mitigation measures.

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5.4 CULTURAL RESOURCES

The purpose of this section is to identify cultural resources affected by the project and to assess the significance of the proposed project's potential impact on such resources. The analysis in this section has been prepared in accordance with *CEQA Guidelines,* Section 15064.5, which considers potential impacts on prehistoric and historic resources. Cultural resources relate to archaeological remains, historic buildings, traditional customs, tangible artifacts, historical documents, and public records that are unique or significant. Feasible mitigation measures to avoid or lessen potentially significant impacts to cultural resources are identified as necessary. The information in this section is based on the *City of Newport Beach General Plan* and *Revised Cultural/Paleontological Resources Assessment for the Proposed Bay Bridge Pump Station and Force Mains Rehabilitation Project* (Cultural/Paleontological Assessment) prepared by Duke CRM, dated March 20, 2019. The Cultural/Paleontological Assessment is provided as Appendix 11.4, *Cultural/Paleontological Resources Assessment*.

The purpose of the Cultural/Paleontological Assessment is to inventory any cultural and paleontological resources within the project site and assess the potential for cultural and paleontological resources to be adversely impacted during construction of the project; refer to Section 5.5-4, *Geology and Soils*, for the discussion of paleontological resources.

5.4.1 EXISTING SETTING

HISTORIC OVERVIEW

The community of Newport Beach has a rich and diverse history, and its close proximity to the water played a large role in the development of the City. The first recorded activity in the community later known as Newport Beach began in 1870, when a small stern wheeler from San Diego named "The Vaquero" made its first trip to a marshy lagoon. James McFadden and other ranch owners in the Lower Bay decided from then on that the area should be called "Newport." In 1888 James McFadden changed the isolated settlement by building a wharf that extended from the shallow bay to deeper water where large steamers could dock. Shipping activity increased dramatically, and in two years, Newport Beach was known as a vibrant Southern California shipping town.

Soon after, the Pacific Electric Railroad established itself in Newport Beach in 1905, connecting the City of Los Angeles by rail. Public transit brought new visitors to the waterfront, and small hotels and beach cottages were developed that catered to the tourist industry. West Newport, East Newport, Bay Island, Balboa, Corona del Mar, Balboa Island, and Port Orange (at old Newport Landing) were soon subdivided, and in August 1906, residents in the booming bay town voted to incorporate. Between 1934 and 1936, the Federal government and the county dredged the Lower Bay, extended jetties, and created the present day contour of Newport Beach. In 1936, community members dedicated the City's main harbor, named Newport Harbor.

During World War II, the harbor became a vital hub as naval ships were built and repaired in its coastal waters. At the end of the war, a housing construction boom began as seasonal rentals became year-round housing, and the City's identity as a summer resort location began to change. The Santa Ana freeway, built in the 1950s, triggered further growth. During this time, housing development began to spread northward from the waterfront to the hills and mesa areas. The community's

economic industry changed as the fishing industry, once the backbone of Newport Beach's economy, gradually declined to be replaced with new businesses and commercial centers. Beginning in the 1970s, the building of shopping centers such as Fashion Island, hotels, restaurants, offices, and many new homes led to the creation of many active employment, retail, and residential areas that characterize much of Newport Beach today.

For many years, Newport Beach's scenic location, attractive neighborhoods, and active commercial areas have continued to place many of the City's original buildings, paleontological resources, and historical sites under extreme development pressures. Many of the community's early structures and archaeological sites have been demolished or altered. However, some historical sites and buildings have been preserved that are representative of the community and the region. Several of these historical resources have been recognized as being of statewide or national importance. This section discusses the existing cultural resources that help define the City's heritage.

Historical Records Search of the Project Area

According to the *City of Newport Beach General Plan EIR* (General Plan EIR), eleven properties in the City have been listed or designated eligible for listing on the National Register of Historic Places (NRHP or National Register) or California Register of Historic Resources (CRHR or California Register), or otherwise listed as historic or potentially historic in the California Historic Resources Information System (CHRIS) maintained by the Office of Historic Preservation. As shown on Figure 4.4-1, *Historical Resources*, of the General Plan EIR, none of the known historical resources are located on or within close proximity of the project site.

As part of the Cultural/Paleontological Assessment, Duke CRM examined the California State Historic Property Data File (HPD), which includes the National Register, California Register, California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). No listed historical resources are present within the project area.

ARCHAEOLOGY

The first generally accepted period of human occupation of Southern California began at about the end of the Pleistocene Epoch, about 10,000 to 12,000 years ago. Archaeological sites around Upper Newport Bay have yielded some of the evidence for the earliest human occupation of Orange County and date to about 9,500 years before present (BP). Over 50 sites have been documented in the City, including the recently annexed Newport Coast area and in the Newport Banning Ranch portion of the City's Sphere of Influence (SOI). Many of these sites have yielded, or have been determined to have the potential to yield, substantial information regarding the prehistory of the City and County, and have included human burials.

At least two and possibly three distinct cultural groups inhabited the area, and later period sites indicate that the area including the City was heavily populated at the time of European contact. Ethnographically, the City falls within a region in which tribal boundaries are unclear: both the Gabrielino and the Luiseño/Juaneño lay ancestral territorial claims. According to the Juaneño Band of Mission Indians, the territory of the Juaneño extended north to the Santa Ana River drainage; however, Gabrielino territory is thought by some to extend south of the Santa Ana River Drainage to Aliso Creek, and possibly even further south.

The Luiseño/Juaneño were hunters/gatherers, organized into sedentary and semi-sedentary, autonomous villages. A large village was typically 30 square miles, and contained several hunting, fishing, and collecting areas in different ecological zones. Seasonal moves to exploit resources outside a village's territory occurred during several weeks of the year.

The coastal Luiseño/Juaneño bands exploited a variety of plant food resources. Seeds and acorns accounted for up to 75 percent of the typical diet. Many fruits, berries, bulbs, and roots were used as medicines, beverage bases, and manufacturing materials as well as food. Terrestrial game accounted for an estimated five to ten percent of the coastal Luiseño/Juaneño diet; fish and marine mammals represented an additional 20 to 35 percent. Luiseño/Juaneño material culture associated with food procurement includes tools such as manos and metates, as well as mortars and pestles for processing acorns and seeds, and pulverizing pulpy materials and small game. They probably hunted first with spears, and then later with bows and arrows. The projectiles themselves would have had fire-hardened wood or chipped stone tips. Near-shore fishing and marine mammal hunting were accomplished with light balsa or dugout canoes.

Archaeological Records Search Results

On December 6, 2016, Duke CRM conducted a records search at the South Central Coastal Information Center (SCCIC). The SCCIC is part of the California Historical Resources Information System (CHRIS) and is located at California State University, Fullerton. The records search included a review of all recorded historic and prehistoric archaeological sites within a half-mile radius of the project area, as well as a review of known cultural resource survey and excavation reports. Twenty-one cultural resource reports are on file within a half mile of the project boundaries. Eleven cultural resources are mapped within a half mile of the project boundaries; as detailed in Table 5.4-1, *Cultural Resources Within A Half Mile of the Project Boundaries*. None of these resources are situated within the project area.

Table 5.4-1
Cultural Resources Within A Half Mile of the Project Boundaries

Primary No.	Description	Distance
30-000048	Prehistoric Shell Midden Site	0.33 mile, north
30-000049	Marine Shell Mound Site	0.25 mile, north
30-000066	Marine Shell Scatter/Mound	0.50 mile, east
30-000067	Marine Shell Scatter/Mound	0.50 mile, east
30-000068	Marine Shell Scatter/Mound	0.25 mile, east
30-000157	Shell Midden Site	0.50 mile, east
30-000158	Shell Midden Site, possible same as 30-000067 above	0.25 mile, east
30-000159	Same Site as 30-000068 above	0.33 mile, east
30-000186	Shell Midden with groundstone and flaked stone artifacts	600 feet north (on bluffs)
30-001451	Small site containing lithic artifacts	0.25 mile, north
30-162261	Historical Marker Plaque-Old Landing, CHL 198	Adjacent, north

Source: Duke CRM, *Revised Cultural/Paleontological Resources Assessment for the Proposed Bay Bridge Pump Station and Force Mains Rehabilitation Project*, dated March 20, 2019; refer to Appendix 11.4, *Cultural/Paleontological Resources Assessment*.

FIELD SURVEY

A reconnaissance survey of the project area and immediate surroundings was conducted by Matthew Stever of Duke CRM on January 16, 2017. Ground visibility within the project's area of potential affects was poor overall (less than 5 percent) due to the built environment. The project boundaries are obscured by asphalt, concrete or other modern construction. The survey confirmed that the project area is characterized as built environment and that exposed areas of soil adjacent to and beneath the bridge are highly disturbed by construction related earth disturbing activities and dredging of the channel. There is a very slight possibility of disturbed prehistoric artifacts along the extreme northern margin of Castaways Park where the bluff is eroding into the channel, but none were observed on the surface. No cultural resources were identified during the survey.

5.4.2 REGULATORY SETTING

Numerous laws and regulations require Federal, State, and local agencies to consider the effects a project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies (i.e., State Historic Preservation Office and the Advisory Council on Historic Preservation). The National Historic Preservation Act (NHPA) of 1966, as amended, the California Environmental Quality Act (CEQA), and the California Register, Public Resources Code (PRC) 5024, are the primary Federal and State laws governing and affecting preservation of cultural resources of national, State, regional, and local significance. The applicable regulations are further discussed below.

FEDERAL

National Historic Preservation Act of 1966

Enacted in 1966 and amended in 2000, the NHPA declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary for the Interior, to encourage the achievement of preservation goals at the Federal, State, and local levels. The NHPA authorized the expansion and maintenance of the National Register, established the position of State Historic Preservation Officer (SHPO) and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP).

Section 106 Process

Through regulations associated with the NHPA, an impact to a cultural resource would be considered significant if government action would affect a resource listed in or eligible for listing in the National Register. The NHPA codifies a list of cultural resources found to be significant within the context of national history, as determined by a technical process of evaluation. Resources that have not yet been placed on the National Register, and are yet to be evaluated, are afforded protection under the Act until shown to be not significant.

Section 106 of the NHPA and its implementing regulations (36 Code of Federal Regulations Part 800) note that for a cultural resource to be determined eligible for listing in the National Register, the resource must meet specific criteria associated with historic significance and possess certain levels of integrity of form, location, and setting. The criteria for listing on the National Register are applied within an analysis when there is some question as to the significance of a cultural resource. The criteria for evaluation are defined as the quality of significance in American history, architecture, archeology, engineering, and culture. This quality must be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history; or

Criterion B: It is associated with the lives of persons significant in our past; or

Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Criterion (D) is usually reserved for archaeological resources. Eligible cultural resources must meet at least one of the above criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character.

The Section 106 evaluation process does not apply to projects undertaken under City environmental compliance jurisdiction; however, should the undertaking require funding, permits or other administrative actions issued or overseen by a Federal agency, analysis of potential impacts to cultural resources following the Section 106 process would likely be necessary. The Section 106 process typically excludes cultural resources created less than 50 years ago unless the resource is considered highly significant from the local perspective. Finally, the Section 106 process allows local concerns to be voiced and the Section 106 process must consider aspects of local significance before a significance judgment is rendered.

Secretary of the Interior's Standards for the Treatment of Historic Properties

Evolving from the *Secretary of the Interior's Standards for Historic Preservation Projects with Guidelines for Applying the Standards* that were developed in 1976, the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings* were published in 1995 and codified as 36 CFR 67. Neither technical nor prescriptive, these standards are "intended to promote responsible preservation practices that help protect our Nation's irreplaceable cultural resources." "Preservation" acknowledges a resource as a document of its history over time, and emphasizes stabilization, maintenance, and repair of existing historic fabric. "Rehabilitation" not only incorporates the retention of features that convey historic character but also accommodates alterations and additions to facilitate continuing or new uses. "Restoration" involves the retention and replacement of features from a specific period of significance. "Reconstruction," the least used treatment, provides a basis for recreating a missing resource. These standards have been

adopted, or are used informally, by many agencies at all levels of government to review projects that affect historic resources.

STATE

California Environmental Quality Act

As defined in PRC Section 21083.2(g), a "unique archaeological resource" is an archaeological artifact, object, or site, about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is high probability that it meets any of the following criteria:

Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.

Has a special and particular quality, such as being the oldest of its type or the best available example of its type.

Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Public Resources Code Section 21084.1 and *CEQA Guidelines* Section 15064.5. If an archaeological site does not meet the criteria for a historical resource contained in the *CEQA Guidelines*, then the site is to be treated in accordance with the provisions of CEQA Section 21083, which covers a unique archaeological resource. The *CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (*CEQA Guidelines* Section 15064.5[c][4]).

California Register of Historical Resources

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR.

The California Register consists of properties that are listed automatically, as well as those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

California properties listed in the National Register and those formally Determined Eligible for the National Register;

California Registered Historical Landmarks from No. 0770 onward; and

Those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Resources Commission for inclusion on the California Register.

The criteria for eligibility of listing in the California Register are based upon National Register criteria, but are identified as 1 to 4 instead of A to D. To be eligible for listing in the California Register, a property must be at least 50 years of age and possess significance at the local, State, or national level, under one or more of the following four criteria:

Criterion 1: It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Criterion 2: It is associated with the lives of persons important in our past.

Criterion 3: 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.

Criterion 4: It has yielded, or may be likely to yield, information important in history or prehistory.

Historical resources eligible for listing in the California Register may include buildings, sites, structures, objects, and historic districts. Resources less than 50 years of age may be eligible if it can be demonstrated that sufficient time has passed to understand its historical importance. While the enabling legislation for the California Register is less rigorous with regard to the issue of integrity, there is the expectation that properties reflect their appearance during their period of significance.

California Points of Historical Interest

California Points of Historical Interest (Points) are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental or other value. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. No historical resource may be designated as both a landmark and a "point." If a point is subsequently granted status as a landmark, the point designation will be retired.

To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

The first, last, only or most significant of its type within the local geographic region (city or county);

Associated with an individual or group having a profound influence on the history of the local area; or

A prototype of, or an outstanding example of, a period, style, architectural movement, or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer, or master builder.

State Historical Building Code

Created in 1975, the State Historical Building Code (SHBC) provides regulations and standards for the preservation, restoration, rehabilitation, or relocation of historic buildings, structures, and properties that have been determined by an appropriate local or State governmental jurisdiction to be significant in the history, architecture, or culture of an area. Rather than being prescriptive, the SHBC constitutes a set of performance criteria. The SHBC is designed to help facilitate restoration or change

of occupancy in such a way as to preserve original or restored elements and features of a resource; to encourage energy conservation and a cost-effective approach to preservation; and to provide for reasonable safety from earthquake, fire, or other hazards for occupants and users of such "buildings, structures, and properties." The SHBC also serves as a guide for providing reasonable availability, access, and usability by the physically disabled.

LOCAL

City of Newport Beach General Plan

City policies pertaining to cultural resources are contained in the Historic Element of the City's General Plan. The Historic Resources Element describes methods for protecting archaeological and historical resources, and provides local policies to guide the implementation of cultural resource preservation, beyond the protections afforded by applicable Federal, State, and local laws. These policies include, but are not limited to, the following:

Historic Resources Element

Goals:

HR 1: Recognize and protect historically significant landmarks, sites, and structures.

HR 2: Identification and protection of important archaeological and paleontological resources within the City.

Policies:

HR 1.5 *Historical Elements within New Projects:* Require that proposed development that is located on a historical site or structure incorporate a physical link to the past within the site or structural design, if preservation or adaptive reuse is not a feasible option. For example, incorporate historical photographs or artifacts within the proposed project or preserve the location and structures of existing pathways, gathering places, seating areas, rail lines, roadways, or viewing vantage points within the proposed site design (Imp 29.2).

HR 2.1 *New Development Activities:* Require that, in accordance with CEQA, new development protect and preserve paleontological and archaeological resources from destruction, and avoid and mitigate impacts to such resources. Through planning policies and permit conditions, ensure the preservation of significant archaeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA (Imp 11.1).

HR 2.2 *Grading and Excavation Activities:* Maintain sources of information regarding paleontological and archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological or archaeological findings. Require a qualified paleontologist/archaeologist to monitor all grading and/or excavation where there is a potential to affect cultural, archaeological, or paleontological resources. If these

resources are found, the applicant shall implement the recommendations of the paleontologist/archaeologist, subject to the approval of the City Planning Department (Imp 11.1).

HR 2.3 *Cultural Organizations:* Notify cultural organizations, including Native American organizations, of proposed developments that have the potential to adversely impact cultural resources. Allow representatives of such groups to monitor grading and/or excavation of development sites (Imp 11.1).

HR 2.4 *Paleontological or Archaeological Materials:* Require new development to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable repository, located within Newport Beach, or Orange County, whenever possible (Imp. 11.1).

In addition, the City's Natural Resources Element also provides for the protection of cultural resources with the following Goal and Policies:

Natural Resources Element

Goal:

NR 18: Protection and preservation of important paleontological and archaeological resources.

Policies:

NR 18.1 *New Development:* Require new development to protect and preserve paleontological and archaeological resources from destruction, and avoid and minimize impacts to such resources in accordance with the requirements of CEQA. Through planning policies and permit conditions, ensure the preservation of significant archaeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA (Imp 7.1).

NR 18.2 *Maintenance of Database Information:* Prepare and maintain sources of information regarding paleontological or archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological and archaeological findings (Imp 10.1).

NR 18.4 *Donation of Materials:* Require new development, where onsite preservation and avoidance are not feasible, to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable repository, located within Newport Beach or Orange County, whenever possible (Imp 11.1).

Newport Beach City Council Policy Manual

The Newport Beach City Council Manual identifies policies applicable to cultural resources. These policies are discussed below.

Places of Historical and Architectural Significance (K-2). This regulation establishes City Council authority to designate any building, object, structure, monument, or collection having importance to the history or architecture of the City and provides procedures for listing. Accordingly, the City Clerk is required to maintain the City of Newport Beach Register of Historical Property. The City Council may at any time repeal, revise, or modify any such designation upon reconsideration of the historical or architectural importance of the structure.

Archaeological Guidelines (K-5). The policies set forth within these guidelines are used to guide the development or redevelopment of land within the City. The City is required, through its planning policies and permit conditions, to ensure the preservation of significant archaeological resources and require that the impact caused by any development be mitigated in accordance with CEQA. The City is to prepare and maintain sources of information regarding archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve archaeological findings.

If determined necessary by the Planning Director, it is the responsibility of the developer to examine the site to determine the existence and extent of archaeological resources. Qualified observers are to prepare and submit a written report describing the findings and making recommendations for further action, which may include monitoring. Based on the report and recommendations, the City is required to ensure that the findings or sites are recorded, preserved, and protected.

City of Newport Beach Local Coastal Program

The CLUP sets forth goals, objectives, and policies that govern the use of land and water in the coastal zone within the City and its sphere of influence, with the exception of Newport Coast and Banning Ranch. Coastal Act policies related to cultural resources that are relevant to Newport Beach include the following:

- *30244*. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

PALEONTOLOGICAL AND ARCHEOLOGICAL RESOURCES

The following CLUP policies are applicable to the proposed project:

4.5.1-1 Require new development to protect and preserve paleontological and archaeological resources from destruction, and avoid and minimize impacts to such resources. If avoidance of the resource is not feasible, require an in situ or site-capping preservation plan or a recovery plan for mitigating the effect of the development.

4.5.1-2 Require a qualified paleontologist/archeologist to monitor all grading and/or excavation where there is a potential to affect cultural or paleontological resources. If grading operations or excavations uncover paleontological/archaeological resources, require the paleontologist/archeologist monitor to suspend all development activity to avoid destruction of resources until a determination can be made as to the significance of the paleontological/ archaeological resources. If resources are determined to be significant, require submittal of a mitigation plan. Mitigation measures considered may

range from in-situ preservation to recovery and/or relocation. Mitigation plans shall include a good faith effort to avoid impacts to cultural resources through methods such as, but not limited to, project redesign, in situ preservation/capping, and placing cultural resource areas in open space.

4.5.1-3 Notify cultural organizations, including Native American organizations, of proposed developments that have the potential to adversely impact cultural resources. Allow qualified representatives of such groups to monitor grading and/or excavation of development sites.

4.5.1-4 Where in situ preservation and avoidance are not feasible, require new development to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable repository, located within Orange County, whenever possible.

4.5.1-5 Where there is a potential to affect cultural or paleontological resources, require the submittal of an archeological/cultural resources monitoring plan that identifies monitoring methods and describes the procedures for selecting archeological and Native American monitors and procedures that will be followed if additional or unexpected archeological/cultural resources are encountered during development of the site. Procedures may include, but are not limited to, provisions for cessation of all grading and construction activities in the area of the discovery that has any potential to uncover or otherwise disturb cultural deposits in the area of the discovery and all construction that may foreclose mitigation options to allow for significance testing, additional investigation and mitigation.

4.5.1-6 Continue to protect Upper Newport Bay cliff faces to serve as a reference section for micropaleontological studies.

5.4.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The purpose of this analysis is to identify any potential cultural resources within or adjacent to the project area, and to assist the Lead Agency in determining whether such resources meet the official definitions of "historical resources," as provided in the Public Resource Code, in particular CEQA.

SIGNIFICANCE GUIDELINES

Historical Resources

Impacts to a significant cultural resource that affect characteristics that would qualify it for the NRHP or that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (*CEQA Guidelines*, Section 15064.5 [b][1], 2000). Material impairment is defined as demolition or alteration "in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register" (*CEQA Guidelines* Section 15064.5[b][2][A]).

Archaeological Resources

A significant prehistoric archaeological impact would occur if grading and construction activities would result in a substantial adverse change to archaeological resources determined to be "unique" or "historic." "Unique" resources are defined in Public Resources Code section 21083.2; "historic" resources are defined in Public Resources Code Section 21084.1 and *CEQA Guidelines* Section 15126.4.

Public Resources Code section 21083.2(g) states:

> *As used in this section, "unique archaeological resource" means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:*
>
> 1. *Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;*
> 2. *Has a special and particular quality, such as being the oldest of its type or the best available example of its type; or*
> 3. *Is directly associated with a scientifically recognized important prehistoric or historic event or person.*

CEQA SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 (refer to Impact Statement CUL-1);

Cause a substantial adverse change in the significance of an archaeological resources pursuant to Section 15064.5 (refer to Impact Statement CUL-2); and/or

Disturb any human remains, including those interred outside of formal cemeteries (refer to Section 8.0, *Effects Found Not To Be Significant*).

Based on these standards, the project's effects have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are proposed for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a "significant unavoidable impact."

5.4.4 IMPACTS AND MITIGATION MEASURES

HISTORICAL RESOURCES

CUL-1 DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT COULD RESULT IN SIGNIFICANT IMPACTS TO HISTORICAL RESOURCES WITHIN THE PROJECT SITE BOUNDARIES.

Impact Analysis:

Original Northeast Pump Station

According to the General Plan EIR, no known historic resources are located within the project area. Further, Duke CRM's records search indicated that no historical resources, including the National Register, California Register, CHL, and CPHI, are present in the project area. Notwithstanding, the project site contains the two structures comprising the OCSD Bay Bridge Station (pump station) that were built in 1966 and 1995 (the original pump station building and the generator building, respectively). Current CEQA Guidelines establish 45 years of age as the threshold at which buildings should be evaluated as historic resources. As the original pump station structure is approximately 52 years old, this structure requires evaluation as a potential historical resource.

The original pump station structure, located within the eastern portion of the project site adjacent to East Coast Highway, would be demolished once the new pump station and force mains are in operation. According to the Back Bay Landing EIR, the existing pump station does not appear to possess architectural significance, such as distinctive characteristics of a type, period, or method of construction; or high artistic value.[1] The structure is surrounded by outside storage/mobile home parking to the east, north, and south. The original pump station structure replaced earlier pump houses and is not considered to be historically important in the history of OCSD. This structure is a common, typical, and undistinguished example of utilitarian architecture in Southern California. Based on the Back Bay Landing EIR, the properties lack sufficient architectural merit or historical importance to meet the threshold of significance as potential historical resources.[2] Therefore, pursuant to CEQA, development of the Original Northeast Pump Station would not result in a direct significant impact to a historical resource with regard to the existing buildings on the subject site. The existing structures constructed in 1966 and 1995 do not appear to rise to the threshold of significance for eligibility in either the National Register, California Register, or City of Newport Beach as an exceptional, distinctive, outstanding, or singular example of their type or style either individually or as a contributor to a district. The pump station structures were recommended ineligible as individual historical resources in the Back Bay Landing EIR.[3] A Department of Parks and Recreation (DPR) form for the OCSD Bay Bridge Station is included in Appendix D of the Back Bay Landing EIR.[4] Pursuant to CEQA, the Original Pump Station alternative would result in less than significant impacts to historical resources.

1 City of Newport Beach, Back Bay Landing Project Environmental Impact Report, February, 2014.
2 Ibid.
3 Ibid.
4 Ibid.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the two pump station structures would be demolished once the new pump station and force mains are in operation. Thus, development of the Modified Northeast Pump Station would not result in a direct significant impact to a historical resource with regard to the existing buildings on the subject site.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station, as the two pump station structures would be demolished once the new pump station and force mains are in operation. Thus, development of the South Pump Station would not result in a direct significant impact to a historical resource with regard to the existing buildings on the subject site.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

ARCHAEOLOGICAL RESOURCES

CUL-2 DEVELOPMENT ASSOCIATED WITH IMPLEMENTATION OF THE PROPOSED PROJECT COULD IMPACT ARCHAEOLOGICAL RESOURCES WITHIN THE PROJECT SITE BOUNDARIES.

Impact Analysis:

Original Northeast Pump Station

The Original Northeast Pump station involves the construction of a new pump station at the existing location, and associated force mains and modifications to gravity sewers within Bayside Drive and East Coast Highway. The project site and surrounding area have been highly disturbed as part of development that has occurred on-site, and the project site occurs in a highly urbanized area. Based on the Cultural/Paleontological Assessment, the research and analysis conducted indicates that the discovery of intact archaeological resources is unlikely. Due to the proximity of the work area to the bluffs immediately north of the project site there is the very slight possibility of encountering cultural material that has eroded from the bluff. However, out of context materials have limited scientific value and most likely would not be significant cultural resources under CEQA. Given this preliminary information, the sensitivity of this property for archaeological resources is considered low and there is little potential to impact archaeological resources. Although the probability is considered remote, if such resources are encountered, these materials could have cultural value to the local Native American tribes; refer to Section 5.12, *Tribal Cultural Resources*.

The Cultural/Paleontological Assessment does not recommend archaeological monitoring during project construction. However, if previously unidentified cultural resources are un-earthed during construction, Mitigation Measure CUL-1 would reduce impacts by requiring construction awareness training, and would also require construction activity to cease work in that area until a qualified archaeologist can assess the significance of a find. If warranted, the archaeologist would be required

to collect the resource, and prepare a technical report describing the results of the investigation. The test-level report would evaluate the site including discussion of the significance (depth, nature, condition, and extent of the resource), identify final mitigation recommendations that OCSD or its designee shall incorporate into future construction plans, and provide cost estimates. Last, with compliance with the Coastal Development Permit (CDP), issued by the California Coastal Commission and City of Newport Beach, the project would implement any CDP conditions required by the City of Newport Beach to demonstrate compliance with the CLUP (including Policies 4.5.1-2 and 4.5.1-3). Therefore, with implementation of Mitigation Measure CUL-1, which would ensure the project is consistent with the requirements of the CDP and CLUP, impacts to archaeological resources would be reduced to less than significant levels.

Modified Northeast Pump Station

As stated, the project site and surrounding area have been highly disturbed as part of development that has occurred on-site, and the project site occurs in a highly urbanized area. Based on the Cultural/Paleontological Assessment, the research and analysis conducted indicates that the discovery of intact archaeological resources is unlikely. The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. However, the Modified Northeast Pump Station would not impact Castaways Park. The bluffs area of Castaways Park has been identified as having a very slight possibility of encountering cultural material that has eroded from the bluff. Avoidance of this area would reduce the potential discovery on intact archaeological resources within this area. Similar to the Original Northeast Pump Station, development of the Modified Northeast Pump Station would be required to comply with Mitigation Measure CUL-1 which would provide construction awareness training and require construction activity to cease work if previously unidentified cultural resources are un-earthed during construction and a qualified archaeologist to assess the significance of the find. Compliance with Mitigation Measure CUL-1, which would ensure the project is consistent with the requirements of the CDP and CLUP, would ensure impacts associated with the Modified Northeast Pump Station are reduced to less than significant levels.

South Pump Station

Similar to the Modified Northeast Pump Station, the South Pump Station would not impact Castaways Park and the associated bluffs area. Thus, the analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station. Compliance with Mitigation Measure CUL-1, which would ensure the project is consistent with the requirements of the CDP and CLUP, would ensure impacts associated with the South Pump Station are reduced to less than significant levels.

Mitigation Measures: The following mitigation measure applies to all site plan concepts:

CUL-1 Prior to ground-disturbing activities, Orange County Sanitation District, or its designee, shall retain a qualified archaeologist to prepare an Archaeological Monitoring Protocol Plan for the project that is consistent with all applicable requirements of the CLUP and CDP as determined by the City of Newport Beach. The Orange County Sanitation District, or designee, shall implement all recommended and required measures identified in the Archaeological Monitoring Protocol Plan approved by the City of Newport Beach. The Archaeological Monitoring Protocol Plan shall require, at minimum, that the archaeologist provide training to a Contractor's Representative regarding the Archaeological Monitoring Protocol Plan and the identification of archaeological

resources. The training shall be open to Native American tribal representative(s), to assist the Contractor's Representative in identifying potential tribal cultural resources. The plan shall identify procedures for the event that potential resources are discovered by the Construction Contractor.

If evidence of potential subsurface archaeological resources is found during site disturbance/excavation activities, these activities shall cease within 50 feet of that area and the construction contractor shall contact the Orange County Sanitation District. Construction activities shall be allowed to continue in other areas of the site. The Orange County Sanitation District, or designee, shall then retain a qualified archaeologist to evaluate the discovery prior to resuming grading/construction activities in the immediate vicinity of the find. If warranted based on the archaeologist's evaluation of the find, the archaeologist shall collect the resource, and prepare a test-level report describing the results of the investigation. The test-level report shall evaluate the site including discussion of the significance (depth, nature, condition, and extent of the resource), identify final mitigation measures that OCSD or its designee shall incorporate into future construction plans, and provide cost estimates.

If the archaeologist determines that the find is prehistoric or includes Native American materials, affiliated Native American groups shall be invited to contribute to the assessment and recovery of the resource, as applicable. The archaeologist and any applicable Native American contacts shall collect the resource and prepare a test-level report describing the results of the investigation. The test-level report shall evaluate the site including discussion of significance (depth, nature, condition, and extent of the resources), final mitigation recommendations, and cost estimates.

Salvage operation requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed. Work within the area of discovery shall resume only after the resource has been appropriately inventoried, documented, and recovered, as applicable.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.4.5 CUMULATIVE IMPACTS

THE PROPOSED PROJECT, COMBINED WITH OTHER RELATED CUMULATIVE PROJECTS, COULD RESULT IN SIGNIFICANT CUMULATIVE IMPACTS TO HISTORICAL RESOURCES.

Impact Analysis:

Original Northeast Pump Station

Based upon the Cultural/Paleontological Assessment, there are no historic resources listed or eligible for listing within the project site or surrounding area. Impacts related to historical resources are generally considered site-specific and are assessed on a case-by-case basis. Potential impacts to historical resources due to cumulative development would be analyzed and mitigated on a site-specific, individual basis. Future cumulative projects would be required to comply with all applicable Federal, State, and local regulations concerning preservation, salvage, or handling of historical resources. As

discussed above, impacts to historical resources from the project would be less than significant, as no historical resources have been identified in the project area. Thus, the project's incremental effect on historical resources would not be cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

THE PROPOSED PROJECT, COMBINED WITH OTHER RELATED CUMULATIVE DEVELOPMENT, COULD RESULT IN SIGNIFICANT CUMULATIVE IMPACTS TO ARCHAEOLOGICAL RESOURCES.

Impact Analysis:

Original Pump Station

Based upon the Cultural/Paleontological Assessment, the project site and surrounding area have been highly disturbed as part of development that has occurred on-site and the discovery of intact archaeological resources is unlikely. However, the bluffs area of Castaways Park has been identified as having a very slight possibility of encountering cultural material that has eroded from the bluff.

Impacts related to archaeological resources are generally considered site-specific and are assessed on a case-by-case basis. Potential impacts to archaeological resources due to cumulative development within the project area would be analyzed and mitigated on a site-specific, individual basis. Future cumulative projects would be required to comply with all applicable Federal, State, and local regulations concerning preservation, salvage, or handling of archaeological resources. As discussed above, impacts to archaeological resources from the project would be less than significant with incorporation of Mitigation Measure CUL-1 and requirements of the CDP.

Overall, given that the project's potential impacts would be would be contained to the project area and would be less than significant with mitigation incorporated, and since cumulative projects would be required to comply with all applicable federal, state, and local regulations to reduce impacts to archaeological resources,, the project's incremental effects involving archaeological resources are not cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: Refer to Mitigation Measure CUL-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.4.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts related to cultural resources have been identified.

5.5 GEOLOGY AND SOILS

This section evaluates the geologic and seismic conditions within the project area and the potential for geologic hazard impacts associated with implementation of the proposed project. Information in this section is based primarily upon the following documents:

- *Cultural/Paleontological Resources Assessment for the Proposed Bay Bridge Pump Station and Force Mains Rehabilitation Project* (Cultural/Paleontological Assessment) prepared by Duke CRM, dated March 30, 2017 (refer to Appendix 11.4, *Cultural/Paleontological Resources Assessment*);
- *REVISED Cultural/Paleontological Resources Assessment for the Proposed Bay Bridge Pump Station and Force Mains Rehabilitation Project* (Cultural/Paleontological Assessment) prepared by Duke CRM, dated March 20, 2019 (refer to Appendix 11.4);
- *Geologic, Geotechnical, and Seismic Technical Background Report (TBR) Bay Bridge Pump Station and Force Mains Rehabilitation Study* (Geology Report), prepared by Hushmand Associates, Inc., dated April 17, 2015 (refer to Appendix 11.5, *Geology Report*)); and*Back Bay Landing Final Environmental Impact Report* (Back Bay Landing EIR), prepared by the City of Newport Beach, dated February 2014.

5.5.1 EXISTING SETTING

The geologic diversity of Newport Beach is strongly related to tectonic movement along the San Andreas Fault and its broad zone of subsidiary faults. This, along with sea level fluctuations related to changes in climate, has resulted in a landscape that is also diverse in geologic hazards. Geologic hazards are generally defined as surficial earth processes that have the potential to cause loss or harm to the community or the environment.

GEOLOGIC CONDITIONS

Site Description and Topography

The project site is located within a predominantly developed and urbanized area. The site is mostly paved with the exception of a disturbed area within the southern portion of Castaways Park and the Newport Bay Channel. The project site ranges in elevation from approximately 10 to 13 feet above mean sea level at the pump station to 15 to 20 feet below mean sea level (bmsl) within the Newport Bay Channel. Pipeline routes are within these elevation ranges.

Local Geology and Soil Conditions

According to the Geology Report, the project area consists of a combination of saltwater marsh and low relief sand and silt deposits (beach/dune sand) that are bordered by bluffs of bedrock and alluvial terrace deposits. Hilly terrain of the San Joaquin Hills to the east contribute runoff to San Diego Creek and smaller drainages such as Peters Canyon and Bonita Creek, which drain into Upper Newport Bay, which then connects at the project area via the Newport Bay Channel.

The project area is underlain by Quaternary (Holocene) estuary sediments surrounding Newport Bay Bridge and under the existing pump station facility. Underlying Newport Bay Channel are very young

sediments overlying unnamed older deposits. However, it is acknowledged that artificial fill materials may be present underlying the existing pump station facility to an unknown depth.

Groundwater

Groundwater basins are located north and west of the project area, but not under the project site. Historically shallow groundwater is reported within the areas of young alluvium. According to the Back Bay Landing EIR, groundwater was typically encountered at depths of approximately six to eight feet below ground surface (bgs). Due to the coastal location of the project site, groundwater levels vary in response to tidal fluctuations. Groundwater highs likely approach tidal highs in Newport Bay, and groundwater lows can be expected to drop bmsl.

Geologic Hazards

Based on the *City of Newport Beach General Plan* (General Plan), the City is located in the northern part of the Peninsular Ranges Province, an area that is exposed to risk from multiple earthquake fault zones. The highest risks originate from the Newport-Inglewood fault zone, the Whittier fault zone, the San Joaquin Hills fault zone, and the Elysian Park fault zone, each with the potential to cause moderate to large earthquakes that would cause ground shaking in Newport Beach and nearby communities. Earthquake-triggered geologic effects include, but are not limited to, surface liquefaction, lateral spreading, and seismic settlement. These hazards are described below.

Liquefaction

Seismic ground shaking of relatively loose, granular soils that are saturated or submerged can cause the soils to liquefy and temporarily behave as a dense fluid. Liquefaction is caused by a sudden temporary increase in pore water pressure due to seismic densification or other displacement of submerged granular soils. Liquefaction more often occurs in earthquake-prone areas underlain by young (i.e., Holocene age) alluvium where the groundwater table is higher than 50 feet bgs. Based on Figure S2, *Seismic Hazards*, of the General Plan, the project area is susceptible to liquefaction.

Lateral Spreading

The occurrence of liquefaction may also cause lateral spreading. Lateral spreading is a phenomenon in which large lateral displacement can occur on the ground surface due to movement of non-liquefied soils along zones of liquefied soils. For lateral spreading to occur, the liquefiable zone must be continuous, unconstrained laterally, and free to move along gently sloping ground toward an unconfined area. According to the Back Bay Landing EIR, the strength reduction that occurs at the onset of liquefaction and the general continuity of the liquefiable layers provide planes of weakness for the overlying non-liquefied deposits to slide along toward the free faces of the submarine slopes. The potential for lateral spreading is, therefore, very high due to the topographic aspects of the site and the unprotected/unrestrained shoreline.

Seismic Settlement

Earthquake-induced settlements result from densification of non-cohesive granular soils which occur as a result of reduction in volume during or after an earthquake event. The magnitude of settlement that results from the occurrence of liquefaction is typically greater than the settlement that results

solely from densification during strong ground shaking in the absence of liquefaction. According to the Back Bay Landing EIR, the post liquefaction seismically-induced settlements are expected to range from less than one inch to a maximum of approximately two inches, excluding vertical distortion attributed to lateral displacement and ground oscillation.

Soil Erosion

Soil erosion is most prevalent in unconsolidated alluvium and surficial soils, which are prone to downcutting, sheetflow, and slumping and bank failure during and after heavy rainstorms. Strong wind forces can also produce varying amounts of soil erosion of unconsolidated surficial soils. The pump station facility site is currently paved and does not possess site conditions necessarily conducive to soil erosion. However, the vacant disturbed land located within the southern portion of Castaways Park may involve soil erosion, as this area consists of bare soils.

Soil Expansion

According to the Back Bay Landing EIR, the near-surface soil consists of mainly sandy materials. Due to the granular nature of the soils, the expansion potential of the soils is expected to be very low.

Corrosive Soils

Corrosive soils contain chemical constituents that can react with construction materials, such as concrete and ferrous metals, that may cause damage to foundations and buried pipelines. One such constituent is water-soluble sulfate which, if in a high enough concentration, can react with and damage concrete. Electrical resistivity and pH level are indicators of the soil's tendency to corrode ferrous metals. To evaluate the corrosion potential of the on-site soils to both ferrous metals and concrete, representative samples must be tested for pH, minimum resistivity, soluble chlorides, and soluble sulfates. According to the Back Bay Landing EIR, the near surface soils have "negligible" soluble sulfate contents and low chloride contents. The soils are considered to have a moderate corrosion potential to buried ferrous metal.

PALEONTOLOGICAL RESOURCES

Fossils in the central Santa Ana Mountains represent the oldest formations in the County at 145 to 175 million years old and contain aquatic fossil types, such as radiolarians (single-celled plankton), ammonites (extinct members of the class including nautili, squid, and octopi), and bivalves (such as oysters and clams). The predominance of these fossil types indicates that Orange County, for much of its geological history, was underwater.

During the Miocene Epoch (26 million years ago [mya] to 7 mya), tectonic forces produced uplifts that resulted in the formation of mountains and initiated movement on the nascent San Andreas Fault system, forming numerous coastal marine basins, including the Los Angeles Basin, of which Orange County is a part. As the sea retreated, the County became a shallow bay surrounded by jungle and savannah areas, as indicated by the mix of aquatic and terrestrial fossils found in rocks of Miocene age. Miocene-age rock units that underlie the City, particularly in the Newport Coast area, are considered to be of high-order paleontological significance (6 to 9 on a scale of 1 to 10).

Further tectonic activity began to uplift the land during the Pliocene Epoch (7 mya to 2.5 mya), and the sea slowly receded from the coast, resulting in the formation of a succession of shoreline deposits that formed a marine terrace. Sandstone deposited in the Newport Beach area during the Pliocene Epoch contains a variety of marine mammals, sea birds, and mollusks.

During the Pleistocene Epoch (2.5 mya to 15,000 years ago), the seas continued to retreat as tectonic uplift continued. Although the Pleistocene Epoch is known as the "Ice Age," glacial ice never reached southern California, and paleontological evidence indicates that a heavily vegetated, marshy area extended inland beyond the shoreline. However, a variety of vertebrate animals typically associated with the Ice Age inhabited the area; local paleontological sites, particularly near the Castaways, have yielded fossils of Ice Age horses, elephants, bison, antelopes, and dire wolves. Also, a number of localities in the portions of the Vaqueros formation that underlie the Newport Coast area have yielded a variety of invertebrate and vertebrate fossils, and are considered to be of high-order paleontological significance (9 on a scale of 1 to 10). Other geological formations that underlie the City have also yielded significant fossils in the City, particularly in the Newport Banning Ranch portion of the City's Sphere of Influence (SOI), as well as in other areas of the County. These include the Topanga and Monterey Formations. Known paleontological deposits at Fossil Canyon, in the North Bluffs area of the City, is considered a unique paleontological locality, and known vertebrate deposits within the City are considered to be among the most important in the State. The Newport Banning Ranch portion of the SOI is particularly rich, and contains at least 14 documented sites of high significance.

The Cultural/Paleontological Assessment indicated that the project area is predominantly underlain by very young estuarine deposits (Qes) of the Holocene Epoch (11,700 years ago to today). The very young estuarine deposits are too recent to have accumulated or fossilized paleontological resources, and are assigned a low sensitivity. However, the young estuarine deposits may overlie deposits of the Capistrano Formation (Tcs), which ranges from the Miocene (23 to 5 million years ago) to Pliocene (5 to 2.5 million years ago), at depth. The Capistrano Formation has produced significant paleontological resources, including a "diverse assemblage" of marine mammal fossils, and would be assigned a high sensitivity if encountered.

Records Search

Duke CRM conducted a paleontological records search from the Los Angeles County Natural History Museum. The search did not reveal any fossil localities in the project area or in nearby young estuarine deposits, but it did document several fossil localities nearby in deposits of the Capistrano Formation and similarly-aged sediment, including sperm whale, baleen whales, bony fish, and other marine mammals. The search of the on-line files of the University of California, Museum of Paleontology revealed multiple fossil localities in deposits of the Miocene and Pliocene Epochs in Orange County, with multiple localities in deposits of the Capistrano Formation specifically. These deposits include marine mammals, birds, turtle, fish, sharks and rays, marine invertebrates, and marine microfossils.

Field Survey

A reconnaissance survey of the project area and immediate surroundings was conducted on January 16, 2017. Ground visibility within the project's area of potential affects was poor overall (less than 5 percent) due to the built environment. The project boundaries are obscured by asphalt, concrete or other modern construction. The survey confirmed that the project area is characterized as built environment and that exposed areas of soil adjacent to and beneath the Bay Bridge are highly disturbed

by construction related earth disturbing activities and dredging of the Newport Bay Channel. There is a very slight possibility of disturbed prehistoric artifacts along the extreme northern margin of Castaways Park where the bluff is eroding into the Newport Bay Channel, but none were observed on the surface. No paleontological resources were identified during the survey.

5.5.2 REGULATORY SETTING

FEDERAL

Federal Soil Protection Act

The purpose of the Federal Soil Protection Act is to protect or restore the functions of soil on a permanent sustainable basis. Protection and restoration activities include prevention of harmful soil changes, rehabilitation of the soil of contaminated sites and of water contaminated by such sites, and precautions against negative soil impacts. If impacts are made on the soil, disruptions of its natural functions as an archive of natural and cultural history should be avoided, as far as practicable.

Clean Water Act

The requirements of the Federal Water Pollution Control Act (also referred to as the Clean Water Act) through the National Pollution Discharge Elimination System (NPDES) provide guidance for protection of geologic and soil resources.

Uniform Building Code

The Uniform Building Code (UBC) is published by the International Conference of Building Officials and forms the basis for California's Building Code, as well as approximately half of the state building codes in the United States. It has been adopted by the California Legislature to address the specific building conditions and structural requirements for California, as well as provide guidance on foundation design and structural engineering for different soil types. The UBC defines and ranks the regions of the United States according to their seismic hazard potential. There are four types of regions defined by Seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 having the highest.

STATE

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 directs the Department of Conservation, California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the Seismic Hazards Mapping Act is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards.

Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally to evaluate the severity of the seismic hazards and designate as

Zones of Required Investigation (ZORI) those areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes.

The Seismic Hazards Mapping Act requires that site-specific geotechnical investigations be conducted within the ZORI to identify and evaluate seismic hazards (i.e., liquefaction and earthquake-induced landslides) and formulate mitigation measures prior to permitting most developments designed for human occupancy.

Special Publication 117A

The CGS prepared its Guidelines for Evaluating and Mitigating Seismic Hazards in California (Special Publication 117A) in 2008. Special Publication 117A constitutes the guidelines for evaluating seismic hazards other than surface fault-rupture, and for recommending mitigation measures as required by Public Resources Code Section 2695(a) and contains several important revisions to the 1997 edition of Special Publication 117. The objectives of Special Publication 117A are to assist in the evaluation and mitigation of earthquake-related hazards for projects within designated zones of required investigation and to promote uniform and effective statewide implementation of the evaluation and mitigation elements of the Seismic Hazards Mapping Act.

2016 California Building Standards Code

California building standards are published in the California Code of Regulations, Title 24, also known as the California Building Standards Code (CBSC). The CBSC, which applies to all applications for building permits, consists of 11 parts that contain administrative regulations for the California Building Standards Commission and for all State agencies that implement or enforce building standards. Local agencies must ensure development complies with the CBSC guidelines. Cities and counties can adopt additional building standards beyond the CBSC. CBSC Part 2, named the California Building Code, is based upon the 2015 International Building Code.

LOCAL

City of Newport Beach General Plan

The General Plan Safety Element addresses coastal hazards, geologic hazards, seismic hazards, flood hazards, wildland and urban fire hazards, hazardous materials, aviation hazards, and disaster planning. Additionally, the General Plan Historical Resources and Natural Resources Elements identify the importance of preserving and protecting cultural resources, including paleontological resources. The following General Plan goals and policies related to geologic issues and paleontological resources may be applicable to the proposed project.

Historic Resources Element

Goal:

HR 2: Identification and protection of important archaeological and paleontological resources within the City.

Policies:

HR 2.1 *New Development Activities:* Require that, in accordance with CEQA, new development protect and preserve paleontological and archaeological resources from destruction, and avoid and mitigate impacts to such resources. Through planning policies and permit conditions, ensure the preservation of significant archaeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA (Imp 11.1).

HR 2.2 *Grading and Excavation Activities:* Maintain sources of information regarding paleontological and archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological or archaeological findings. Require a qualified paleontologist/archaeologist to monitor all grading and/or excavation where there is a potential to affect cultural, archaeological, or paleontological resources. If these resources are found, the applicant shall implement the recommendations of the paleontologist/archaeologist, subject to the approval of the City Planning Department (Imp 11.1).

HR 2.4 *Paleontological or Archaeological Materials:* Require new development to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable repository, located within Newport Beach, or Orange County, whenever possible (Imp 11.1).

Natural Resources Element

Goal:

NR 18: Protection and preservation of important paleontological and archaeological resources.

Policies:

NR 18.1 *New Development:* Require new development to protect and preserve paleontological and archaeological resources from destruction, and avoid and minimize impacts to such resources in accordance with the requirements of CEQA. Through planning policies and permit conditions, ensure the preservation of significant archaeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA (Imp 7.1).

NR 18.2 *Maintenance of Database Information:* Prepare and maintain sources of information regarding paleontological or archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological and archaeological findings (Imp 10.1).

NR 18.4 *Donation of Materials:* Require new development, where onsite preservation and avoidance are not feasible, to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable

repository, located within Newport Beach or Orange County, whenever possible (Imp 11.1).

Safety Element

Policies:

S 4.2 *Retrofitting of Essential Facilities:* Support and encourage the seismic retrofitting and strengthening of essential facilities such as hospitals and schools to minimize damage in the event of seismic or geologic hazards. (Imp 27.1)

S 4.5 *Maintenance of Existing Essential Facilities:* Ensure that existing essential facilities that have been built in or on seismic and geologic hazards are upgraded and maintained in order to prevent and reduce loss. (Imp 27.1)

Newport Beach Local Coastal Program Land Use Plan

The *City of Newport Beach Local Coastal Program Coastal Land Use Plan* sets forth goals, objectives, and policies that govern the use of land and water in the coastal zone within the City, with the exception of Newport Coast and Banning Ranch. The following policy related to geologic issues may be applicable to the proposed project.

- Require applications for new development, where applicable [i.e., in areas of known or potential geologic or seismic hazards], to include a geologic/soils/geotechnical study that identifies any geologic hazards affecting the proposed project site, any necessary mitigation measures, and contains a statement that the project site is suitable for the proposed development and that the development will be safe from geologic hazard. Require such reports to be signed by a licensed Certified Engineering Geologist or Geotechnical Engineer and subject to review and approval by the City. (2.8.7-3)

Newport Beach Local Hazard Mitigation Plan

On May 10, 2016, the City adopted the updated *Newport Beach Local Hazards Mitigation Plan* (LHMP) to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards. This can be achieved by increasing public awareness, documenting resources available for risk reduction and loss prevention, and identifying activities to guide the City towards building a safer, more sustainable community. The LHMP discusses the City's current hazard conditions and provides actions that are consistent with current City standards and other relevant Federal, State, or regional regulations, including Federal Emergency Management Agency requirements. Earthquakes and flood hazards are also addressed in the LHMP.[1]

[1] City of Newport Beach, *Local Hazard Mitigation Plan 2016 Update*, 2016, ftp://newportbeachca.gov/LHMP/NB_DMP_Complete_pdf.pdf, accessed November 14, 2018.

Newport Beach City Council Policy Manual

The Newport Beach City Council Manual identifies the following guideline applicable to paleontological resources.

Paleontological Guidelines (K-4). Policy K-4 applies to paleontological resources. Under this policy, the City is required to prepare and maintain sources of information regarding paleontological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological findings. If determined necessary by the Planning Director, it is the responsibility of a developer to examine the proposed site in order to determine the existence and extent of paleontological resources. Qualified individuals are to prepare and submit a written report describing the findings and making recommendations for further action. Based on the report and recommendations, the City is required to ensure that the findings or sites are recorded, preserved, and protected.

5.5.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Directly or indirectly cause 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. Refer to Division of Mines and Geology Special Publication 42 (refer to Section 8.0, *Effects Found Not To Be Significant*).
  - Strong seismic ground shaking (refer to Impact Statement GEO-1).
  - Seismic-related ground failure, including liquefaction (refer to Impact Statement GEO-2).
  - Landslides; refer to Section 8.0, *Effects Found Not To Be Significant.*
- Result in substantial soil erosion or the loss of topsoil (refer to Impact Statement GEO-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 landslide, lateral spreading, subsidence, liquefaction or collapse (refer to Impact Statement GEO-2).
- Be located on expansive soil, as defined in Table 18-1-B of the California Building Code (1994), creating substantial direct or indirect risks to life or property (refer to Impact Statement GEO-4).
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water (refer to Section 8.0, *Effects Found Not To Be Significant*).
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (refer to Impact Statement GEO-5).

Based on these standards, the project's effects have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a "significant unavoidable impact."

5.5.4 IMPACTS AND MITIGATION MEASURES

STRONG SEISMIC GROUND SHAKING

GEO-1 THE PROJECT COULD BE SUBJECT TO POTENTIAL SUBSTANTIAL ADVERSE EFFECTS INVOLVING STRONG SEISMIC GROUND SHAKING.

Impact Analysis:

Original Northeast Pump Station

The project would result in the construction of a new pump station and associated force mains. A moderate to large magnitude earthquake on a regional fault could cause moderate to severe seismic shaking in the City, thus exposing the proposed pump station facility to potential substantial adverse effects, including the risk of loss. However, since the proposed pump station would not include any habitable structures, no risk involving injury or death would occur.

The possibility of moderate to high ground acceleration in the City may be considered as similar to the entire southern California region, as a whole. Ground shaking accompanying earthquakes on nearby faults can be expected to produce the potential for strong ground motion during the design life of the proposed project. The intensity of ground shaking within the project area would depend upon the magnitude of the earthquake, distance to the epicenter, and the geology of the area between the epicenter and the project area.

The project would be required to comply with the California Building Code (CBC) and OCSD sewer pipeline design standards, which would reduce the potential for risk of loss during a strong seismic ground shaking event. Minimum standards to safeguard property and public welfare from potential seismic and geologic hazards include the design, construction, quality of materials, location and maintenance of buildings, equipment, and structures.

Potential adverse effects to people and new structures from strong, seismically-induced, vibratory ground motion would be sufficiently mitigated through proper seismic design and conformance with the CBC and OCSD sewer pipeline design standards. As detailed in the Geology Report, design measures may include specially constructed artificial fill and heavily reinforced foundations and slabs. With compliance with the CBC and OCSD sewer pipeline design standards, the exposure of new structures to potential adverse impacts involving strong, seismically-induced, vibratory ground motion would be reduced to less than significant levels.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the required construction and operational activities would be similar to those proposed under the Original Northeast Pump Station. However, construction of the Modified

Northeast Pump Station proposes dredging, in addition to microtunneling, as a potential construction method for force main improvements. If dredging is utilized, the Modified Northeast Pump Station would require the use of sonic pile driving equipment. The difference in construction method would not result in a change in seismic ground shaking impacts compared to the Original Northeast Pump Station as the development footprint would be similar. Development of the Modified Northeast Pump Station would also conform to the CBC and OCSD sewer pipeline design standards and Geology Report design measures. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station and Modified Northeast Pump Station is also applicable to the South Pump Station. Similar to the Modified Northeast Pump Station, the South Pump Station would install force mains across the Newport Bay Channel via either dredging or microtunneling. The difference in construction method would not result in a change in seismic ground shaking impacts compared to the Original Northeast Pump Station as the development footprint would be similar. Development of the South Pump Station would also conform to the CBC and OCSD sewer pipeline design standards and Geology Report design measures. As such, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

SEISMIC-RELATED GROUND FAILURE

GEO-2 THE PROJECT COULD EXPOSE PEOPLE OR STRUCTURES TO POTENTIAL SUBSTANTIAL ADVERSE EFFECTS INVOLVING SEISMIC-RELATED GROUND FAILURE.

Impact Analysis:

Original Northeast Pump Station

Liquefaction and Seismic Settlement

The project area is susceptible to liquefaction and seismic settlement (although to a lesser degree than liquefaction). The Seismic Hazards Mapping Program provides published guidelines and implementation procedures for the evaluation and mitigation of liquefaction conditions with a designated liquefaction hazard zone. These procedures would also reduce potential impacts involving seismic settlement. These guidelines and procedures require registered professionals (California Registered Civil Engineer or Certified Engineering Geologist) to conduct the evaluations, establish the site-specific mitigation, and participate in the implementation process. Ground improvement (densification and hardening) and structural (foundation) design are the two classes of liquefaction mitigation. Ground densification methods include vibro-compaction, vibro-replacement (also known as vibro-stone columns), deep dynamic compaction, and compaction (pressure) grouting. Hardening methods reduce the void space in the liquefiable soil by introducing grout materials either through permeation grouting, mechanical soil mixing, or jet grouting.

For heavy structures, the preferred mitigation is deep caissons or pile foundations to penetrate through the liquefiable material, or a mat foundation may be feasible. For lighter structures continuous spread footings having isolated footings interconnected with grade beams, mat foundations, and post-tensioned slabs may be appropriate. Dewatering and drainage systems may be part of the mitigation process as well. Whether a single type of mitigation technique or a combination of techniques is needed would depend on the site-specific geotechnical conditions.

The exposure of people and new structures to potential adverse impacts involving seismically-induced liquefaction and settlement would be reduced to less than significant levels through compliance with the Seismic Hazards Mapping Program, CBC, and OCSD sewer pipeline design standards.

Lateral Spreading

The potential for lateral spreading in the project area is high due to the topographic aspects of the site and the unprotected/unrestrained shoreline. Development projects within a zone susceptible to earthquake-induced lateral spreading must be evaluated using CGS guidelines. Lateral spread hazards are not as readily mitigated with structural solutions and may require use of retaining structures, removal or treatment of liquefiable soils, modification of site geometry, or drainage to lower the groundwater table. The Geology Report provides mitigation options which include, but are not limited to, building setbacks, landslide debris removal/replacement, slope angle reduction, earth or engineered buttresses, protective barriers, retaining/slough walls, debris fences, and run-out/catchment areas. With compliance with the CGS guidelines, CBC, and OCSD sewer pipeline design standards, potentially significant impacts regarding lateral spreading would be reduced to a less than significant level.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the required construction and operational activities would be similar to those proposed under the Original Northeast Pump Station. However, construction of the Modified Northeast Pump Station proposes dredging, in addition to microtunneling, as a potential construction method for force main improvements. If dredging is utilized, the Modified Northeast Pump Station would require the use of sonic pile driving equipment. The difference in construction method would not result in a change in potential for seismic ground failure compared to the Original Northeast Pump Station as the development footprint would be similar. Development of the Modified Northeast Pump Station would also conform to the CBC and OCSD sewer pipeline design standards and Geology Report design measures. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station and Modified Northeast Pump Station is also applicable to the South Pump Station. Similar to the Modified Northeast Pump Station, the South Pump Station would install force mains across the Newport Bay Channel via either dredging or microtunneling. The difference in construction method would not result in a change in potential for seismic ground failure compared to the Original Northeast Pump Station as the development footprint would be similar. Development of the South Pump Station would also conform to the CBC and

OCSD sewer pipeline design standards and Geology Report design measures. As such, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

SOIL EROSION

GEO-3 THE PROJECT COULD RESULT IN SUBSTANTIAL SOIL EROSION OR THE LOSS OF TOPSOIL.

Impact Analysis:

Original Northeast Pump Station

Project implementation would result in ground-disrupting activities such as excavation and trenching for construction, foundations, and utilities of the pump station wet wells and force mains, soil compaction and site grading, and the erection of new structures, all of which would temporarily disturb soils. As concluded in Section 5.8, *Hydrology and Water Quality*, the project is subject to compliance with the NPDES permitting process, since one or more acres of soil would be disturbed. Per existing State regulations, OCSD would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) for the Santa Ana Regional Water Quality Control Board, in order to control common pollutants such as suspended soil in stormwater runoff from leaving the project area. The SWPPP would include an Erosion Control Plan and appropriate best management practices. Following compliance with the established NPDES regulatory requirements, project implementation would result in a less than significant impact involving soil erosion or the loss of topsoil. Operations of the project would involve underground facilities and the relocated pump station. As the pump station site is currently paved, and would remain paved upon completion of the project, no increase in erosion potential during operations would result. Thus, with compliance with existing State regulations during construction, the proposed project would not result in significant impacts involving substantial erosion or loss of topsoil.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the required construction and operational activities would be similar to those proposed under the Original Northeast Pump Station. Construction of the Modified Northeast Pump Station could involve dredging to install the force main improvements. If dredging is utilized, the Modified Northeast Pump Station would require the use of sonic pile driving equipment. However, the difference in construction method would not result in a change in impacts related to soil erosion or loss of topsoil compared to the Original Northeast Pump Station. Development of the Modified Northeast Pump Station would similarly be required to comply with NPDES regulatory requirements. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station, as the required construction and operational activities would be similar to those proposed under the Original Northeast Pump Station. Construction of the Modified Northeast Pump Station could involve dredging to install the force main improvements. However, the difference in construction method would not result in a change in impacts related to soil erosion or loss of topsoil compared to the Original Northeast Pump Station. Development of the South Pump Station would similarly be required to comply with NPDES regulatory requirements. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

EXPANSIVE SOILS

GEO-4 THE PROPOSED DEVELOPMENT COULD BE LOCATED ON EXPANSIVE SOIL CREATING SUBSTANTIAL RISKS TO LIFE OR PROPERTY.

Impact Analysis:

Original Northeast Pump Station

According to the Back Bay Landing EIR, the near-surface soil consists of mainly sandy materials. Due to the granular nature of the soils, the expansion potential of the soils is expected to be very low. Notwithstanding, the project would be required to comply with the CBC and OCSD sewer pipeline design standards, which would require minimization measures (such as over-excavation of the subject soils and recompaction of new engineered fill material, possibly pre-saturating the subject soils, and provision of proper surface drainage away from structures and building foundations) to reduce potential loss of property as a result of expansive soils. Compliance with the CBC and OCSD sewer pipeline design standards would reduce impacts to less than significant levels.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the required construction and operational activities would be similar to those proposed under the Original Northeast Pump Station. However, construction of the Modified Northeast Pump Station proposes dredging, in addition to microtunneling, as a potential construction method for force main improvements. If dredging is utilized, the Modified Northeast Pump Station would require the use of sonic pile driving equipment. The difference in construction method would not result in an increased impact related to expansive soils compared to the Original Northeast Pump Station as the development footprint would be similar. Development of the Modified Northeast Pump Station would also conform to the CBC and OCSD sewer pipeline design standards and Geology Report design measures. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station and Modified Northeast Pump Station is also applicable to the South Pump Station. Similar to the Modified Northeast Pump Station, the South Pump Station would install force mains across the Newport Bay Channel via either dredging or microtunneling. The difference in construction method would not result in a change an increased impact related to expansive soils compared to the Original Northeast Pump Station as the development footprint would be similar. Development of the South Pump Station would also conform to the CBC and OCSD sewer pipeline design standards and Geology Report design measures. As such, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

PALEONTOLOGICAL RESOURCES

GEO-5 DEVELOPMENT ASSOCIATED WITH THE PROPOSED PROJECT COULD IMPACT PALEONTOLOGICAL RESOURCES WITHIN THE PROJECT BOUNDARIES.

Impact Analysis:

Original Northeast Pump Station

Based on the Cultural/Paleontological Assessment, there are no known fossil localities recorded within the project boundaries. The project area is predominantly underlain by very young estuarine deposits that are too recent to have accumulated or fossilized paleontological resources. However, the young estuarine deposits may overlie deposits of the Capistrano Formation, which has produced significant paleontological resources, including a "diverse assemblage" of marine mammal fossils.

Deeper ground disturbance may encounter deposits of the Miocene- to Pliocene-age Capistrano Formation, which have a high sensitivity for containing paleontological resources. However, the projected ground disturbance associated with the Original Northeast Pump Station is limited to microtunneling and horizontal directional drilling, which normally disturbs sediment to the extent that fossils would not be recoverable. Therefore, according to the Cultural/Paleontological Assessment, regular monitoring of ground disturbing activities is not necessary.

To reduce potential impacts to unknown paleontological resources, Mitigation Measure GEO-1 would require a qualified paleontologist to provide a Monitoring Protocol Plan for the project. The plan would be required to identify procedures in the event that potential recoverable fossils are discovered by the Construction Contractor. If a fossil or suspected fossil is encountered during ground disturbing activities, the fossil site would not be touched, moved, or disturbed in any way. Work would stop in the immediate area, and a 50-foot buffer would be marked. The Contractor's Representative and qualified paleontologist identified to implement the Monitoring Protocol Plan would be immediately notified. The paleontologist would examine the fossil and make a determination of significance based on the Monitoring Protocol Plan. If the find is not significant, the foreman would be notified when

it is acceptable to resume work in the area. If the paleontologist determines that the find is significant, the paleontologist would be required to develop a mitigation plan, , which would likely involve salvage excavation and removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find. Therefore, with compliance with Mitigation Measure GEO-1, potential impacts associated with development of the Original Northeast Pump Station involving paleontological resources would be reduced to less than significant levels.

Modified Northeast Pump Station

As stated above, there are no known fossil localities recorded within the project boundaries and the project area is predominantly underlain by very young estuarine deposits that are too recent to have accumulated or fossilized paleontological resources. However, the young estuarine deposits may overlie deposits of the Capistrano Formation, which has produced significant paleontological resources in Newport Beach, including a number of marine mammal fossils. Construction activities associated with the Modified Northeast Pump Station would be similar to the Original Northeast Pump Station with the exception of a dredging option to install the force main improvements across the Newport Bay Channel, which would require trenching approximately 10 feet wide, 580 feet long, and 18 feet deep. As such, anticipated ground disturbance associated with construction activities may encounter deposits of the Miocene- to Pliocene-age Capistrano Formation, which have a high sensitivity for containing paleontological resources. Implementation of Mitigation Measure GEO-1 would ensure a Monitoring Protocol Plan is in place that establishes appropriate protocol should a fossil or suspected fossil be encountered during ground disturbing activities. Compliance with Mitigation Measure GEO-1 would ensure impacts associated with the Modified Northeast Pump Station are reduced to less than significant levels.

South Pump Station

Similar to the Modified Northeast Pump Station, the South Pump Station also includes a dredging construction option to install the force main improvements across Newport Bay Channel. Thus, the analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: The following mitigation measure applies to all site plan concepts:

GEO-1 Prior to ground-disturbing activities, a qualified paleontologist shall provide a Monitoring Protocol Plan for the project. The plan shall identify procedures for the event that potential recoverable fossils are discovered by the Construction Contractor. The qualified paleontologist shall have a B.S. or B.A. in geology and/or paleontology with demonstrated competence in research, fieldwork, reporting, and curation. The paleontologist shall provide training to a Contractor's Representative regarding the Monitoring Protocol Plan and the identification of paleontological resources. If a fossil or suspected fossil is encountered during ground disturbing activities, the following steps shall be taken:

- The fossil site shall not be touched, moved, or disturbed in any way.
- Work shall stop in the immediate area, and a minimum 50-foot buffer shall be marked with brightly colored flagging. No further disturbance in the flagged area shall occur until the Contractor has cleared the area.

- The Contractor's Representative, construction foreman or supervisor and then a qualified paleontologist shall be immediately notified.

- The paleontologist shall quickly examine the find and make a determination of significance based on the Monitoring Protocol Plan. If the find is not significant, the foreman shall be informed when it is acceptable to resume work in the area.

- Should the paleontologist determine the find is significant, the qualified paleontologist shall develop a plan of mitigation which would likely include salvage excavation and removal of the find, removal of sediment from around the specimen, research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.5.5 CUMULATIVE IMPACTS

THE PROPOSED PROJECT, COMBINED WITH OTHER RELATED CUMULATIVE PROJECTS, COULD EXPOSE PEOPLE OR STRUCTURES TO POTENTIAL SUBSTANTIAL ADVERSE EFFECTS INVOLVING GEOLOGY AND SOILS AND PALEONTOLOGICAL RESOURCES.

Impact Analysis:

Original Northeast Pump Station

The geotechnical and soil characteristics of each cumulative project site would be evaluated on a project-by-project basis, and appropriate mitigation measures would be required, as necessary to reduce potential impacts to a less than significant level. Further, all identified cumulative projects would be required to comply with the CBC, the *Newport Beach Municipal Code*, and the recommendations of the site-specific geotechnical and soils investigations, as necessary. As concluded above, compliance with the CBC, Seismic Hazards Mapping Program, State NPDES requirements, and OCSD sewer pipeline design standards would ensure that project implementation results in less than significant impacts involving strong seismic ground shaking, seismic-related ground failure, soil erosion, and expansive soils.

Further, impacts to paleontological resources are generally considered site-specific and are assessed on a case-by-case basis based on the range of site-specific, geologic units underlying a project site. Therefore, potential impacts to paleontological resources due to cumulative development within the project area would be analyzed and mitigated on a site-specific, individual basis. Future cumulative projects would be required to comply with all applicable Federal, State, and local regulations concerning preservation, salvage, or handling of paleontological resources. As discussed above, impacts to paleontological resources from the project would be less than significant with incorporation of Mitigation Measure GEO-1.

Overall, given that the project's potential impacts would be less than significant with mitigation incorporated, and since the potential impacts would be contained to the project area, the project's incremental effects involving geology and soils are not cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: Refer to Mitigation Measure GEO-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.5.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts related to geology and soils have been identified.

5.6 GREENHOUSE GAS EMISSIONS

This section evaluates greenhouse gas (GHG) emissions associated with the proposed project and analyzes project compliance with applicable regulations. Consideration of the project's consistency with applicable plans, policies, and regulations, as well as the introduction of new sources of GHGs, is included in this section. GHG technical data is included as Appendix 11.2, *Air Quality/Greenhouse Gas Emissions/Energy Data*.

5.6.1 EXISTING SETTING

The project site lies within the southern portion of the South Coast Air Basin (Basin). The Basin is a 6,600-square mile area bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The Basin's terrain and geographical location (i.e., a coastal plain with connecting broad valleys and low hills) determine its distinctive climate.

The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. The climate is mild and tempered by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The extent and severity of the air pollution problem in the Basin is a function of the area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle). Factors such as wind, sunlight, temperature, humidity, rainfall, and topography all affect the accumulation and/or dispersion of pollutants throughout the Basin.

SCOPE OF ANALYSIS FOR CLIMATE CHANGE

The study area for climate change and the analysis of GHG emissions is broad as climate change is influenced by world-wide emissions and their global effects. However, the study area is also limited by the CEQA Guidelines [Section 15064(d)], which directs lead agencies to consider an "indirect physical change" only if that change is a reasonably foreseeable impact which may be caused by the project.

The baseline against which to compare potential impacts of the project includes the natural and anthropogenic drivers of global climate change, including world-wide GHG emissions from human activities, which have grown more than 70 percent between 1970 and 2004. The State of California is leading the nation in managing GHG emissions. Accordingly, the impact analysis for this project relies on guidelines, analyses, policy, and plans for reducing GHG emissions established by the California Air Resources Board (CARB). This analysis also cites and relies on local air quality management district recommendations from the South Coast Air Quality Management District (SCAQMD) for CEQA assessment of GHG emissions.

GLOBAL CLIMATE CHANGE – GREENHOUSE GASES

The natural process through which heat is retained in the troposphere is called the "greenhouse effect."[1] The greenhouse effect traps heat in the troposphere through a three-fold process as follows: Short wave radiation emitted by the sun is absorbed by the Earth; the Earth subsequently emits a portion of this energy in the form of long wave radiation; and GHG in the upper atmosphere trap a portion of this long wave radiation while the rest is released into space. This "trapping" of the long wave (thermal) radiation in the upper atmosphere is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO_2). Many other trace gases, while less plentiful than CO_2 and water vapor, have an even greater ability to absorb and re-radiate long wave radiation. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential for each GHG based on its ability to absorb and re-radiate long wave radiation.

GHGs potentially associated with the proposed project include the following:[2]

- *Water Vapor (H_2O)*. Although water vapor has not received the scrutiny of other GHGs, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute close to 90 percent and 10 percent of the water vapor in our atmosphere, respectively. The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, it does not contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a Global Warming Potential for water vapor.
- *Carbon Dioxide (CO_2)*. Carbon dioxide is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, CO_2 emissions from fossil fuel combustion increased by a total of 3.7 percent between 1990 and 2017.[3] Carbon dioxide is the most widely emitted GHG and is the reference gas (Global Warming Potential of 1) for determining Global Warming Potentials for other GHGs.
- *Methane (CH_4)*. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The United States' top three methane sources are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, used for space and water heating, steam production, and power generation. The Global Warming Potential of methane is 25.
- *Nitrous Oxide (N_2O)*. Nitrous oxide is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. The Global Warming Potential of nitrous oxide is 298.

1 The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.
2 All Global Warming Potentials are given as 100 year GWP. Unless noted otherwise, all Global Warming Potentials were obtained from the Intergovernmental Panel on Climate Change.
3 U.S. Environmental Protection Agency, Inventory of United States Greenhouse Gas Emissions and Sinks 1990 to 2017, February 12, 2019.

- *Hydrofluorocarbons (HFCs)*. HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is increasing, as the continued phase out of CFCs and HCFCs gains momentum. The 100-year Global Warming Potential of HFCs range from 12 for HFC-161 to 14,800 for HFC-23.[4]
- *Perfluorocarbons (PFCs)*. Perfluorocarbons are compounds consisting of carbon and fluorine, and are primarily created as a byproduct of aluminum production and semiconductor manufacturing. Perfluorocarbons are potent GHGs with a Global Warming Potential several thousand times that of carbon dioxide, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).[5] The Global Warming Potential of PFCs range from 7,390 to 12,200.[6]
- *Sulfur hexafluoride (SF_6)*. Sulfur hexafluoride is a colorless, odorless, nontoxic, nonflammable gas. Sulfur hexafluoride is the most potent GHG that has been evaluated by the IPCC with a Global Warming Potential of 22,800.[7] However, its global warming contribution is not as high as the Global Warming Potential would indicate due to its low mixing ratio compared to carbon dioxide (4 parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively).[8]

In addition to the six major GHGs discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone (O_3) depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- *Hydrochlorofluorocarbons (HCFCs)*. HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The United States is scheduled to achieve a 100 percent reduction to the cap by 2030. The 100-year Global Warming Potentials of HCFCs range from 90 for HCFC-123 to 1,800 for HCFC-142b.[9]
- *1,1,1 trichloroethane*. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The Global Warming Potential of methyl chloroform is 146 times that of carbon dioxide.[10]
- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the U.S. Environmental Protection Agency's (EPA) Final Rule (57 FR 3374) for the phase out of O_3 depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the atmosphere contributing to the greenhouse

4 Ibid.
5 U.S. Environmental Protection Agency, *Overview of Greenhouse Gas Emissions*, May 26, 2016, https://www.epa.gov/ghgemissions/overview-greenhouse-gases, accessed on March 18, 2019.
6 Ibid.
7 Ibid.
8 Ibid.
9 Intergovernmental Panel on Climate Change, "*Climate Change 2007: Working Group I: The Physical Science Basis, 2.10.2, Direct Global Warming Potentials,*" 2007, https://www.ipcc.ch/report/ar4/wg1/ , accessed March 18, 2019.
10 Intergovernmental Panel on Climate Change, "*Climate Change 2007: Working Group I: The Physical Science Basis, 2.10.2, Direct Global Warming Potentials*", 2007, https://www.ipcc.ch/report/ar4/wg1/, accessed March 20, 2019.

effect. CFCs are potent GHGs with 100-year Global Warming Potentials ranging from 3,800 for CFC 11 to 14,400 for CFC 13.[11]

5.6.2 REGULATORY SETTING

FEDERAL

To date, no national standards have been established for nationwide GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the Federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

- Increase the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020 and direct the National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products and procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

U.S. Environmental Protection Agency Endangerment Finding. The EPA authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs (carbon dioxide [CO_2], methane [CH_4], nitrous oxide [N_2O], hydrofluorocarbons [HFCs], perfluorocarbons [PFCs], and sulfur hexafluoride [SF_6]) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling discussed above, the George W. Bush Administration issued Executive Order 13432 in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model

[11] Ibid.

year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Barack Obama issued a memorandum directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated Federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.

In August 2016, the EPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans, and all types and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

Clean Power Plan and New Source Performance Standards for Electric Generating Units. On October 23, 2015, the EPA published a final rule (effective December 22, 2015) establishing the carbon pollution emission guidelines for existing stationary sources: electric utility generating units (80 FR 64510–64660), also known as the Clean Power Plan. These guidelines prescribe how states must develop plans to reduce GHG emissions from existing fossil-fuel-fired electric generating units. The guidelines establish CO_2 emission performance rates representing the best system of emission reduction for two subcategories of existing fossil-fuel-fired electric generating units: (1) fossil-fuel-fired electric utility steam-generating units and (2) stationary combustion turbines. Concurrently, the EPA published a final rule (effective October 23, 2015) establishing standards of performance for GHG emissions from new, modified, and reconstructed stationary sources: electric utility generating units (80 FR 64661–65120). The rule prescribes CO_2 emission standards for newly constructed, modified, and reconstructed affected fossil-fuel-fired electric utility generating units. The U.S. Supreme Court stayed implementation of the Clean Power Plan pending resolution of several lawsuits. Additionally, in March 2017, President Trump directed the EPA Administrator to review the Clean Power Plan in order to determine whether it is consistent with current executive policies concerning GHG emissions, climate change, and energy.

Presidential Executive Order 13783. Presidential Executive Order 13783, Promoting Energy Independence and Economic Growth (March 28, 2017), orders all Federal agencies to apply cost-

benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

STATE

Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long term. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Executive Order S-1-07. Executive Order S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

Executive Order S-3-05**.** Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;
- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of the California Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of Cal/EPA created the California Climate Action Team (CAT), made up of members from various State agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order B-30-15**.** Executive Order B-30-15 added the interim target to reduce statewide GHG emissions 40 percent below 1990 levels by 2030.

Executive Order S-13-08**.** Executive Order S-13-08 seeks to enhance the State's management of climate impacts including sea level rise, increased temperatures, shifting precipitation, and extreme weather events by facilitating the development of State's first climate adaptation strategy. This will result in consistent guidance from experts on how to address climate change impacts in the State of California.

Executive Order S-14-08**.** Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-20-04**.** Executive Order S-20-04, the California Green Building Initiative, (signed into law on December 14, 2004), establishes a goal of reducing energy use in State-owned buildings by 20 percent from a 2003 baseline by 2015. It also encourages the private commercial sector to set the same goal. The initiative places the California Energy Commission (CEC) in charge of developing a building efficiency benchmarking system, commissioning and retro-commissioning (commissioning for existing commercial buildings) guidelines, and developing and refining building energy efficiency standards under Title 24 to meet this goal.

Executive Order S-21-09**.** Executive Order S-21-09, 33 percent Renewable Energy for California, directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002) which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006) which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Assembly Bill 32 (California Global Warming Solutions Act of 2006**).** California passed the California Global Warming Solutions Act of 2006 (AB 32; *California Health and Safety Code* Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Assembly Bill 1493**.** AB 1493 (also known as the Pavley Bill) requires that CARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHG emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State."

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 and adoption of 13 CCR Section 1961.1 require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty weight classes for passenger vehicles (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily to transport people), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. When fully phased in, the near-term standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term standards will result in a reduction of about 30 percent.

Assembly Bill 3018**.** AB 3018 established the Green Collar Jobs Council (GCJC) under the California Workforce Investment Board (CWIB). The GCJC will develop a comprehensive approach to address California's emerging workforce needs associated with the emerging green economy. This bill will ignite the development of job training programs in the clean and green technology sectors.

Senate Bill 97**.** SB 97, signed in August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA.

OPR published a technical advisory recommending that CEQA lead agencies make a good-faith effort to estimate the quantity of GHG emissions that would be generated by a proposed project. Specifically, based on available information, CEQA lead agencies should estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur, and should mitigate the impacts where feasible. OPR requested CARB technical staff to recommend a method for setting CEQA thresholds of significance as described in CEQA Guidelines Section 15064.7 that will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

The Natural Resources Agency adopted the CEQA Guidelines Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the CEQA Guidelines Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The CEQA Guidelines Amendments became effective on March 18, 2010.

Senate Bill 375**.** SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding programmed after January 1, 2012.

Senate Bills 1078 and 107**.** SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Senate Bill 1368**.** SB 1368 (Chapter 598, Statutes of 2006) is the companion bill of AB 32 and was signed into law in September 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007. SB 1368 also required the CEC to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions

rate from a baseload combined-cycle, natural gas fired plant. Furthermore, the legislation states that all electricity provided to California, including imported electricity, must be generated by plants that meet the standards set by CPUC and CEC.

Senate Bill 32 (SB 32)**.** Signed into law on September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

CARB Scoping Plan

On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap to achieve the California GHG reductions required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California would implement to reduce the projected 2020 BAU emissions to 1990 levels, as required by AB 32. These strategies are intended to reduce CO_2eq[12] emissions by 174 million metric tons (MT) This reduction of 42 million MT CO_2eq, or almost ten percent from 2002 to 2004 average emissions, would be required despite the population and economic growth forecasted through 2020.

CARB's Scoping Plan calculates 2020 BAU emissions as those expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. When CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32. On February 10, 2014, CARB released the draft proposed first update. On May 22, 2014, CARB approved the First Update to the AB 32 Scoping Plan. The update also defines CARB's climate change priorities for the next five years, and sets the groundwork to each long-term goals set forth in Executive Orders S-3-05 and B-15-2012. Lastly, the update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the initial Scoping Plan, and evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities in water, waste, natural resources, clean energy, transportation, and land use.

On January 20, 2017, CARB released the proposed Second Update to the Scoping Plan, which identifies the State's post-2020 reduction strategy. The Second Update was approved on December 14, 2017, and reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32.[13] Key programs that the Second Update builds upon include the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce methane emissions from agricultural and other wastes. The 2017 Scoping Plan establishes a new emissions limit of 260

[12] Carbon Dioxide Equivalent (CO_2eq) - A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

[13] California Air Resources Board, *California's 2017 Climate Change Scoping Plan*, November 2017, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf, accessed March 18,209.

million $MTCO_2eq$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030.

California's climate strategy will require contributions from all sectors of the economy, including the land base, and will include enhanced focus on zero- and near-zero-emission vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. In addition to Statewide strategies, the 2017 Scoping Plan also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 $MTCO_2eq$ or less per capita by 2030 and 2 $MTCO_2eq$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds - consistent with the Scoping Plan and the State's long-term GHG goals - and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible; or, a performance-based metric using a climate action plan or other plan to reduce GHG emissions is appropriate.

LOCAL

City of Newport Beach

Energy Action Plan

On July 2013, the City prepared an *Energy Action Plan* (Energy Action Plan), created in partnership with Southern California Edison (SCE) and Southern California Gas Company. The Energy Action Plan provides the City guidance in reducing greenhouse emissions by lowering municipal and community wide energy use. The primary goal of the Energy Action Plan is to provide a roadmap for the City to reduce GHG emission through reductions in energy used in facility buildings and operations. The Energy Action Plan assists in identifying a clear path to successfully implementing goals, policies, and actions that will achieve the City's reduction targets.

Orange County Cities Energy Leadership Partnership Program

In 2011, the City entered into the *Orange County Cities Energy Leadership Partnership Program* (OCCELP), a joint partnership with SCE, Southern California Gas Company and neighboring cities Fountain Valley, Westminster and Costa Mesa to identify and create projects to improve long term energy and sustainability throughout the local area. The partnership provides a performance-based opportunity to demonstrate energy efficiency leadership in its community through energy saving actions including installing energy efficient lighting, lighting and temperature controls, air conditioning and heating system improvements, monitoring local government utility accounts, carbon reporting, and technical energy audits of the City's major facilities.

5.6.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

At this time, there is no absolute consensus in the State of California among CEQA lead agencies regarding the analysis of global climate change and the selection of significance criteria. In fact, numerous organizations, both public and private, have released advisories and guidance with recommendations designed to assist decision-makers in the evaluation of GHG emissions given the current uncertainty regarding when emissions reach the point of significance.

Lead agencies may elect to rely on thresholds of significance recommended or adopted by State or regional agencies with expertise in the field of global climate change (CEQA Guidelines Section 15064.7(c).) CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects. However, neither the Orange County Sanitation District nor the City of Newport Beach has established specific quantitative significance thresholds for GHG emissions for infrastructure/development projects.

The SCAQMD has formed a GHG CEQA Significance Threshold Working Group (Working Group) to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. As of the most recent Working Group meeting (Meeting No. 15) held in September 2010, the SCAQMD is proposing to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency.

With the tiered approach, the project is compared with the requirements of each tier sequentially and would not result in a significant impact if it complies with any tier. Tier 1 excludes projects that are specifically exempt under SB 97 from resulting in a significant impact. Tier 2 excludes projects that are consistent with a GHG reduction plan that has a certified final CEQA document and complies with AB 32 GHG reduction goals. Tier 3 excludes projects with annual emissions lower than a screening threshold. For all non-industrial projects, the SCAQMD is proposing a screening threshold of 3,000 $MTCO_2eq$ per year. SCAQMD concluded that projects with emissions less than the screening threshold would not result in a significant cumulative impact.

Tier 4 consists of three decision tree options. Under the Tier 4 first option, the project would be excluded if design features and/or mitigation measures resulted in emissions 30 percent lower than business as usual emissions. However, the Working Group did not provide a recommendation for this approach. The Working Group folded the Tier 4 second option into the third Option. Under the Tier 4 third option, the project would be excluded if it was below an efficiency-based threshold of 4.8 $MTCO_2eq$ per service population (SP) per year.[14] Tier 5 would exclude projects that implement offsite mitigation (GHG reduction projects) or purchase offsets to reduce GHG emission impacts to less than the proposed screening level.

[14] The project-level efficiency-based threshold of 4.8 $MTCO_2eq$ per SP per year is relative to the 2020 target date. The SCAQMD has also proposed efficiency-based thresholds relative to the 2035 target date to be consistent with the GHG reduction target date of SB 375. GHG reductions by the SB 375 target date of 2035 would be approximately 40 percent. Applying this 40 percent reduction to the 2020 targets results in an efficiency threshold for plans of 4.1 $MTCO_2eq$ per SP per year and an efficiency threshold at the project level of 3.0 $MTCO_2eq$/year.

The 3,000 $MTCO_2eq$ per year has been selected as the significance threshold, as it is most applicable to the proposed project. The 3,000 $MTCO_2eq$ per year is used in addition to the qualitative thresholds of significance set forth below from Section VII of CEQA Guidelines Appendix G.

CEQA SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment (refer to Impact Statement GHG-1); and/or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases (refer to Impact Statement GHG-2).

Based on these significance thresholds and criteria, the project's effects have been categorized as either "no impact," a "less than significant impact," or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

The standards used to evaluate the significance of impacts are often qualitative rather than quantitative because appropriate quantitative standards are either not available for many types of impacts or are not applicable for some types of projects.

5.6.4 IMPACTS AND MITIGATION MEASURES

GREENHOUSE GAS EMISSIONS

GHG-1 GREENHOUSE GAS EMISSIONS GENERATED BY THE PROJECT COULD HAVE A SIGNIFICANT IMPACT ON GLOBAL CLIMATE CHANGE.

Impact Analysis:

Original Northeast Pump Station

Project-Related Sources of Greenhouse Gases

Project-related GHG emissions typically include emissions from construction and operational activities. Construction of the project would result in direct emissions of CO_2, N_2O, and CH_4 from the operation of construction equipment. Transportation of materials and construction workers to and from the project site would also result in GHG emissions. Construction activities would be of limited duration and would cease upon project completion. The proposed project involves pump station and force main improvements and does not propose a trip-generating land use or facilities that would generate emissions. Direct project-related GHG emissions include emissions from construction activities, while indirect sources include emissions from electricity consumption for the

additional 250 horsepower pump. Operational GHG estimations are based on energy emissions from electricity.

Direct Project-Related Source of Greenhouse Gases

Construction Emissions. As shown in Table 5.6-1, *Project Related Greenhouse Gas Emissions*, construction of the proposed project would result in a total of 736.06 $MTCO_2eq$ (24.54 $MTCO_2eq$/year amortized over 30 years). The California Emissions Estimator Model (CalEEMod, version 2016.3.1) was used to calculate off-road construction emissions. CalEEMod relies upon construction phasing and project specific land use data to calculate emissions; refer to Appendix 11.2, *Air Quality/Greenhouse Gas Emissions/Energy Data*. Construction GHG emissions are typically summed and amortized over the lifetime of the project (assumed to be 30 years), then added to the operational emissions.[15]

Indirect Project-Related Source of Greenhouse Gases

Energy Consumption. Energy consumption would occur during operation of one additional 250 horsepower pump. Using Southern California Edison emissions factors from CalEEMod, the proposed project would indirectly result in 522.20 $MTCO_2eq$/year due to energy consumption.

Table 5.6-1
Project Related Greenhouse Gas Emissions

Source	CO_2	CH_4		N_2O		Total Metric Tons of CO_2eq
	Metric Tons/yr[1]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	Metric Tons/yr[1]	Metric Tons of CO_2eq[2]	
Construction Emissions						
Total Construction Emissions (one time)	731.76	0.17	4.30	0.00	0.00	736.06
Total Construction Emissions (amortized over 30 years)	24.39	0.06	0.14	0.00	0.00	24.54
Indirect Emissions						
Energy[3]	520.33	0.02	0.45	0.00	1.42	522.20
Total Unmitigated Project-Related Emissions[4]	*546.74 $MTCO_2eq$/year*					

Notes:
1. Emissions calculated using CalEEMod computer model.
2. CO_2 Equivalent values calculated using the EPA Website, *Greenhouse Gas Equivalencies Calculator*, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator, accessed March 2019.
3. Energy emissions from pumps were calculated separately. Emissions were based on energy consumption from operation of one additional 250 horsepower pump and Southern California Edison emissions factors from CalEEMod (currently there are two 250 horsepower pumps and two 50 horsepower pumps operating onsite. The project would have a total of three 250 horsepower pumps and two 50 horsepower pumps).
4. Totals may be slightly off due to rounding.

Refer to Appendix 11.2, *Air Quality/Greenhouse Gas Emissions/Energy Data*, for detailed model input/output data.

[15] The project lifetime is based on the standard 30 year assumption of the South Coast Air Quality Management District (South Coast Air Quality Management District, *Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #13,* August 26, 2009).

As shown in Table 5.6-1, project-related emissions would be 546.74 $MTCO_2eq$/year, which is below the 3,000 $MTCO_2eq$/year threshold. Therefore, pursuant to the most recent guidance from the SCAQMD Working Group, the proposed project would result in a less than significant impact with regards to GHG emissions.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the operation and construction activities required would be similar to those proposed under the Original Northeast Pump Station. However, construction of the Modified Northeast Pump Station proposes an alternative dredging construction method for force main improvements. As such, the project may require alternative construction equipment and would be shorter in duration than the Original Northeast Pump Station. HDD would not be an option for the Modified Northeast Pump Station. Modified Northeast Pump Station construction variations are discussed in more detail below.

Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station proposes microtunneling as a potential construction method to install the force main improvements across the Newport Bay Channel to the south of Bay Bridge. However, the Modified Northeast Pump Station also proposes dredging as a potential construction method, as opposed to microtunneling, across the Newport Bay Channel. Dredging activities would require the use of excavator clamshell dredge/backfill equipment.

As shown in Table 5.6-1, the Original Northeast Pump Station GHG emissions would be 546.74 $MTCO_2eq$/year, which is below the 3,000 $MTCO_2eq$/year threshold. Although Modified Northeast Pump Station construction proposes dredging and alters slightly from Original Northeast Pump Station construction, the construction GHG emissions resulting from dredging would not increase significantly from those analyzed under the Original Northeast Pump Station. As such, the Modified Northeast Pump Station would result in a less than significant impact with regards to GHG emissions.

South Pump Station

The analyses for the Original Northeast Pump Station and Modified Northeast Pump Station are also applicable to the South Pump Station. Development of the South Pump Station would involve shifting and expanding the existing pump station facility site approximately 200 feet to the west and constructing a new pump station building. Pump station improvements construction activities for the South Pump Station would be similar to that of the Original Northeast Pump Station and Modified Northeast Pump Station. Similar to the Modified Northeast Pump Station, the South Pump Station would install force mains across the Newport Bay Channel via either dredging or microtunneling. Thus, the analyses for the Original Northeast Pump Station and Modified Northeast Pump Station would be applicable to the South Pump Station and GHG emissions would be less than significant.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

CONSISTENCY WITH APPLICABLE GHG PLANS, POLICIES, OR REGULATIONS

GHG-2 IMPLEMENTATION OF THE PROPOSED PROJECT COULD CONFLICT WITH AN APPLICABLE GREENHOUSE GAS REDUCTION PLAN, POLICY, OR REGULATION.

Impact Analysis:

Original Northeast Pump Station

Neither the Orange County Sanitation District nor the City of Newport Beach currently have an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. However, the City prepared an Energy Action Plan, created in partnership with Southern California Edison (SCE) and Southern California Gas Company (SCG). The Energy Action Plan provides the City guidance in reducing GHG emissions by lowering municipal and community wide energy use. The Energy Action Plan assists in identifying a clear path to successfully implementing goals, policies, and actions that will achieve the City's reduction targets. Additionally, the City entered into the Orange County Cities Energy Leadership Partnership Program (OCCELP), a joint partnership with Southern California Edison (SCE), Southern California Gas Company and neighboring cities Fountain Valley, Westminster and Costa Mesa to improve long term energy and sustainability throughout the local area.

As discussed above, the project involves pump station and force main improvements and does not propose a trip-generating land use or facilities that would generate emissions. As presented in Table 5.6-1, the project's short-term GHG emissions are well below the 3,000 $MTCO_2eq$/year screening threshold. As concluded in Impact Statement GHG-1 the proposed project would not generate a significant amount of GHGs emissions. The proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts are less than significant in this regard.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, the Modified Northeast Pump Station would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and impacts are less than significant.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions and impacts are less than significant.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

5.6.5 CUMULATIVE IMPACTS

Table 4-1, *Cumulative Projects List*, identifies the related projects and other possible development in the area determined as having the potential to interact with the proposed project to the extent that a significant cumulative effect may occur. The following discussion determines whether a significant cumulative effect would occur.

GREENHOUSE GAS EMISSIONS GENERATED BY THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD HAVE A SIGNIFICANT IMPACT ON GLOBAL CLIMATE CHANGE.

Impact Analysis:

Original Northeast Pump Station

Based on the California Air Pollution Control Officers Association's (CAPCOA) *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act* (2008), it is generally the case that an individual project of this size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory.[16] GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.[17] The additive effect of project-related GHGs would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the proposed project and other related projects would be subject to all applicable regulatory requirements, which would further reduce GHG emissions. As shown in Table 5.6-1, the project would not exceed applicable GHG emissions thresholds. As such, the project would not impede progress toward the reduction targets of AB 32 in 2020 and the project's cumulative contribution of GHG emissions in 2020 and post-2020 would be less than significant.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, the Modified Northeast Pump Station would not impede progress toward the reduction targets of AB 32 in 2020 and the Modified Northeast Pump Station's cumulative contribution of GHG emissions in 2020 and post-2020 would be less than significant.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station would not impede progress toward the reduction targets of AB 32 in 2020 and the South Pump Station's cumulative contribution of GHG emissions in 2020 and post-2020 would be less than significant.

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16 California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, 2008, page 27.

17 California Air Pollution Control Officers Association, *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*, 2008, page 35. .

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

5.6.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No unavoidable significant impacts related to GHG emissions have been identified in this section.

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5.7 HAZARDS AND HAZARDOUS MATERIALS

This section describes how hazardous substances are regulated from a Federal, State, and local perspective, and discusses potential adverse impacts to human health and the environment due to exposure of hazardous materials. Where significant impacts are identified, mitigation measures are provided to reduce these impacts to a less than significant level. For this EIR, the term "hazardous material" includes any material that, because of its quantity, concentration, or physical, chemical, or biological characteristics, poses a considerable present or potential hazard to human health or safety, or to the environment. It refers generally to hazardous chemicals, radioactive materials, and biohazards materials. "Hazardous waste," a subset of hazardous material, is material that is to be abandoned, discarded, or recycled, including chemicals, radioactive, and bio-hazardous waste (including medical waste).

Information in this section is based primarily upon the *Phase I Environmental Site Assessment (ESA) – Back Bay Landing Project* (Back Bay Phase I ESA), prepared by Leighton Consulting, Inc., October 2009, and the *Back Bay Landing Final Environmental Impact Report* (Back Bay Landing EIR), prepared by the City of Newport Beach, February 2014.

5.7.1 EXISTING SETTING

PROJECT SITE

The project site is located within a fully developed and urbanized area of the City of the Newport Beach. The existing Bay Bridge Pump Station facility is located immediately north of East Coast Highway, and is bounded by a recreational vehicle (RV) storage station site to the north, east, and west; refer to Table 3-1, *Surrounding Land Uses*. New pump station facilities would be located on the same 31.4-acre RV parcel; refer to Exhibit 3-4, *Conceptual Site Plans*. As such, most of the project site is improved within the Bayside Village Marina, LLC parcel, with the current remaining area occupied by RV storage facilities. Areas potentially impacted by construction improvements would include the current Bayside Village Marina, LLC property, a disturbed vacant area in the southern portion of Castaways Park, Newport Bay Channel, Bayside Drive, West Coast Highway, East Coast Highway, and West Road, as well as construction easement areas south of East Coast Highway. The surrounding area is comprised of residential, commercial, and commercial recreational marine uses.

HISTORICAL USE OF PROJECT SITE AND SURROUNDING AREA

The project site has historically consisted of vacant land, marina/dry storage uses, and a public facility (wastewater utility infrastructure similar to existing conditions). The RV storage area was paved/developed sometime in the 1950s and 1960s. According to As-Builts, provided by OCSD, the Bay Bridge Pump Station facility was constructed by 1965.[1] Prior to this use, the project site appeared to be associated with former marina uses, particularly dry storage uses.

Government Code Section 65962.5 requires the California Department of Toxic Substances Control (DTSC) and State Water Resources Control Board (SWRCB) to compile and update a list of sites falling within the criteria of the Section, which mainly includes various types of hazardous waste sites.

[1] Orange County Sanitation District, *Coast Highway Trunk Sewer Plan and Profile, 50+00 to Bayside Drive*, As-Builts, dated July 7, 1965.

The California Department of Health Services is also required to compile and update, as appropriate, a list of all public drinking water wells that contain detectable levels of organic contaminants and that are subject to water analysis pursuant to Section 116395 of the Health and Safety Code. Section 65962.5 requires the local enforcement agency, as designated pursuant to Section 18051 of Title 14 of the California Code of Regulations (CCR), to compile, as appropriate, a list of all solid waste disposal facilities from which there is a known migration of hazardous waste. Based on the California Environmental Protection Agency's (CalEPA's) *Cortese List Data Resources*, the project site is not reported on a list maintained pursuant to Government Code Section 65962.5.[2]

ON-SITE STRUCTURES

Structural Asbestos

Asbestos is a strong, incombustible, and corrosion resistant material, which was used in many commercial products since prior to the 1940s and up until the early 1970s. If inhaled, asbestos fibers can result in serious health problems. The California Division of Occupational Safety and Health (Cal/OSHA) asbestos construction standard (Title 8, CCR, Section 1259) defines asbestos-containing materials (ACMs) as material containing more than one percent asbestos. Asbestos Containing Construction Material (ACCM) is defined as any manufactured construction material which contains more than one tenth of 1 percent asbestos by weight.

Due to the age of the on-site buildings, there is a potential that ACMs are present in on-site buildings. Suspect materials that may contain ACMs include, but may not be limited to, drywall systems, floor tiles, ceiling tiles, and roofing systems. Currently, Federal and State regulations govern the renovation and demolition of structures where ACM's are present.

Lead-Based Paints

Lead has long been used as a component of paint, primarily as a pigment and for its ability to inhibit and resist corrosion. Over time, as concern over the health effects associated with lead began to grow, health and environmental regulations were enacted to restrict the use of lead in certain products and activities in the U.S. In the last 25 years, lead-based paint, leaded gasoline, leaded can solder and lead-containing plumbing materials were among the products that were gradually restricted or phased out of use.

Currently, Federal and State regulations govern the renovation and demolition of structures where lead-based paints (LBPs) are present. Due to the age of the on-site buildings, there is a potential that LBP is present in association with on-site buildings.

Polychlorinated Biphenyls (PCBs) Containing Equipment

As the existing OCSD Bay Bridge Pump Station likely contains an electrical room or generator facility, there is potential that polychlorinated biphenyls (PCBs) are present on-site.

[2] California Environmental Protection Agency, *Cortese List Data Resources*, http://www.calepa.ca.gov/ sitecleanup/corteselist/, accessed November 14, 2018.

POTENTIAL GROUNDWATER CONCERNS FROM OFF-SITE USES

According to the Back Bay Landing Phase I ESA, there are a number of facilities in the vicinity of the project site that have been known to handle, store, and/or transport hazardous materials:

- *Mobil #18HGK, 301 Coast Highway:* The facility adjoins the project site to the southeast across East Coast Highway. The contaminant of concern is gasoline affecting other groundwater (uses other than drinking water). This facility's status was "Case Closed" on July 28, 2005. The Back Bay Landing Phase I ESA indicated that groundwater direction was to the west-southwest and is tidally influenced. Groundwater contamination remained at the site, including methyl tertiary butyl ether (MTBE) at 224 parts per million (ppm); however, the plume was reported to be stable and limited to the area beneath the facility and a portion of Bayside Drive, to the south of East Coast Highway.
- *Newport Auto Center, 445 East Coast Highway:* The facility is located approximately 380 feet to the southeast of the project site. The contaminant of concern is gasoline affecting other groundwater (uses other than drinking water). The Back Bay Landing Phase I ESA indicated that groundwater direction was to the southwest and that contaminant concentrations at the facility are low. According to the SWRCB's online database (GeoTracker), this facility received case closure by the Regional Water Quality Control Board (RWQCB) on November 22, 2010.[3]
- *ARCO Service Station Site (Former), 200 Coast Highway:* The facility is situated off-site to the west of the project site (at 200 West Coast Highway). The contaminant of concern is gasoline affecting other groundwater (uses other than drinking water). According to the GeoTracker database, this site achieved case closure by the RWQCB on May 5, 1998.[4]
- *Shell Oil (Former), 990 Coast Highway:* The facility is located approximately 0.47-mile southeast of the project site. Based on the GeoTracker database, the contaminant of concern is gasoline affecting other groundwater. The site achieved case closure by the RWQCB on July 1, 2015.[5]

NEWPORT BAY CHANNEL

According to the Back Bay Landing Phase I ESA, sampling results from sediment within the bay at the Marina (area proposed for force main improvements via horizontal directional drilling [HDD]/microtunneling beneath the Newport Bay Channel) reported elevated levels of dichlorodiphenyltrichloroethane (DDT) and dichlorodiphenyldichloroethylene (DDE) pesticide contamination.

GROUNDWATER

According to the Geologic, Geotechnical, and Seismic Technical Background Report (TBR) Bay Bridge Pump Station and Force Mains Rehabilitation Study (Geology Report) prepared by Hushmand Associates, Inc., April 17, 2015 (refer to Appendix 11.4, Geology Report), depth to groundwater is

[3] State Water Resources Control Board, *Geotracker Website*, http://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=newport+beach%2C+ca, accessed November 14, 2018.
[4] Ibid.
[5] Ibid.

approximately 10 to 15 feet below ground surface (bgs) due to the close proximity of Newport Bay. Groundwater flow direction is reported to be tidally influenced and is therefore variable.

EMERGENCY EVACUATION

The City of Newport Beach is currently using the Standardized Emergency Management System (SEMS) for emergency response in the City, where depending on the type of incident, several different agencies and disciplines may be called upon to assist with emergency response. Agencies and disciplines that can be expected to be part of an emergency response team include medical, health, fire and rescue, police, public works, and the coroner. Additionally, policies and plans from the Orange County Operational Area Mutual Aid Plan (the State's Mutual Aid Plan) and the State's Fire and Rescue Mutual Aid System would be implemented.

Currently, the Newport Beach Fire Department (NBFD) provides basic life support (BLS), advanced life support (ALS), and emergency transportation utilizing the fire engines and ladder trucks housed in the NBFD's eight fire stations along with the paramedics housed in three of those stations. While the NBFD has the immediate capability of providing ALS service at three simultaneous incidents, there is an occasional need for additional ALS units. Additional ALS service is provided by nearby and adjoining public agencies by means of cooperative automatic aid agreements. Emergency transportation beyond the capability of the NBFD is provided by private ambulance companies.

In the event of a disaster, the City's Emergency Operations Center can be opened. The center has undergone a series of considerable upgrades and improvements. Training for the residents within the City continues through the Community Emergency Response Team program. The continued development of the community's disaster preparedness efforts will aid the residents of the City in an area-wide disaster by fostering a citywide culture of "preparedness."

5.7.2 REGULATORY SETTING

FEDERAL AND STATE

According to the U.S. Environmental Protection Agency (EPA), a "hazardous" waste is defined as any waste, "which because of its quantity, concentrations, or physiochemical or infectious properties, may either increase mortality or produce irreversible or incapacitating illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed" (U.S. Public Health and Welfare Code Section 6903). Special handling and management are required for materials and wastes that exhibit hazardous properties. Treatment, storage, transport, and disposal of these materials are highly regulated at both the Federal and State levels. Compliance with Federal and State hazardous materials laws and regulations minimizes the potential risks to the public and the environment presented by these potential hazards. These laws and regulations include, but are not limited to, the following:

- Resources Conservation and Recovery Act (RCRA) – Hazardous waste management;
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Cleanup of contamination;

- Superfund Amendment and Reauthorization Act (SARA) – Cleanup of contamination; and
- Hazardous Materials Transportation Act (HMTA) – Safe transport of hazardous materials.

These laws provide the "cradle to grave" regulation of hazardous wastes. Businesses, institutions, and other entities that generate hazardous waste are required to identify and track their hazardous waste from the point of generation until it is recycled, reused, or disposed of. The primary responsibility for implementing RCRA is assigned to the EPA, although individual states are encouraged to seek authorization to implement some or all RCRA provisions.

The EPA and the DTSC have developed and continue to update lists of hazardous wastes subject to regulation. In addition to the EPA and DTSC, the Santa Ana RWQCB, is the enforcing agency for the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil and groundwater. Other State agencies involved in hazardous materials management include the Office of Emergency Services (OES), California Department of Transportation (Caltrans), California Highway Patrol (CHP), California Air Resources Board (CARB), and CalRecycle. California hazardous materials management laws include, but are not limited to, the following:

- Hazardous Materials Management Act – Business plan reporting;
- Hazardous Substance Act – Cleanup of contamination;
- Hazardous Waste Control Act – Hazardous waste management; and
- Safe Drinking Water and Toxic Enforcement Act of 1986 – Releases of and exposure to carcinogenic chemicals.

Department of Toxic Substances Control

In 1992, the responsibility for implementation of RCRA was given to the DTSC. The DTSC is also responsible for implementing and enforcing California's own hazardous waste laws, which are known collectively as the Hazardous Waste Control Law. Although similar to RCRA, the California Hazardous Waste Control Law and its associated regulations define hazardous waste more broadly and regulate a larger number of chemicals. Hazardous wastes regulated by California, but not by EPA, are called "non-RCRA hazardous wastes."

State Water Resources Control Board

Brownfields are underutilized properties where reuse is hindered by the actual or suspected presence of pollution or contamination. The goals of the SWRCB Brownfield Program are to:

- Expedite and facilitate site cleanups and closures for Brownfields sites to support reuse of those sites;
- Preserve open space and greenfields;
- Protect groundwater and surface water resources, safeguard public health, and promote environmental justice; and

- Streamline site assessment, clean up, monitoring, and closure requirements and procedures within the various SWRCB site cleanup programs.

Site cleanup responsibilities for brownfields primarily reside within four main programs at the SWRCB: the Underground Storage Tank Program, the Site Cleanup Program, the Department of Defense Program, and the Land Disposal Program. These SWRCB cleanup programs are charged with ensuring sites are remediated to protect the State of California's surface and groundwater and return it to beneficial use.

California Air Resources Board

One of CARB's major goals is to protect the public from exposure to toxic air contaminants. The California Air Toxics Program establishes the process for the identification and control of toxic air contaminants and includes provisions to make the public aware of significant toxic exposures and for reducing risk.

The Toxic Air Contaminant Identification and Control Act (AB 1807, Tanner 1983) created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly 1987) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

Under AB 1807, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, the CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community." AB 1807 also requires CARB to use available information gathered from the AB 2588 program to include in the prioritization of compounds. This report includes available information on each of the above factors required under the mandates of the AB 1807 program. AB 2588 air toxics "Hot Spots" program requires facilities to report their air toxics emissions, ascertain health risks, and to notify nearby residents of significant risks. In September 1992, the "Hot Spots" Act was amended by Senate Bill 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Accidental Release Prevention Law

The State's Accidental Release Prevention Law provides for consistency with Federal laws (i.e., the Emergency Preparedness and Community Right-to-Know Act and the Clean Air Act) regarding accidental chemical releases and allows local oversight of both the State and Federal programs. State and Federal laws are similar in their requirements; however, the California threshold planning quantities for regulated substances are lower than the Federal quantities. Local agencies may set lower reporting thresholds or add additional chemicals to the program. The Accidental Release Prevention Law is implemented by the Certified Unified Program Agencies (CUPAs) and requires that any business, where the maximum quantity of a regulated substance exceeds the specified threshold quantity, register with the responsible CUPA as a manager of regulated substances and prepare a Risk Management Plan. A Risk Management Plan must contain an offsite consequence analysis, a five-year accident history, an accident prevention program, an emergency response program, and a certification of the truth and accuracy of the submitted information. Businesses submit their plans to the CUPA,

which makes the plans available to emergency response personnel. The Business Plan must identify the type of business, location, emergency contacts, emergency procedures, mitigation plans, and chemical inventory at each location.

Transportation of Hazardous Materials/Wastes

Transportation of hazardous materials/wastes is regulated by California Code of Regulations (CCR) Title 26. The United States Department of Transportation (DOT) is the primary regulatory authority for the interstate transport of hazardous materials. The DOT establishes regulations for safe handling procedures (i.e., packaging, marking, labeling and routing). The CHP and Caltrans enforce Federal and State regulations and respond to hazardous materials transportation emergencies. Emergency responses are coordinated as necessary between Federal, State and local governmental authorities and private persons through a State mandated Emergency Management Plan.

Worker and Workplace Hazardous Materials Safety

Occupational safety standards exist to minimize worker safety risks from both physical and chemical hazards in the workplace. The Cal/OSHA is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires 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.

State Emergency Response and Evacuations Plans

After the 1993 Oakland fire, the State of California passed legislation authorizing the State's Office of Emergency Services (State OES) to prepare a SEMS program that sets forth measures by which a jurisdiction handles emergency disasters. By December 1996, each jurisdiction was required to show the Office of Emergency Services that it is in compliance with SEMS through a number of measures, including having an up-to-date emergency management plan, which would include an emergency evacuation plan. Non-compliance with SEMS can result in the State withholding disaster relief from the non-complying jurisdiction in the event of a disaster.

REGIONAL

Santa Ana Regional Water Quality Control Board

The Santa Ana RWQCB is the enforcing agency for the protection and restoration of water resources, including remediation of unauthorized releases of hazardous substances in soil and groundwater. The UST Section directs environmental cleanup activities at leaking UST sites. Such sites include active and inactive gasoline stations, agricultural sites, brownfield redevelopment sites, airports, bulk petrochemical storage terminals, pipeline facilities, and various chemical and industrial facilities. The Site Cleanup Section oversees activities at non-UST sites where soil or groundwater contamination have occurred. Many of these sites are former industrial facilities and dry cleaners, where chlorinated solvents were spilled, or have leaked into the soil or groundwater.

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) works with CARB and is responsible for developing and implementing rules and regulations regarding air toxics on a local level. The SCAQMD establishes permitting requirements, inspects emission sources, and enforces measures through educational programs and/or fines. SCAQMD Rule 1403 also establishes survey requirements, and notification and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities.

COUNTY OF ORANGE

Orange County Health Care Agency

Since April 1988, the SWRCB has contracted with the County of Orange to provide regulatory oversight for cleanup of leaking underground storage tanks (LUSTs) under the Local Oversight Program (LOP) contract. The Orange County Health Care Agency (OCHCA), serving as the County's LOP, is responsible for the following:

- Confirming a release;
- Identifying and notifying Responsible Parties (RPs);
- Reviewing and approving preliminary site assessment work plans to determine the type and extent of soil and groundwater contamination;
- Overseeing assessment activities;
- Reviewing assessment reports, quarterly reports, feasibility studies, risk appraisals, and corrective action plans;
- Issuing cleanup directives to the RPs;
- Overseeing cleanup operations;
- Approving and certifying cleanup operations; and
- Completing all records.

The OCHCA, Environmental Health Division, is designated as the CUPA for the County of Orange by the State Secretary for Environmental Protection. The CUPA is the local administrative agency that coordinates the regulation of hazardous materials and hazardous wastes in Orange County through the following six programs:

- Hazardous Waste (HW);
- Underground Storage Tank (UST);
- Aboveground Petroleum Storage Tank (APST);
- Hazardous Materials Disclosure (HMD);
- Business Emergency Plan (BEP); and
- California Accidental Release Prevention (CalARP).

Orange County Waste and Recycling

Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be "household hazardous waste." Products, such as paints, cleaners, oils, batteries, and pesticides that contain potentially hazardous ingredients require special care when you dispose of them. Improper disposal of household hazardous wastes can include pouring them down the drain, on the ground, into storm sewers, or in some cases putting them out with the trash. The dangers of such disposal methods might not be immediately obvious, but improper disposal of these wastes can pollute the environment and pose a threat to human health. Household hazardous waste and e-waste can be collected at a County Household Hazardous Waste Collection Center. The Huntington Beach Household Hazardous Waste Collection Center (located at 17121 Nichols Street-Gate 6, Huntington Beach) serves the project site.

Multi-Casualty Incident Response Plan

Mass casualty incidents, those incidents usually involving three or more critical patients, require the implementation of the Orange County Fire Services Operational Plan Annex "Multi-Casualty Incident Response Plan." This Plan is an organizational plan that aids in assigning treatment teams and quickly moving patients from the scene to appropriate receiving centers in an expeditious and organized manner.

The multi-casualty plan is intended to be implemented during any multi-casualty incident, such as multiple vehicle accidents, aviation accidents, hazardous materials incidents, high-rise fires, and so forth. Although the system has been designed to be used with as few as three patients, it can be expanded to a much larger number as it becomes necessary.

LOCAL

City of Newport Beach

Newport Beach Fire Department

The NBFD has joined in partnership with the OCHCA as a Participating Agency (PA). The NBFD administers the HMD and BEP programs, which are overseen by the OCHCA. Chapter 6.95 of Division 20 of the California Health and Safety Code, Section 11022 of Title 42 of the United States Code (1989), and local laws contain the minimum requirements for hazardous material inventory reporting and data management. These regulations require businesses within this jurisdiction to complete a chemical inventory to disclose hazardous materials stored, used, or handled on-site. This disclosure information assists emergency responders in planning for and handling emergencies involving hazardous materials. The main program objective is to safeguard the lives of emergency responders, the public, and to minimize property loss. The California Health and Safety Code also requires a BEP. The intent of the BEP is to assist in mitigating a release or threatened release of a hazardous material, and to minimize any potential harm or damage to human health or the environment.

City of Newport Beach General Plan Safety Element

The following General Plan goals and policies are applicable to the proposed project:

Safety Element

Goals:

S 6: Protection of human life and property from the risks of wildfires and urban fires.

S 7: Exposure of people and the environment to hazardous materials associated with methane gas extraction, oil operations, leaking underground storage tanks, and hazardous waste generators is minimized.

Policies:

S 6.8 *Update Building and Fire Codes*. Regularly update building and fire codes to provide for fire safety design. (Imp 7.1)

S 7.1 *Known Areas of Contamination*. Require proponents of projects in known areas of contamination from oil operations or other uses to perform comprehensive soil and groundwater contamination assessments in accordance with American Society for Testing and Materials standards, and if contamination exceeds regulatory action levels, require the proponent to undertake remediation procedures prior to grading and development under the supervision of the County Environmental Health Division, County Department of Toxic Substances Control, or Regional Water Quality Control Board (depending upon the nature of any identified contamination). (Imp 7.1, 8.1)

S 7.4 *Implementation of Remediation Efforts*. Minimize the potential risk of contamination to surface water and groundwater resources and implement remediation efforts to any resources adversely impacted by urban activities. (Imp 6.1, 17.1, 18.1, 19.1)

LOCAL HAZARD MITIGATION PLAN

The most current Local Hazards Mitigation Plan (LHMP) is, and as updated from time to time will continue to be, incorporated in the Safety Element. The Safety Element and the LHMP are complementary documents that work together to achieve the ultimate goal to reduce the impacts on the community from a disaster.

CITY OF NEWPORT BEACH EMERGENCY MANAGEMENT PLAN

Within the NBFD, the Disaster Preparedness Coordinator has updated the City's Emergency Management Plan, including the development and implementation of disaster training for employees. The Emergency Management Plan describes the different levels of emergencies, the local emergency management organization, and the specific responsibilities of each participating agency, government office, and City staff. A Citywide drill, which involves implementation of the Plan, is conducted annually.

5.7.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

CEQA SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials (refer to Impact Statement HAZ-1);
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment (refer to Impact Statement HAZ-1);
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school (refer to Section 8.0, *Effects Found Not To Be Significant*);
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (refer to Section 8.0, *Effects Found Not To Be Significant*);
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working the in the project area (refer to Section 8.0, *Effects Found Not To Be Significant*);
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (refer to Impact Statement HAZ-2); and
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? (refer to Section 8.0, *Effects Found Not To Be Significant*).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant unavoidable impact.

5.7.4 IMPACTS AND MITIGATION MEASURES

ACCIDENTAL RELEASE AND/OR ROUTINE HANDLING OF HAZARDOUS MATERIALS

HAZ-1 THE PROPOSED PROJECT COULD CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR ENVIRONMENT THROUGH THE ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS, OR ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS.

Impact Analysis:

Original Northeast Pump Station

Short-Term Construction

One of the means through which human exposure to hazardous substance could occur is through accidental release. Incidents that result in an accidental release of hazardous substances into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. Human exposure of contaminated soil or water can have potential health effects based on a variety of factors, such as the nature of the contaminant and the degree of exposure. Construction activities associated with the proposed project could release hazardous materials into the environment through reasonably foreseeable upset and accident conditions.

Structural Demolition

The existing OCSD Bay Bridge Pump Station would be demolished as part of the proposed project. According to the documentation made available by OCSD, the Bay Bridge Pump Station facility was constructed in 1965.[6] Thus, the potential for ACMs or LBPs exists. Demolition of the structures could expose construction personnel and the public to ACMs or LBPs. Federal and State regulations govern the renovation and demolition of structures where ACMs and LBPs are present. All demolition that could result in the release of ACMs or LBPs must be conducted according to Federal and State standards.

The National Emission Standards for Hazardous Air Pollutants (NESHAP) and SCAQMD Rule 1403 mandate that building owners conduct an asbestos survey to determine the presence of ACMs prior to the commencement of any remedial work, including demolition (Mitigation Measure HAZ-1). If ACM is found, abatement of asbestos would be required prior to any demolition activities. If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste would be required to be evaluated independently from the building material by a qualified Environmental Professional (HAZ-2). If LBP is found, abatement would be required to be completed by a qualified Lead Specialist prior to any demolition activities. Compliance with Mitigation Measures HAZ-1 and HAZ-2, as well as SCAQMD Rule 1403 would reduce potential impacts in this regard to less than significant levels.

6 Orange County Sanitation District, *Coast Highway Trunk Sewer Plan and Profile, 50+00 to Bayside Drive*, July 7, 1965.

Further, the existing OCSD Bay Bridge Pump Station likely contains an electrical room or generator facility. As such, the potential for PCBs exists. Demolition of the structure could expose construction personnel and the public to PCBs. However, adherence to Federal and State standards would ensure the proposed project would not expose people to PCBs in excess of regulatory standards. Therefore, no significant human exposure to PCBs is anticipated from construction of the proposed project.

Existing Soil Contamination in Newport Bay Channel

The project includes force main improvements that would travel across the Newport Bay Channel westward to a disturbed area within the southern portion of Castaways Park, and would then cross West Coast Highway southward to connect to OCSD's existing force mains. As noted in Section 5.7.1, *Existing Setting*, elevated levels of DDT/DDE pesticide contamination have been reported in the Newport Bay Channel. However, these contaminants are anticipated to be present in topsoils along the channel as a result of deposition. As such, proposed HDD/microtunneling force main crossing beneath the Newport Bay Channel would occur in deeper soils and is not anticipated to involve these contaminated topsoils. Notwithstanding, for spoils resulting from proposed HDD/microtunneling activities, the Soil Management Plan (SMP) would require a Phase II/Site Characterization Specialist to conduct sampling of spoils prior to disposal (Mitigation Measure HAZ-3). These drilling activities would also require pumping of water in the tunnel(s) during drilling, which also may be contaminated. The project would also be required to obtain and comply with the National Pollutant Discharge Elimination System (NPDES) General Permit, *Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activities* (Order No. 2009-0009-DWQ, NPDES Number CAS000002). The NPDES General Permit requires the proper handling and discharge of harmful pollutants that could affect water quality in the area. Therefore, compliance with the NPDES General Permit would ensure that any harmful pollutants or hazardous materials contained within the Newport Bay Channel would be properly handled and disposed of to prevent unsafe exposure to construction workers. Compliance with the Mitigation Measure HAZ-3 and NPDES General Permit compliance would result in a less than significant impact in this regard.

Transport of Hazardous Materials

In the event that hazardous materials are encountered in soil/water during drilling activities or the demolition of the existing on-site pump station facility, off-site transport and disposal of hazardous materials may occur. Off-site transport and disposal of hazardous materials from the demolition of the existing on-site structures may also occur. However, these activities would be short-term in nature, only occurring during demolition and excavation/grading activities, and would be subject to Federal, State, and local health and safety regulations that protect public safety. The handling, transport, and disposal of hazardous materials are regulated by the DTSC, CalEPA, Cal/OSHA, OCHCA, and NBFD. The project construction contractor would also be subject to the requirements of the Cal/OSHA and OCHCA governing removal actions. Further, DTSC regulations would require specific hazardous materials handling methods, truck haul routes, and schedules to minimize potential exposure during hazardous materials removal actions. Additionally, Mitigation Measure HAZ-3 would require a SMP during construction activities to provide guidelines for safety measures, soil management, and handling of disturbed soils. The SMP would require verification sampling for soil import/export to confirm no presence of hazardous materials. With adherence to the mandatory requirements of affected regulatory agencies regarding the handling, transport, and disposal of hazardous materials, as well as Mitigation Measure HAZ-3, the proposed project would not create a significant hazard to the public or the environment through the transport of hazardous materials. As

such, impacts related to the temporary off-site hauling and disposal of hazardous building materials and/or soil/groundwater contamination during demolition would be less than significant with implementation of Mitigation Measure HAZ-3.

Off-Site Regulatory Properties

As discussed in Section 5.7.1, there are a number of properties in the vicinity of the project site that have been known to handle, store, and/or transport hazardous materials; these properties also have reported contamination. These properties include the former Mobil #18HGK (301 Coast Highway), Newport Beach Cars LLC (445 East Coast Highway), former ARCO Service Station Site (200 Coast Highway), and former Shell Oil (990 Coast Highway). As discussed in Section 5.7.1, all of these properties have received case closure status by the RWQCB, and therefore are not anticipated to currently affect groundwater contamination underlying the project site or areas of potential dewatering. Therefore, a less than significant impact would occur in this regard.

Encountering Unexpected Hazardous Materials Conditions

Site disturbance and demolition activities could expose construction workers to a variety of unknown hazardous materials. However, Mitigation Measure HAZ-4 would reduce potential impacts from unknown hazardous materials that could result in accidental conditions at the project site. If unknown wastes or suspect materials are discovered during construction by the contractor, which he/she believes may involve hazardous wastes/materials, the contractor would be required to complete the following (Mitigation Measure HAZ-4):

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area;
- Notify the Orange County Sanitation District Director of Engineering;
- Secure the areas as directed by the Orange County Sanitation District Director of Engineering; and
- Notify the Orange County Health Care Agency's Hazardous Waste/Materials Coordinator.

With implementation of Mitigation Measures HAZ-1 through HAZ-4 and compliance with applicable Federal, State, and local regulatory requirements pertaining to hazardous materials, potential short-term construction hazardous materials impacts would be reduced to less than significant levels.

Project Operations

The new pump station facilities would include a pump station, generator, and odor control facilities that may utilize chemicals or other hazardous materials for operation. The new pump station would house pumps, motors, electrical instrumentation, control equipment, a restroom, and other mechanical equipment. The new pump station would also contain a 750 kilowatt [kw] diesel backup generator with 66-gallon fuel tank, and a new 620 square-foot odor control facility that would hold a multi-stage odor control scrubber system. The multi-stage odor control scrubber system would remove odorous compounds from the incoming waste stream, and would require two 10-foot diameter tanks to accommodate liquid phase odor control. The mechanical equipment, multi-stage odor control scrubber system, and generator could require the use of chemicals and other hazardous materials for maintenance purposes. However, OCSD would be required to file all hazardous

materials or chemicals, above regulatory thresholds for quantities, used during project operations with the OCHCA (the designated CUPA) and NBFD. All hazardous materials and chemicals would be routinely inspected to ensure that these materials are being stored, handled, and used in accordance with all applicable Federal, State, and local standards and regulations in order to reduce the potential for a hazardous materials incident. In addition, OCSD and/or NBFD would be required to develop hazardous waste management and safety plans in accordance with County, OSHA, and EPA requirements. In accordance with OSHA regulation 29 CFR 1910.119, OCSD would be required to prepare a Process Safety Management Program (PSM) for the new pump station facility, which is designed to prevent or minimize the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. The PSM would provide the following preventative components:

- Employee participation plan;
- Process safety information;
- Process hazard analysis;
- Written operating procedures;
- Employee training requirements and written training programs;
- Inspection and maintenance program to document mechanical integrity;
- Preventative maintenance program;
- Contractor training requirements;
- Hot work cutting and welding permit procedures;
- Pre-startup safety review and management of change procedures;
- Compliance audit procedures;
- External emergency/non-emergency notification;
- Facilities training requirements; and
- Reportable quantities of on-site chemicals.

Storage of reportable quantities of hazardous materials would also be subject to compliance with EPA Risk Management Planning (RMP) Rule 40 CFR 68, which would require the operator to register the facility with the EPA before on-site storage of hazardous chemicals. With adherence to all required Federal, State, and local laws, ordinances, and regulations discussed above, hazardous materials impacts associated with project operations would be reduced to less than significant levels.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. However, the Modified Northeast Pump Station design proposes dredging as a potential construction method to install the force main improvements across the Newport Bay Channel south of Bay Bridge. As noted in Section 5.7.1, *Existing Setting*, elevated levels of DDT/DDE pesticide contamination have been reported in the Newport Bay Channel and are anticipated to be present in topsoils. Therefore, dredging of the channel could expose construction personnel to DDT/DDE pesticide contamination. Pursuant to the Clean Water Act Section 401 Certification, the

project would be required to comply with best management practices (BMPs) including the proper disposal of dredged materials and incorporating all necessary pollution prevention BMPs for each potential pollution source associated with the project.[7] Additionally, pursuant to Mitigation Measure HAZ-3, the SMP would require a Phase II/Site Characterization Specialist to conduct sampling of dredged material prior to disposal. Thus, a less than significant impact would result with adherence to the Clean Water Act Section 401 Certification and implementation of Mitigation Measures HAZ-1 through HAZ-4.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station. A less than significant impact would occur with implementation of Mitigation Measures HAZ-1 through HAZ-4.

Mitigation Measures: The following mitigation measures apply to all site plan concepts:

HAZ-1 Prior to demolition activities, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and California Division of Occupational Safety and Health (Cal/OSHA) certified building inspector to determine the presence or absence of asbestos containing-materials (ACMs). If ACMs are located, abatement of asbestos shall be completed prior to any activities that would disturb ACMs or create an airborne asbestos hazard. Asbestos removal shall be performed by a State certified asbestos containment contractor in accordance with the South Coast Air Quality Management District (SCAQMD) Rule 1403. Contractors performing ACM removal shall provide evidence of abatement activities to the Orange County Sanitation District.

HAZ-2 If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste shall be evaluated independently from the building material by a qualified Environmental Professional. If lead-based paint is found, abatement shall be completed by a qualified Lead Specialist prior to any activities that would create lead dust or fume hazard. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the Orange County Sanitation District.

HAZ-3 Prior to construction, a Soil Management Plan (SMP) shall be prepared by a qualified environmental professional with Phase II/Site Characterization experience. The SMP shall be incorporated into project plans and specifications to be used by the contractor and the Orange County Sanitation District during construction activities. The SMP shall include guidelines for safety measures and soil management in the event that soils are to be disturbed, and for handling soil during any planned earthwork activities. Additionally, the SMP shall include verification sampling for spoils/dredged material, soil import and export, as well as backfill to confirm no presence of hazardous materials. If hazardous

[7] City of Newport Beach, *Dredging Permits*, https://www.newportbeachca.gov/government/departments/public-works/development-services/permits/dredging-permits, accessed February 13, 2019.

materials are detected, the materials shall be properly disposed of in accordance with Federal and State requirements. The SMP shall also include a decision framework and specific risk management measures for managing soil in a manner protective of human health and consistent with applicable regulatory requirements.

HAZ-4 If unknown wastes are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following:

- Immediately cease work in the vicinity of the suspected contaminant, and remove workers and the public from the area;
- Notify the Orange County Sanitation District;
- Secure the area as directed by the Orange County Sanitation District; and
- Notify the Orange County Health Care Agency's Hazardous Materials Division's Hazardous Waste/ Materials Coordinator (or other appropriate agency specified by the Director of Engineering). The Hazardous Waste/Materials Coordinator shall advise the responsible party of further actions that shall be taken, if required.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

INTERFERENCE WITH AN ADOPTED EMERGENCY RESPONSE OR EVACUATION PLAN

HAZ-2 CONSTRUCTION AND OPERATIONS OF THE PROJECT COULD CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR ENVIRONMENT THROUGH INTERFERENCE WITH AN ADOPTED EMERGENCY RESPONSE OR EVACUATION PLAN.

Impact Analysis:

Original Northeast Pump Station

The City of Newport Beach Emergency Management Plan (EMP) is the only emergency response plan applicable to the project site. The EMP does not identify any specific requirements for the project site, nor is the site identified by the EMP as being part of an emergency evacuation route. Further, the proposed project would require a maximum of approximately 15 vehicle trips per week (including chemical deliveries) for OCSD staff to perform periodic maintenance and/or inspections of facilities and equipment. Thus, development of the proposed project would result in no new vehicle trips on the circulation system, since these vehicle trips are currently required for maintenance/inspection of the existing pump station and no new employees would be generated as part of the project. As such, the project would not result in any long-term operational impacts to an emergency response or evacuation plan.

The pump station and force main improvements would require designated work areas and partial lane closures along East Coast Highway, West Coast Highway, Dover Drive, and Bayside Drive during the short-term construction process; refer to Exhibit 3-8, *Original Northeast Pump Station Work Areas*.

Although the project may require temporary partial lane closures during project construction activities, all roadways would remain open to traffic at all times. As such, project operations would not obstruct traffic flow or emergency operations, and emergency vehicle access would be similar to existing conditions. In addition, Mitigation Measure TRA-1 would require that emergency access be maintained and that at least three business days before any off-site roadway improvements, the construction contractor must notify the City of Newport Beach Public Works Department and Caltrans, of construction activities that could impede movement (such as lane closures) along roadways, to allow for uninterrupted emergency access. Thus, upon implementation of Mitigation Measure TRA-1, the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and less than significant impacts would occur in this regard.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. A less than significant impact would occur with implementation of Mitigation Measure TRA-1.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. A less than significant impact would occur with implementation of Mitigation Measure TRA-1.

Mitigation Measures: Refer to Mitigation Measure TRA-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.7.5 CUMULATIVE IMPACTS

The cumulative impacts discussed below rely upon the list of cumulative development projects in Table 4-1, *Cumulative Projects List*, of Section 4.0, *Basis of Cumulative Analysis*. The analysis below discloses the cumulative impacts from those projects listed in Table 4-1, and the proposed project's contribution to that cumulative impact. The nearest cumulative projects to the project site in Table 4-1 are the Back Bay Landing project (which is within the project site), Balboa Marina West Expansion project (which adjoins the project site to the south), and Bay Crossing Water Main Replacement project (south of the East Coast Highway/Newport Bay Bridge); refer to Exhibit 4-1, *Cumulative Project Locations*.

THE PROPOSED PROJECT COULD CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR ENVIRONMENT THROUGH THE ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIALS, OR ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS.

THE PROPOSED PROJECT COULD CREATE A SIGNIFICANT HAZARD TO THE PUBLIC OR ENVIRONMENT THROUGH INTERFERENCE WITH AN ADOPTED EMERGENCY RESPONSE OR EVACUATION PLAN.

Impact Analysis:

Original Northeast Pump Station

Cumulative projects are not anticipated to result in a cumulatively considerable hazardous materials impact. As discussed above, with implementation of the recommended Mitigation Measures HAZ-1 through HAZ-4, implementation of the proposed project would not result in significant impacts involving hazards and hazardous materials. Other cumulative projects could result in the increase in handling of hazardous materials, potential for accidental conditions, or an increase in the transport of hazardous materials, particularly during site disturbance/ demolition/remedial activities. However, with compliance with the DTSC, OCHCA, CalEPA, Cal/OSHA, and NBFD laws and regulations, these impacts would be minimized. Compliance with all applicable Federal and State laws and regulations related to the handling of hazardous materials would reduce the likelihood and severity of accidents, thereby ensuring that a less than significant cumulative impacts result. As a result, the proposed project's incremental effect in terms of creating hazards to the public or environment through the transport, use, disposal, or accidental release of hazardous materials would be less than cumulatively considerable..

The proposed project was determined to have less than significant impact with regard to interfering with an emergency evacuation plan, as lane closures during construction would be short-term and would allow for emergency vehicles to access all roadways in the vicinity of the project site without disruption with compliance with Mitigation Measure TRA-1. Cumulative projects in the area would be analyzed for impairment of emergency access vehicles and consistency with the EMP on a project-by-project basis, and would be required to comply with all City roadway design standards to ensure adequate emergency access is not impacted. Therefore, the proposed project's incremental effect would not be cumulatively considerable with regard to interfering with an emergency plan with implementation of recommended mitigation.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. A less than significant impact would occur with implementation of Mitigation Measures HAZ-1 through HAZ-4 and TRA-1.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. A less than significant impact would occur with implementation of Mitigation Measures HAZ-1 through HAZ-4 and TRA-1.

Mitigation Measures: Refer to Mitigation Measures HAZ-1 through HAZ-4 and TRA-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.7.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts related to hazards and hazardous materials have been identified following implementation of the recommended mitigation measures.

5.8 HYDROLOGY AND WATER QUALITY

This section analyzes potential project impacts on existing drainage patterns, surface hydrology, and water quality. Where necessary, mitigation measures are recommended to avoid or reduce potential impacts to a less than significant level. Information in this section is based primarily on the City's General Plan EIR and the *Back Bay Landing Final Environmental Impact Report* (Back Bay Landing EIR), prepared by the City of Newport Beach, February 2014.

5.8.1 EXISTING SETTING

REGIONAL HYDROLOGY AND DRAINAGE CONDITIONS

According to the General Plan EIR, climate in Newport Beach is Mediterranean, characterized by warm summers, cool winters, and markedly seasonal rainfall. Nearly all rain falls from late autumn to early spring; virtually no precipitation falls during the summer. The average annual rainfall in Newport Beach is approximately 12 inches. Potential evapotranspiration in the region exceeds precipitation on an annual basis, and, under natural conditions, the lower reaches of rivers that drain the watersheds are dry during the summer.

The City is located within the boundaries of four watersheds, each of which contain an interconnected system of surface water resources that feed into the underlying groundwater or drain into the ocean. These watersheds include Newport Bay, Newport Coast, Talbert, and San Diego Creek Watersheds. Both the Newport Bay and Newport Coast Watersheds cover most of the area, with the remaining smaller portions covered by the Talbert and San Diego Creek Watersheds.

The project area is situated within the Newport Bay Watershed. The Newport Bay Watershed covers 13.2 square miles along the coast of central Orange County. This watershed encompasses most of the western portion of the City in addition to the eastern portion of Costa Mesa. The East Costa Mesa, Santa Isabel, and other smaller channels of this watershed drain into Newport Bay.

Regional Drainage and Runoff

The City can be divided into three geographic areas: (1) a low elevation area comprised of Banning Ranch, West Newport, Balboa Peninsula, and Newport Bay, (2) elevated marine terrace areas that include Newport Heights and Westcliff, and (3) high relief terrain of the San Joaquin Hills in the southeastern portion of the City. The low elevation and terrace areas (which encompass the project area) are generally drained by urbanized and relatively low relief streams that empty into Newport Bay, and the rugged natural streams with steeper gradients drain the Newport Ridge and Newport Coast areas.

The City has over 30 miles of bay and ocean waterfront. Over 63 percent of the City is in the coastal zone. Surface water resources such as freshwater wetlands, estuaries, tideland and submerged lands, reservoirs, and waterways are located within the City. Upper Newport Bay extends south of the Corona del Mar Freeway (SR-73) to the Pacific Ocean, dividing the City into east and west sides. This bay area makes up many of the tidelands and submerged lands in the City, and connects with the estuary waters south of it, including Newport Dunes, Lido Channel, and Newport Bay Channel. An additional estuary is also located in the northern portion of the City, east of Upper Newport Bay and

south of SR-73. Small amounts of freshwater wetlands are scattered throughout the central portion of the City east of Upper Newport Bay and North Star Beach.

The City contains two above-ground reservoirs: Big Canyon and San Joaquin Reservoirs, which are generally located in the eastern portion of the City. Big Canyon Reservoir is located within a quarter mile north of San Joaquin Hills Road and San Joaquin Reservoir is located approximately 0.75 miles northeast of Big Canyon Reservoir. The main tributaries within the City are the Santa Ana River, San Diego Creek, and Big Canyon Wash.

Existing Regional Drainage Infrastructure

Generally, the City provides storm drain service to the entire City. Orange County Public Works (OCPW) maintains the regional drainage facilities in the City, including the Santa Ana River and San Diego Creek.

The existing storm drain system owned and operated by the City consists of pipelines, catch basins, manholes, tide valves, open channels, and retention basins located throughout the system. Pipelines range from three to 120 inches in diameter, and are constructed of materials such as reinforced concrete, corrugated metal, plastic, ductile iron, steel, clay, and asbestos cement. Some segments of the system are over 50 years old, while other segments have been recently constructed.

The City's storm drain system also includes retarding basins. These include the Koll Center retarding basin, located north of SR-73, the Farallon/El Paseo retarding basin, located between Avocado Street and MacArthur Boulevard, near Fashion Island, and the Harbor View retarding basin, located between Corona del Mar and San Joaquin Hills Road. The purpose of these retarding basins is to reduce the flow rate within the respective downstream storm drain systems so that older, possibly undersized, downstream facilities are able to carry the discharge from new development areas upstream.

PROJECT SITE HYDROLOGY AND DRAINAGE CONDITIONS

According to the Back Bay Landing EIR, the project site is specifically located within the Lower Newport Bay sub-area watershed. The existing and proposed pump station sites consist of RV storage facilities, which are completely paved and impervious. Proposed temporary excavation areas (for proposed conveyance facilities) include paved areas associated with West Coast Highway, East Coast Highway, and Bayside Drive right-of-way.

Under existing conditions, runoff from the site generally flows in varying directions towards the Newport Bay Channel or surrounding roadways into the City's storm drain system. At the existing/proposed pump station site, runoff combines with existing off-site flows emanating from East Coast Highway and Bayside Drive, which are then conveyed to a local low point just adjacent to the existing sewer pump station. Based on the Back Bay Landing EIR, these flows are tied into an existing 30-inch storm drain within East Coast Highway that flows westerly through the project site before discharging into Upper Newport Bay.

EXISTING STORM WATER QUALITY CONDITIONS

Nonpoint Source Pollutants

A net effect of urbanization can be to increase pollutant export over naturally occurring conditions. The impact of the higher export affects the adjacent streams and also the downstream receiving waters. However, an important consideration in evaluating storm water quality is to assess whether the beneficial use to the receiving waters is impaired. Nonpoint source pollutants have been characterized by the following major categories in order to assist in determining the pertinent data and its use. Receiving waters can assimilate a limited quantity of various constituent elements; however, there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact. Standard water quality categories of typical urbanization impacts are:

- *Sediment*. Sediment is made up of tiny soil particles that are washed or blown into surface waters. It is the major pollutant by volume in surface water. Suspended soil particles can cause the water to look cloudy or turbid. The fine sediment particles also act as a vehicle to transport other pollutants, including nutrients, trace metals, and hydrocarbons. Construction sites are the largest source of sediment for urban areas under development. Another major source of sediment is streambank erosion, which may be accelerated by increases in peak rates and volumes of runoff due to urbanization.
- *Nutrients*. Nutrients are a major concern for surface water quality, especially phosphorous and nitrogen, which can cause algal blooms and excessive vegetative growth. Of the two, phosphorus is usually the limiting nutrient that controls the growth of algae in lakes. The orthophosphorous form of phosphorus is readily available for plant growth. The ammonium form of nitrogen can also have severe effects on surface water quality. The ammonium is converted to nitrate and nitrite forms of nitrogen in a process called nitrification. This process consumes large amounts of oxygen, which can impair the dissolved oxygen levels in water. The nitrate form of nitrogen is very soluble and is found naturally in low concentrations in water. When nitrogen fertilizer is applied to lawns or other areas in excess of plant needs, nitrates can leach below the root zone, eventually reaching ground water. Orthophosphate from auto emissions also contributes phosphorus in areas with heavy automobile traffic. As a general rule of thumb, nutrient export is greatest from development sites with the most impervious areas. Other problems resulting from excess nutrients are: 1) surface algal scums; 2) water discolorations; 3) odors; 4) toxic releases; 5) hypertrophication; and 6) overgrowth of plants. Common measures for nutrients are total nitrogen, organic nitrogen, total Kjeldahl nitrogen (TKN), nitrate, ammonia, total phosphate, and total organic carbon (TOC).
- *Trace Metals*. Trace metals are primarily a concern because of their toxic effects on aquatic life, and their potential to contaminate drinking water supplies. The most common trace metals found in urban runoff are lead, zinc, and copper. Fallout from automobile emissions is also a major source of lead in urban areas. A large fraction of the trace metals in urban runoff are attached to sediment; this effectively reduces the level of trace metals that is immediately available for biological uptake and subsequent bioaccumulation. Metals associated with sediment settle out rapidly and accumulate in the soils. Urban runoff events typically occur over a shorter duration, which reduces the aquatic environment's exposure to toxic trace metals. The toxicity of trace metals in runoff varies with the hardness of the receiving water.

As total hardness of the water increases, the threshold concentration levels for adverse effects also increases.

- *Oxygen-Demanding Substances*. Aquatic life is dependent on the dissolved oxygen in the water. When organic matter is consumed by microorganisms, dissolved oxygen is consumed in the process. A rainfall event can deposit large quantities of oxygen-demanding substances in lakes and streams. The biochemical oxygen demand (BOD) of typical urban runoff is on the same order of magnitude as the effluent from an effective secondary wastewater treatment plant. Problems can occur when the rate of oxygen-demanding material exceeds the rate of replenishment, resulting in low levels of dissolved oxygen (DO). Oxygen demand is estimated by direct measure of DO and indirect measures such as BOD, chemical oxygen demand (COD), oils and greases, and TOC.
- *Bacteria*. Bacteria levels in undiluted urban runoff exceed public health standards for water contact recreation almost without exception. Studies have found that total coliform counts exceeded the U.S. Environmental Protection Agency's (EPA) water quality criteria at almost every site and almost every time it rained. The coliform bacteria that are detected may not be a health risk by themselves, but are often associated with human pathogens.
- *Oil and Grease*. Oil and grease contain a wide variety of hydrocarbons, some of which could be toxic to aquatic life in low concentrations. These materials initially float on water and create the familiar rainbow-colored film. Hydrocarbons have a strong affinity for sediment and quickly become absorbed to it. The major source of hydrocarbons in urban runoff is through leakage of crankcase oil and other lubricating agents from automobiles. Hydrocarbon levels are highest in the runoff from parking lots, roads, and service stations. Residential land uses generate less hydrocarbon export, although illegal disposal of waste oil into storm water can be a local problem.
- *Other Toxic Chemicals*. Priority pollutants are generally related to hazardous wastes or toxic chemicals and can be sometimes detected in storm water. Priority pollutant scans have been conducted in previous studies of urban runoff, which evaluated the presence of over 120 toxic chemicals and compounds. The scans rarely revealed toxins that exceeded the current safety criteria. The urban run-off scans were primarily conducted in suburban areas not expected to have many sources of toxic pollutants (with the possible exception of illegally disposed or applied household hazardous wastes). Measures of priority pollutants in storm water include: 1) phthalate (plasticizer compound); 2) phenols and creosols (wood preservatives); 3) pesticides and herbicides; 4) oils and greases; and 5) metals.

PHYSICAL CHARACTERISTICS OF SURFACE WATER QUALITY

Standard parameters, which can assess the quality of storm water, provide a method of measuring impairment. A background of these typical characteristics assists in understanding water quality requirements. The quantity of a material in the environment and its characteristics determine the degree of availability as a pollutant in surface runoff. In an urban environment, the quantity of certain pollutants in the environment is a function of the intensity of the land use. For instance, a high level of automobile traffic makes many potential pollutants (such as lead and hydrocarbons) more available. The availability of a material, such as a fertilizer, is a function of the quantity and the manner in which it is applied. Applying fertilizer in quantities that exceed plant needs leaves the excess nutrients available for loss to surface or ground water.

The physical properties and chemical constituents of water traditionally have served as the primary means for monitoring and evaluating water quality. Evaluating the condition of water through a water quality standard refers to its physical, chemical, or biological characteristics. Water quality parameters for storm water comprise a long list and are classified in many ways. Typically, the concentration of an urban pollutant, rather than the annual load of that pollutant, is required to assess a water quality problem. Some of the physical, chemical, or biological characteristics used to evaluate the quality of the surface runoff are listed below.

- *Dissolved Oxygen*. DO in the water has a pronounced effect on the aquatic organisms and the chemical reactions that occur. It is one of the most important biological water quality characteristics in the aquatic environment. The DO concentration of a water body is determined by the solubility of oxygen, which is inversely related to water temperature, pressure, and biological activity. DO is a transient property that can fluctuate rapidly in time and space, and represents the status of the water system at a particular point and time of sampling. The decomposition of organic debris in water is a slow process, as are the resulting changes in oxygen status. The oxygen demand is an indication of the pollutant load and includes measurements of biochemical oxygen demand or chemical oxygen demand.
- *Biochemical Oxygen Demand*. The BOD is an index of the oxygen-demanding properties of the biodegradable material in the water. Samples are taken from the field and incubated in the laboratory at 20°C, after which the residual dissolved oxygen is measured. The BOD value commonly referenced is the standard 5-day values. These values are useful in assessing stream pollution loads and for comparison purposes.
- *Chemical Oxygen Demand*. The COD is a measure of the pollutant loading in terms of complete chemical oxidation using strong oxidizing agents. It can be determined quickly because it does not rely on bacteriological actions as with BOD. COD does not necessarily provide a good index of oxygen demanding properties in natural waters.
- *Total Dissolved Solids*. Total dissolved solids (TDS) concentration is determined by evaporation of a filtered sample to obtain residue whose weight is divided by the sample volume. The TDS of natural waters varies widely. There are several reasons why TDS is an important indicator of water quality. Dissolved solids affect the ionic bonding strength related to other pollutants such as metals in the water. TDS are also a major determinant of aquatic habitat. TDS affects saturation concentration of dissolved oxygen and influences the ability of a water body to assimilate wastes. Eutrophication rates depend on TDS.
- *pH*. The pH of water is the negative log, base 10, of the hydrogen ion (H^+) activity. A pH of 7 is neutral; a pH greater than 7 indicates alkaline water; a pH less than 7 represents acidic water. In natural water, carbon dioxide reactions are some of the most important in establishing pH. The pH at any one time is an indication of the balance of chemical equilibrium in water and affects the availability of certain chemicals or nutrients in water for uptake by plants. The pH of water directly affects fish and other aquatic life; generally, toxic limits are pH values less than 4.8 and greater than 9.2.
- *Alkalinity*. Alkalinity is the opposite of acidity, representing the capacity of water to neutralize acid. Alkalinity is also linked to pH and is caused by the presence of carbonate, bicarbonate, and hydroxide, which are formed when carbon dioxide is dissolved. A high alkalinity is associated with a high pH and excessive solids. Most streams have alkalinities less than 200

milligrams per liter (mg/l). Ranges of alkalinity of 100-200 mg/l seem to support well-diversified aquatic life.

- *Specific Conductance*. The specific conductivity of water, or its ability to conduct an electric current, is related to the total dissolved ionic solids. Long term monitoring of project waters can develop a relationship between specific conductivity and TDS. Its measurement is quick and inexpensive and can be used to approximate TDS. Specific conductivities in excess of 2000 microohms per centimeter (µohms/cm) indicate a TDS level too high for most freshwater fish.
- *Turbidity*. The clarity of water is an important indicator of water quality that relates to the ability of photosynthetic light to penetrate a body of water. Turbidity measures a water sample's ability to scatter or absorb light. Turbidity is caused by suspended clays and other organic particles. It can be used as an indicator of certain water quality constituents, such as predicting sediment concentrations.
- *Nitrogen*. Sources of nitrogen in storm water are from the additions of organic matter to water bodies or chemical additions. Ammonia and nitrate are important nutrients for the growth of algae and other plants. Excessive nitrogen can lead to eutrophication since nitrification consumes dissolved oxygen in the water. Nitrogen occurs in many forms. Organic nitrogen breaks down into ammonia, which eventually becomes oxidized to nitrate-nitrogen, a form available for plants. High concentrations of nitrate-nitrogen (N/N) in water can stimulate growth of algae and other aquatic plants, but if phosphorus (P) is present, only about 0.30 mg/l of nitrate-nitrogen is needed for algal blooms. Some fish life can be affected when nitrate-nitrogen exceeds 4.2 mg/l. There are several ways to measure the various forms of aquatic nitrogen. Typical measurements of nitrogen include Kjeldahl nitrogen (organic nitrogen plus ammonia), ammonia, nitrite plus nitrate, nitrite, and nitrogen in plants. The principal water quality criterion for nitrogen focuses on nitrate and ammonia.
- *Phosphorus*. Phosphorus is an important component of organic matter. In many water bodies, phosphorus is the limiting nutrient that prevents additional biological activity from occurring. The origin of this constituent in urban storm water discharge is generally from fertilizers and other industrial products. Orthophosphate is soluble and is considered the only biologically available form of phosphorus. Since phosphorus strongly associates with solid particles and is a significant part of organic material, sediments influence concentration in water and are an important component of the phosphorus cycle in streams. Important methods of measurement include detecting orthophosphate and total phosphorus.

Existing Storm Water Quality Conditions

Both Upper Newport Bay and Lower Newport Bay are classified as impaired water bodies and have been placed on the 303(d) list of impaired waters for the following pollutants: chlordane, copper, dichlorodiphenyltrichloroethane (DDT), indicator bacteria, metals, nutrients, polychlorinated biphenyls (PCBs), pesticides, and sediment toxicity, and sedimentation/siltation for Upper Newport Bay only.[1]

[1] State Water Resources Control Board, *Final 2012 California Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report)*, http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml, accessed on March 25, 2019.

The Santa Ana Regional Water Quality Control Board (RWQCB) has set Total Maximum Daily Loads (TMDLs) for nutrients, pathogens, pesticides, and sedimentation/siltation. A TMDL sets a limit for the total amount of a particular pollutant that can be discharged to a waterbody per day, such that the pollutant loads from all sources would not impair the designated beneficial uses of the waterbody. The timeframe for compliance with TMDL targets varies, with some deadlines set many years into the future. TMDLs often include a compliance schedule, identifying interim and final targets.

The project site is currently occupied by the existing pump station and RV storage facilities. Existing uses at the site are anticipated to generate suspended solids/sediments, heavy metals, pathogens, oil and grease, toxic organic compounds, and trash and debris.

Beneficial Uses

The Santa Ana RWQCB adopted the *Water Quality Control Plan for the Santa Ana River Basin* (Basin Plan), dated January 24, 1995 and updated in February 2008 and February 2016, which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems. The Basin Plan identifies beneficial uses for waters within the Santa Ana Region. A beneficial use is one of the various ways that water can be used for the benefit of people and/or wildlife. Although more than one beneficial use may be identified for a given waterbody, the most sensitive use must be protected. The Basin Plan identifies the following beneficial uses for Newport Bay:

Upper Newport Bay

- REC1 – Water contact recreation;
- REC2 – Non-contact water recreation;
- COMM – Commercial and sportfishing;
- BIOL – Biological significance;
- WILD – Wildlife habitat;
- RARE – Rare, threatened, and endangered species;
- SPWN – Spawning, reproduction, and development;
- MAR – Marine habitat;
- SHEL – Shellfish harvesting; and
- EST – Estuarine habitat.

Lower Newport Bay

- NAV – Navigation;
- REC1 – Water contact recreation;
- REC2 – Non-contact water recreation;
- COMM – Commercial and sportfishing;
- WILD – Wildlife habitat;
- RARE – Rare, threatened, and endangered species;
- SPWN – Spawning, reproduction, and development;
- MAR – Marine habitat; and
- SHEL – Shellfish harvesting.

Environmentally Sensitive Areas

Per the Basin Plan, Upper Newport Bay is identified as an area designated for preservation of biological habitats of special significance. However, no Basin Plan-designated Areas of Special Biological Significance are located in the vicinity of the project site. According to the Back Bay Landing EIR, the nearest Basin Plan-identified Areas of Special Biological Significance include the Irvine Coast Marine Life Refuge Areas of Special Biological Significance, located offshore and about seven miles south, and the Newport Beach Marine Life Refuge, also offshore and about five miles to the south.

5.8.2 REGULATORY SETTING

This section discusses the Federal, State, and local drainage policies and requirements applicable to the project site.

FEDERAL

Federal Clean Water Act (Section 404)

The project would be subject to Federal permit requirements under the Federal Clean Water Act (CWA). The CWA requires that the discharge of pollutants to "Waters of the U.S." from any point source be effectively prohibited, unless the discharge complies with a National Pollutant Discharge Elimination System (NPDES) Permit. Under the NPDES permit program, the EPA established regulations for discharging storm water by municipal and industrial facilities and construction activities.

The NPDES permit is broken up into two Phases: I and II. Phase I requires medium and large cities, or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their storm water discharges. Phase II requires regulated small Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their storm water discharges. Polluted storm water runoff is commonly transported through MS4s. This runoff is often untreated and discharged into local water bodies.

Federal Antidegradation Policy

The Federal Antidegradation Policy was released in 1968 and was included in the EPA's first Water Quality Standards Regulation. The Antidegradation Policy represents a three-tiered approach to maintaining and protecting water quality. First, all existing beneficial uses and levels of water quality necessary to protect those uses must be preserved and protected from degradation. Second, water quality must be protected in areas where the quality cannot support the propagation of fish, shellfish, and wildlife and recreation ("fishable/swimmable"). Third, the policy provides special protection of waters for which the ordinary water quality criteria are not sufficient. These waters are called "Outstanding National Resources Waters" and have been designated as unique or ecologically sensitive.

If an activity is going to be allowed to degrade or lower water quality (in situations where existing water quality is higher than that needed to maintain established beneficial uses), the Antidegradation Policy requires that proposed projects meet the criteria below:

- The activity is necessary to accommodate important economic or social development in the area.
- Water quality is adequate to protect and fully maintain existing beneficial uses.

STATE

California Porter-Cologne Act

The CWA places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although it does establish certain guidelines for the states to follow in developing their programs and allows the EPA to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resources Control Board (SWRCB) and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its state water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

California Toxics Rule

The California Toxics Rule (40 CFR 131.38) is an EPA-issued federal regulation that provides water quality criteria for potentially toxic constituents in California surface waters with designated uses related to human health or aquatic life. The rule fills a gap in California water quality standards that was created in 1994 when a State court overturned the State's water quality control plans containing water quality criteria for priority toxic pollutants. These Federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the Clean Water Act.

The California Toxics Rule establishes two types of aquatic life criteria: (1) acute criteria represent the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without harmful effects, and (2) chronic criteria equal the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects. Due to the intermittent nature of storm water runoff (especially in Southern California), the acute criteria are considered to be more applicable to storm water conditions than chronic criteria.

State Antidegradation Policy

Under the State's Antidegradation Policy (as set forth in SWRCB Resolution No. 68-16), whenever the existing quality of waters is better than what is needed to protect present and future beneficial uses, such existing quality must be maintained. This State policy has been adopted as a water quality objective in all the State's Basin Plans. The State policy establishes a two-step process to determine if discharges with the potential to degrade the water quality of surface or groundwater would be allowed.

The first step requires that, where a discharge would degrade high-quality water, the discharge may be allowed only if any change in water quality would:

- Be consistent with the maximum benefit to the people of the State;
- Not reasonably affect present and anticipated beneficial uses of such water; and
- Result in water quality that is not less than that which is prescribed in State policies (i.e., Basin Plans).

The second step (as set forth in SWRCB Resolution No. 68-16) states that any activity resulting in discharge to high-quality waters is required to use the best practicable treatment or control of the discharge necessary to avoid the occurrence of pollution or nuisance and to maintain the "highest water quality consistent with the maximum benefit to the people of the state." The State policy applies to both surface and groundwater, as well as to both existing and potential beneficial uses of the applicable waters.

State Water Resources Control Board

The SWRCB administers water rights, water pollution control, and water quality functions throughout the State, while the RWQCBs conduct planning, permitting, and enforcement activities. For the proposed project, the NPDES permit is divided into two parts: construction and post-construction. The construction permitting is administered by the SWRCB, while the post-construction permitting is administered by the RWQCB.

Development projects typically result in the disturbance of soil that requires compliance with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ [as amended by 2010-0014-DWQ and 2012-006-DWQ], NPDES Number CAS000002). This Statewide General Construction permit regulates discharges from construction sites that disturb one or more acres of soil. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation results in soil disturbance of at least one acre of total land area must comply with the provisions of this NPDES Permit, and develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). The project applicant must submit a Notice of Intent (NOI) to the SWRCB, to be covered by the NPDES General Permit, and prepare the SWPPP before beginning construction. Implementation of the plan starts with the commencement of construction and continues through the completion of the project. Upon completion of the project, the applicant must submit a Notice of Termination (NOT) to the SWRCB to indicate that construction is completed.

Water Quality Control Plan for Ocean Waters Of California

The *Water Quality Control Plan for Ocean Waters of California* (Ocean Plan), dated 2015, establishes beneficial uses and water quality objectives for waters of the Pacific Ocean along the California coast outside enclosed bays, estuaries, and coastal lagoons. The Ocean Plan establishes water quality objectives, discharge prohibitions, and management guidelines for safeguarding the Pacific Ocean's water quality.

California Coastal Commission

The California Coastal Commission (CCC) was established by voter initiative in 1972 (Proposition 20) and later made permanent by the Legislature through adoption of the California Coastal Act of 1976. The CCC, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Act to include (among others) construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the CCC or the local government. A Coastal Development Permit (CDP) would be required prior to any construction activities within the project site since it is located within the coastal zone.

REGIONAL

Santa Ana Regional Water Quality Control Board

The SWRCB oversees the nine RWQCBs in the state of California. The City of Newport Beach is within the jurisdictional boundaries of the Santa Ana RWQCB (Region 8). The NPDES Municipal Separate Stormwater Sewer Systems (MS4) permit program is administered by the RWQCB, which develops and enforces water quality objectives and implementation plans that safeguard the quality of water resources in its region. Its duties include developing "basin plans" for its hydrologic area, issuing waste discharge requirements, taking enforcement action against violators, and monitoring water quality.

To prevent harmful pollutants from being washed or dumped into MS4s, facilities must comply with the NPDES permit and develop a storm water management program (SWMP). The goal of the SWMP is to reduce the contamination of storm water runoff and prohibit illicit discharges.

Water Quality Control Plan for the Santa Ana River Basin

As indicated above, the project site is located within the Santa Ana RWQCB's jurisdiction. The Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) designates beneficial uses and water quality objectives for water bodies in the region. Narrative water quality criteria contained in the Basin Plan cover a range of both organic and inorganic constituents for both surface and groundwater; the Basin Plan prohibits the degradation of water quality in a manner that would adversely impact a water body's designated beneficial uses. The Basin Plan incorporates applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

For certain designated surface water bodies and groundwater management zones, specific numeric water quality objectives have been established for a range of contaminants. These water quality criteria

apply within receiving waters and do not apply directly to runoff. Within the project area, there are no water bodies (or groundwater management zones) for which numeric objectives have been established.

The Santa Ana RWQCB defines a beneficial use for surface waters in the region as "one of the various ways that water can be used for the benefit of people and/or wildlife." Beneficial uses, along with specific water quality criteria, comprise water quality standards for surface (navigable) waters as defined by Section 303 of the Federal Clean Water Act (33 United States Code [USC] Section 1313). Under the Porter-Cologne Water Quality Control Act (California Water Code Sections 13050 et seq.), these concepts are separately considered as beneficial uses and water quality objectives. Beneficial uses and water quality objectives are to be established for all "Waters of the State," both surface and subsurface groundwater.

Non-Point Source Pollution Control Program

The purpose of the Non-Point Source Pollution (NPS) Control Program (NPS Program Plan) is to improve the State's ability to effectively manage NPS pollution and conform to the requirements of the CWA and the Federal Coastal Zone Act Reauthorization Amendments of 1990. These documents were developed by staff of the SWRCB's Division of Water Quality and the CCC, in coordination with the RWQCBs and staff from over 20 other State agencies.

General Waste Discharge Requirements for Insignificant Threats to Surface Waters

The Santa Ana RWQCB issued Order No. RS-2015-0004 and updates to NPDES Permit No. CAG998001 (Dewatering Permit) to regulate the discharge of dewatering wastes from construction, subterranean seepage, and other similar types of discharges that pose an insignificant (de minimis) threat to water quality within the covered jurisdictions. Effective on July 1, 2015, this order supersedes Order No. RS-2009-0003 and applies to projects located within the City of Newport Beach. To obtain regulatory coverage under this order, an applicant must submit an NOI at least 45 days prior to discharge and basic information needed to characterize the dewatering discharge including a list of potential pollutants, maximum flow rates, and proposed treatment systems. A standard monitoring and reporting program is included as part of the permit.

Orange County Public Works

The specific water pollutant control elements of the Orange County Stormwater Program are documented in the *2003 Drainage Area Management Plan* (DAMP). The Orange County Stormwater Program is a municipal regulatory compliance initiative focused on the management and protection of Orange County's streams, rivers, creeks, and coastal waters.

The Orange County DAMP is the Permittees' (County of Orange, the Orange County Flood Control District, and the incorporated cities of Orange County) primary policy, planning, and implementation document for municipal NPDES Stormwater Permit compliance. The focus of the DAMP is addressing the impacts of urban runoff on water quality.

Fourth Term Permits were adopted in the Santa Ana Region (Permit No. CAS618030, Order No. R8-2009-0030, amended by Order R8-2010-0062) in 2009. In response, an updated *Exhibit 7.II - Model Water Quality Management Plan* (Model WQMP) along with a Technical Guidance Document (TGD),

dated May 19, 2011, were prepared. The Model WQMP and TGD were approved by the Santa Ana Regional Board on May 19, 2011.

The Orange County Permittees submitted a Report of Waste Discharge on October 3, 2013 to apply for a Fifth Term Permit. Upon issuance of the Fifth Term Permit, the DAMP will be updated and new programs developed as required.

LOCAL

City of Newport Beach General Plan

City policies pertaining to hydrology and water quality are contained in the Natural Resources and Safety Elements of the General Plan. These policies include the following:

Natural Resources Element

Policies:

NR 3.4 *Storm Drain Sewer System Permit:* Require all development to comply with the regulations under the City's municipal separate storm drain system permit under the National Pollutant Discharge Elimination System.

NR 3.5 *Natural Water Bodies:* Require that development not result in the degradation of natural water bodies.

NR 3.9 *Water Quality Management Plan:* Require new development applications to include a Water Quality Management Plan (WQMP) to minimize runoff from rainfall events during construction and post-construction.

NR 3.10 *Best Management Practices:* Implement and improve upon Best Management Practices (BMPs) for residences, businesses, development projects, and City operations.

NR 3.11 *Site Design and Source Control:* Include site design and source control BMPs in all developments. When the combination of site design and source control BMPs are not sufficient to protect water quality as required by the National Pollutant Discharge Elimination System (NPDES), structural treatment BMPs will be implemented along with site design and source control measures.

NR 3.12 *Reduction of Infiltration:* Include equivalent BMPs that do not require infiltration, where infiltration of runoff would exacerbate geologic hazards.

NR 3.17 *Parking Lots and Rights-of-Way:* Require that parking lots and public and private rights-of-way be maintained and cleaned frequently to remove debris and contaminated residue.

NR 3.19 *Natural Drainage Systems:* Require incorporation of natural drainage systems and storm water detention facilities into new developments, where appropriate and feasible, to retain storm water and increase groundwater recharge.

NR 3.20 *Impervious Surfaces:* Require new development and public improvements to minimize the creation of and increases in impervious surfaces, especially directly connected impervious areas, to the maximum extent practicable. Require redevelopment to increase area of pervious surfaces, where feasible.

Newport Beach Local Coastal Program Land Use Plan

The City of Newport Beach Local Coastal Program Coastal Land Use Plan (CLUP) sets forth goals, objectives, and policies that govern the use of land and water in the City of Newport Beach's coastal zone and Sphere of Influence (SOI), with the exception of Newport Coast and Banning Ranch. The following policies related to hydrology and water quality issues may be applicable to the proposed project.

- Review all applications for new development to determine potential threats from coastal and other hazards. (2.8.1-1)
- Design and site new development to avoid hazardous areas and minimize risks to life and property from coastal and other hazards. (2.8.1-2)
- Require new development to provide adequate drainage and erosion control facilities that convey site drainage in a non-erosive manner in order to minimize hazards resulting from increased runoff, erosion and other hydrologic impacts to streams. (2.8.7-2)
- Promote pollution prevention and elimination methods that minimize the introduction of pollutants into coastal waters, as well as the generation and impacts of dry weather and polluted runoff. (4.3.2-1)
- Require that development not result in the degradation of coastal waters (including the ocean, estuaries and lakes) caused by changes to the hydrologic landscape. (4.3.2-2)
- Continue to update and enforce the Newport Beach Water Quality Ordinance consistent with the MS4 Permit. (4.3.2-4)
- Implement and improve upon best management practices (BMPs) for residences, businesses, new development and significant redevelopment, and City operations. (4.3.2-6)
- Incorporate BMPs into the project design in the following progression:
  - Site Design BMPs.
  - Source Control BMPs.
  - Treatment Control BMPs.

  Include site design and source control BMPs in all developments. When the combination of site design and source control BMPs are not sufficient to protect water quality as required by the LCP or Coastal Act, structural treatment BMPs will be implemented along with site design and source control measures. (4.3.2-7)

- To the maximum extent practicable, runoff should be retained on private property to prevent the transport of bacteria, pesticides, fertilizers, pet waste, oil, engine coolant, gasoline, hydrocarbons, brake dust, tire residue, and other pollutants into recreational waters. (4.3.2-8)

- To the maximum extent practicable, limit the use of curb drains to avoid conveying runoff directly to the City's street drainage system without the benefit of absorption by permeable surfaces and natural treatments such as landscaped areas and planters. (4.3.2-9)
- Require new development to minimize the creation of and increases in impervious surfaces, especially directly connected impervious areas, to the maximum extent practicable. Require redevelopment to increase area of pervious surfaces, where feasible. (4.3.2-11)
- Require development to protect the absorption, purification, and retention functions of natural drainage systems that exist on the site, to the maximum extent practicable. Where feasible, design drainage and project plans to complement and utilize existing drainage patterns and systems, conveying drainage from the developed area of the site in a non-erosive manner. Disturbed or degraded natural drainage systems should be restored, where feasible. (4.3.2-12)
- Whenever possible, divert runoff through planted areas or sumps that recharge the groundwater dry wells and use the natural filtration properties of the earth to prevent the transport of harmful materials directly into receiving waters. (4.3.2-14)
- Where infiltration of runoff would exacerbate geologic hazards, include equivalent BMPs that do not require infiltration. (4.3.2-15)
- Condition coastal development permits to require the City, property owners, or homeowners associations, as applicable, to sweep permitted parking lots and public and private streets frequently to remove debris and contaminated residue. (4.3.2-18)
- Require parking lots and vehicle traffic areas to incorporate BMPs designed to prevent or minimize runoff of oils and grease, car battery acid, coolant, gasoline, sediments, trash, and other pollutants to receiving waters. (4.3.2-19)
- Require commercial development to incorporate BMPs designed to prevent or minimize the runoff of pollutants from structures, landscaping, parking areas, loading and unloading dock areas, repair and maintenance bays, and vehicle/equipment wash areas. (4.3.2-20)
- Require new development applications to include a Water Quality Management Plan (WQMP). The WQMP's purpose is to minimize to the maximum extent practicable dry weather runoff, runoff from small storms (less than ¾" of rain falling over a 24-hour period) and the concentration of pollutants in such runoff during construction and post-construction from the property. (4.3.2-23)

Newport Beach City Council Policies

Council Policy L-18 – Protection of Water Quality:

Drainage – Public Rights-Of-Way

A. Curb Drains. Curb drains have been utilized as a means of draining sump areas and roof drains within a property by conveying flows via subsurface piping systems to the curb gutter. Curb drains typically convey runoff directly to the City's street drainage system without the benefit of absorption by permeable surfaces and natural treatments such as landscaped areas and planters. Whenever possible, runoff shall be diverted through planted areas or sumps that recharge the groundwater. The use of permeable surfaces affords the opportunity to use the natural filtration properties of the earth to

prevent the transport of harmful pollutants directly to our water resources. The use of curb drains to drain private residential and commercial property shall only be permitted as follows:

1. New Development/Redevelopment – See Policy L-22.

2. Reconstruction or Grading of Existing Properties – The grading/drainage for additions and/or modifications to existing properties including the construction of patios, decks, roof drains, downspouts, gutters or substantial grading remodel (grading affecting over 50 percent of the existing yard/setback areas that alter existing drainage patterns) shall be designed to retain and/or direct urban runoff into planted/permeable areas. Curb drains and subsurface piping shall be permitted for secondary or overflow of hardscape or planted areas to prevent dwellings from flooding due to significant (defined for this Policy as more than ¾" of rain in any 24-hour period) storm events only. Curb drains may be permitted to correct existing drainage problems on a case-by-case basis after all reasonable alternatives are explored. Curb drains, when approved, shall have a French drain system of perforated pipe and gravel unless site-specific circumstances endanger public safety so as to prohibit its use as determined by the Public Works Director.

B. Parkway Permeability. The City's parkway areas represent the last opportunity to retain and allow urban runoff to percolate into the earth before entering the City's street drainage system. Non-sidewalk areas within the City's parkway areas (defined as the area between the curb and the street right of way/property line) shall utilize permeable surfaces that permit the percolation of urban runoff. Non-permeable parkway surfacing within the area between the street curb and sidewalk for decorative (non-pedestrian) purposes, installed at grade, not to exceed 25 percent of the parkway area (between back of curb and sidewalk) less driveways when installed in conjunction with landscaping, irrigation, and street trees is permitted in accordance with Council Policy L-6. Decorative materials include colored, stamped, and patterned concrete; brick, pavers, and stone masonry, pavers, flat stone, and brick set in sand; and other materials as approved by the Public Works Department.

C. Down Slope Drains. Wherever practical, private property drainage shall be diverted away from bluffs or steep slopes (2:1 slopes or greater). The design shall include:

1. Hydrological and hydraulic calculations in conformance with the latest edition of the Orange County Drainage Design Manual;

2. Subsurface piping system utilizing approved piping materials which incorporate sealed joints;

3. The drainage system shall have a French drain system of perforated pipe and gravel, or similar device to percolate low flow urban runoff unless site-specific circumstances endanger public safety or improvements so as to prohibit its use as determined by the Public Works Director and/or the project soils engineer does not allow percolation; and

4. Any permitted flow shall not create continuous standing water within City street gutters, pose a hazard to safe motor vehicle or pedestrian use, or create a nuisance such as odor or algae growth. The property owner will accept responsibility to maintain the slope drainage facility and will execute a non-standard permit agreement with the City. The City reserves the right to revoke this agreement at any time for non-compliance.

D. Sump Pump discharges into the public right of way. Permanent sump pump discharges shall be permitted as follows:

1. Permitted sump pump discharges shall be filtered and piped directly to the City's storm drain system. Connections to the city's storm drain shall be in accordance with City standards and executed under a valid encroachment permit from the Public Works Department.

2. The permittee and the City have executed a non-standard permit agreement which authorizes the City to revoke the permit at any time for non-compliance.

3. Discharges from permanently installed sump pumps of basement garage spaces (areas with motor vehicle storage) shall not be permitted within the public right of way.

4. Storage areas and living areas below natural grade as permitted by the Building Division may discharge sump pump flow into the City's street drainage system provided that:

    - The property owner show evidence of all approved permits as required by the Regional Water Quality Control Board and other jurisdictional agencies;

    - The discharge flow must not be continuous and be shown to be less than five (5) gallons per day; and

    - The permitted flow shall not create continuous standing water within City street gutters, pose a hazard to safe motor vehicle or pedestrian use, or create a nuisance such as odor or algae growth.

E. Construction Dewatering. Construction dewatering as permitted by the Building Division may discharge pump flow into the City's street drainage system provided that:

1. The property owner show evidence of all approved permits as required by the Regional Board and other jurisdictional agencies;

2. The permitted flow shall not create continuous standing water within City street gutters, pose a hazard to safe motor vehicle or pedestrian use, or create a nuisance such as odor or algae growth; and

3. An encroachment permit is executed in accordance with City Council Policy L-6, including authorization for the City to revoke this permit at any time for non-compliance.

Council Policy L-22 – Protection of Water Quality:

Water Quality Management Plans for New Development and Redevelopment

New development or redevelopment, as defined in the model Water Quality Management Plan (WQMP), presents the City and the public with the opportunity to reduce the impacts of runoff that would otherwise drain to the City's street drainage system and our harbors, bays, and ocean. At the time of submittal of an application for a new development or redevelopment project, an applicant shall submit a WQMP to the City. The WQMP's purpose is to minimize to the maximum extent practicable dry weather runoff and runoff from small storms (less than ¾" of rain falling over a 24-hour period) during construction and post-construction from the property. The following are components of any WQMP:

A. Design Elements - All Development Types. Each applicant's WQMP shall attempt to infiltrate or treat projected runoff for the new development by an amount equal to or greater than the volume of runoff produced from a storm event through incorporation of design elements that address one or more of the goals set forth below. The design elements utilized by an applicant may, but are not required to, include those provided on the list below so long as the required projected runoff infiltration or treatment is achieved:

1. Maximize permeable areas to allow more percolation of runoff into the ground through such means as biofilters, green strips, landscaped swales, planters, and other retention/ percolation devices as approved. The use of permeable materials in lieu of or to replace hardscapes will increase the amount of runoff seepage into the ground.

2. Maximize the amount of runoff directed to permeable areas and/or maximize stormwater storage for reuse or infiltration. For the purposes of this Policy, pools, spas, and water features shall not be considered permeable surfaces.

Acceptable and encouraged design elements include:

1. Orienting roof runoff towards permeable surfaces, drywells, French drains, or other structural BMPs rather than directly to driveways or non-permeable surfaces so that runoff will penetrate into the ground instead of flowing off-site.

2. Grading the site to divert runoff to permeable areas.

3. Using cisterns, retention structures or green rooftops to store precipitation or runoff for reuse.

4. Removing or designing curbs, berms or the like so as to avoid isolation of permeable or landscaped areas.

5. Remove pollutants through installation of treatment control BMPs such as filters, clarifiers, and other devices as approved.

B. Design Elements - Commercial, Retail, and Multi-Family Residential. These design elements shall be required for all new development:

1. Urban runoff shall not be allowed to come into contact with the following areas:

    - Loading and unloading dock areas;
    - Repair and maintenance bays;
    - Vehicle and equipment wash areas; and
    - Fueling areas.

2. Where new development/redevelopment will include outdoor areas for the storage of material that may contribute pollutants to the storm water conveyance system, these materials must be:

    - Placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or
    - Protected by secondary containment structures such as berms, dikes, or curbs.

3. The outdoor materials storage areas subject to this section must be:

    - Paved and sufficiently impervious to contain leaks and spills; and
    - Covered with a roof or awning to minimize collection of storm water within the secondary containment area.

4. The area where a trash receptacle or receptacles are located for use as a repository for solid wastes must meet the following structural or treatment control BMPs:

    - Drainage from adjoining roofs and pavement must be diverted away from the trash storage areas;
    - The area must be covered with roof or awning (to prevent rain from entering the area and sewer or storm drain conveyance system),

screened or walled to prevent off-site transport of trash, and connected to the sanitary sewer; and

- Trash bins must have solid covers and be covered at all times except while being emptied.

5. Any construction project adding down spouts, gutters and subsurface pipes directing stormwater thru the curb face shall have a French drain system of perforated pipe and gravel unless site-specific circumstances endanger public safety so as to prohibit its use as determined by the Building Division or Public Works Department. Dry-weather runoff shall not drain over public right-of-way, such as sidewalks, decorative paving or City parkland.

C. Use of Moisture-Detecting or Weather-Based Irrigation Systems. All WQMPs must describe how the applicant plans to use irrigation systems that are automated and controlled by either a weather-based satellite system or by direct moisture detection in the soil.

D. Long-Term Maintenance. The WQMP must also include the applicant's plan for the long-term and continuous maintenance of all BMP's requiring ongoing maintenance and the applicant's signed statement accepting responsibility for the maintenance of all structural and treatment control BMPs. Any transfer or sale of property subject to a Water Quality Management Plan must include as a written condition to the transfer or sale such that the transferee assumes full responsibility for maintenance of any structural, and/or source or treatment control BMPs.

E. Evaluation of WQMPs. The City's evaluation of each Water Quality Management Plan will ascertain if the proposed plan meets the standards set forth in this Policy. Each plan will be evaluated on its own merits according to the particular characteristics of the project and the site to be developed. The Building Official or Public Works Director, or their respective designee shall approve or disapprove the plan. If the plan is disapproved, the reasons for disapproval shall be given in writing to the applicant. Any plan disapproved by the Building Official or Public Works Director or their respective designee must be revised by the developer and resubmitted for approval. No building permit shall be issued until the final WQMP has been approved by the Building Division or Public Works Department.

F. Waiver. The WQMP required under this Policy may be waived by the Building Official or Public Works Director or his or her designee if the applicant demonstrates the impracticability of implementing this Policy's requirements. Recognized circumstances demonstrating impracticability may include:

1. Extreme limitations of space for treatment;

2. Unfavorable or unstable soil conditions at a site to attempt infiltration; and

3. Risk of groundwater contamination because a known unconfined aquifer lies beneath the land surface or an existing or potential underground source of drinking water is less than ten feet from the soil surface.

Any other justification for impracticability must be separately petitioned by the applicant to the City Manager and, where applicable, the Regional Board for advice and consideration.

If a waiver is granted for impracticability, the petitioner will be required to transfer the savings in cost, as determined by the Building Official or Public Works Director, to the City's Runoff Mitigation Account. This Account shall be used to promote regional or alternative solutions for runoff pollution in Newport Beach-area watersheds. Funds payable from the Account may accrue to a public agency or a non-profit entity.

G. Compliance Required. Compliance with an approved Water Quality Management Plan shall be a condition of any required planning approval.

Newport Beach Municipal Code

Chapter 14.36, Water Quality

City of Newport Beach Municipal Code (Municipal Code) Chapter 14.36, *Water Quality*, states the City's intent to participate in the improvement of water quality and comply with Federal requirements for the control of urban pollutants to storm water runoff, which enters the network of storm drains throughout Orange County. All new development and significant redevelopment projects within the City are required to comply with the DAMP and any conditions and requirements established by the Community Development Department and/or Public Works Department, which are reasonably related to the reduction or elimination of pollutants in storm water runoff from the project site. Prior to the issuance of a grading permit, building permit or nonresidential plumbing permit for any new development or significant redevelopment, the Community Development Department and/or Public Works Department shall review the project plans and impose terms, conditions and requirements on the project in accordance with Chapter 14.36.

Chapter 15.10, Excavation And Grading Code

Municipal Code Chapter 15.10, *Excavation and Grading Code*, is intended to safeguard life, limb, property, and the public welfare by regulating grading, drainage, and hillside construction on private property and for similar improvements proposed by private interests on City right-of-way where regulations are not otherwise exercised. Chapter 15.10 establishes grading, fill, drainage, and erosion control standards required during construction activities.

Where the Building Official determines that existing or proposed construction may alter or has altered drainage conditions, creating an adverse or dangerous condition, or where existing drainage conditions result in an adverse or dangerous condition, a drainage permit may be required for the purpose of preventing or eliminating the adverse or dangerous conditions and require corrective work to be accomplished. Such corrective work would be designed in a manner that will retain dry weather runoff and minor rain events within the site consistent with the City's MS4 Permit unless otherwise approved by the Building Official.

5.8.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

CEQA SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality (refer to Impact Statements HWQ-1 and HWQ-2);
- Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin (refer to Section 8.0, *Effects Found Not To Be Significant*);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
  - Result in substantial erosion or siltation on- or off-site (refer to Impact Statements HWQ-1 and HWQ-2);
  - Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site (refer to Section 8.0, *Effects Found Not To Be Significant*);
  - Create or contribute to runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff (refer to Impact Statement HWQ-2); or
  - Impede or redirect flood flows (refer to Section 8.0, *Effects Found Not To Be Significant*);
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation (refer to Section 8.0, *Effects Found Not To Be Significant*); and
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan (refer to Section 8.0, *Effects Found Not To Be Significant*).

5.8.4 IMPACTS AND MITIGATION MEASURES

WATER QUALITY – SHORT-TERM IMPACTS

HWQ-1 GRADING, EXCAVATION, AND CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT COULD IMPACT WATER QUALITY.

Impact Analysis:

Original Northeast Pump Station

There are three sources of short-term construction-related storm water pollution associated with the proposed project, which include the following:

- Handling, storage, and disposal of construction materials containing pollutants;
- Maintenance and operation of construction equipment; and
- Earthmoving activities.

These sources, if not controlled, can generate soil erosion as well as on- and off-site transport via storm runoff or mechanical equipment. Poorly maintained vehicles and heavy equipment leaking fuel, oil, antifreeze, or other vehicle-related fluids on the project site are also common sources of storm water pollution and soil contamination. Generally, standard safety precautions for handling and storing construction materials can adequately reduce the potential pollution of storm water by these materials. These types of standard procedures can be extended to non-hazardous storm water pollutants such as sawdust, concrete washout, and other wastes.

In addition, grading activities can greatly increase erosion processes, leading to impacts on storm drains and sediment loading to storm runoff flows. Two general strategies are recommended to prevent soil materials from entering local storm drains. First, erosion control procedures should be implemented for those areas that must be exposed, and secondly, the project site should be secured to control off-site transport of pollutants.

Implementation of the proposed project would result in the disturbance of the existing pump station and RV storage facilities area in order to construct the new pump station, as well as excavation, trenching, and drilling/tunneling for force mains and gravity sewer pipelines. During these site disturbance activities, increased erosion potential of areas of bare soils would result. Furthermore, HDD and microtunneling activities require slurry water/drilling fluid for lubrication of the boring machine and transporting drill cuttings to the surface with potential to leak and contribute storm water pollution. The project would be required to comply with the existing State and local permitting requirements to ensure water quality is maintained during construction. The project would be required to prepare and submit a Notice of Intent (Mitigation Measure HWQ-1) and a SWPPP (Mitigation Measure HWQ-2) to the SWRCB demonstrating compliance with the Construction General NPDES Permit.

The General Permit requires that non-storm water discharges from construction sites be eliminated or reduced to the maximum extent practicable, that a SWPPP be developed governing construction activities for the proposed project, and that routine inspections be performed of all storm water pollution prevention measures and control practices being used at the site, including inspections before and after storm events. Upon completion of the project, OCSD would be required to submit a Notice of Termination to the SWRCB (Mitigation Measure HWQ-3) to indicate that construction is completed.

Construction activities associated with the proposed project would have a less than significant impact on surface water and groundwater quality and would not significantly impact the beneficial uses of receiving waters after compliance with Mitigation Measures HWQ-1 through HWQ-3, which would ensure adherence to construction requirements per the State. With implementation of Mitigation Measures HWQ-1 through HWQ-3, short-term water quality impacts would be reduced to less than significant levels.

Based on the depths to groundwater within the project site, dewatering may be required for HDD activities. Should groundwater be encountered that would require dewatering, the project would apply

for coverage and conform to the monitoring and reporting program under Order No. RS-2015-0004, NPDES No. CAG998001 as required by Mitigation Measure HWQ-1. If required, dewatering would be performed in accordance with Order No. RS-2015-0004 and the appropriate NPDES requirements under the CWA. Implementation of Mitigation Measure HWQ-1 and compliance with regulatory requirements would ensure that dewatering activities would not result in the exceedance of water quality standards during HDD operations, including TMDL limits applicable to Lower Newport Bay. Based on the above, construction-related dewatering impacts would be less than significant.

Modified Northeast Pump Station

In regard to pump station improvements, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. However, the Modified Northeast Pump Station proposes dredging and microtunneling as two potential construction methods to install the force main improvements across the Newport Bay Channel south of Bay Bridge.

To install the force mains underneath Newport Bay Channel, microtunneling is a trenchless method which would result in a similar range of impacts in regard to construction activity and duration as the HDD that was proposed as part of Original Northeast Pump Station. Therefore, the mircotunneling method to install the force mains associated with the Modified Northeast Pump Station would result in the same three sources of short-term construction-related storm water pollution as the Original Northeast Pump Station and implementation of Measures HWQ-1 through HWQ-3 would reduce short-term water quality impacts to less than significant levels.

The dredging method of installation of the force mains would require open cut trenching 10 feet wide at a depth of 18 feet across the Newport Bay Channel. Dredging activities would cause a short-term increase in turbidity from the disturbance and resuspension of bay sediments. Although, the project site is located within the Lower Newport Bay which is not an impaired water body on the 303(d) list for sedimentation/siltation, turbid waters could potentially contribute to the dispersal of other listed pollutants as they are transported into the water column presenting an impact to water quality. The project would be subject to the NPDES requirements and implement a SWPPP as required by Mitigation Measures HWQ-1 through HWQ-3 and implementation of water quality monitoring during dredging would be required pursuant to CWA Section 401 Water Quality Certification. Dredging activities would be subject to further Federal permit requirements under the CWA as required by Mitigation Measure HWQ-4. Upon submittal of an application for Section 404 CWA authorization to the U.S. Army Corps of Engineers (Corps) for dredging operations, the project would be reviewed by the Southern California Dredged Material Management Team (SC-DMMT) which is an interagency team for coordinated review of dredging projects and policy issues within the Southern California area including Orange County. The SC-DMMT member agencies include the U.S. Army Corps of Engineers (Corps), CCC, various RWQCBs, and the EPA which have permitting authority over dredging projects. The SC-DMMT provides review of the technical and policy issues associated with dredging project development, evaluation, suitability determinations, and approval of dredging projects.[2] Thus, implementation of Mitigation Measures HWQ-1 through HWQ-4 and adherence to the provisions of the approved Section 401 Water Quality Certification, would ensure water quality impacts due to dredging activities would remain less than significant.

[2] United States Army Corps of Engineers Los Angeles District, *Southern California Dredged Material Management Team (SC-DMMT)*, https://www.spl.usace.army.mil/Missions/Regulatory/Projects-Programs/, accessed on March 25, 2019.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: The following mitigation measures apply to each site plan concept as specified:

Original Northeast Pump Station

HWQ-1 Prior to site disturbance activities and as part of the project's compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the State Water Resources Control Board (SWRCB) and the Santa Ana Regional Water Quality Control Board (RWQCB), providing notification and intent to comply with the State of California Construction General Permit and the General Waste Discharge Requirements For Insignificant Threat Discharges to Surface Waters.

HWQ-2 The proposed project shall conform to the requirements of an approved Storm Water Pollution Prevention Plan (SWPPP) (to be applied for prior to site disturbance) and the NPDES Permit for General Construction Activities No. CAS000002, Order No. 2009-0009-DWQ (as amended by 2010-014-DWQ and 2012-006-DWQ), including implementation of all recommended Best Management Practices (BMPs), as approved by the State Water Resources Control Board (SWRCB).

HWQ-3 Upon completion of project construction, the Orange County Sanitation District, or designee, shall submit a Notice of Termination (NOT) to the State Water Resources Control Board (SWRCB) to indicate that construction is completed.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

Modified Northeast Pump Station

Refer to Mitigation Measures HWQ-1 through HWQ-3, as well as the following:

HWQ-4 In compliance with the Federal Clean Water Act (CWA), the proposed project shall conform to the requirements of a Department of the Army permit (to be applied for prior to site disturbance) from the U.S. Army Corps of Engineers (Corps) Los Angeles District.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

South Pump Station

Refer to Mitigation Measures HWQ-1 through HWQ-4.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

LONG-TERM OPERATIONAL IMPACTS

HWQ-2 LONG-TERM OPERATION OF THE PROPOSED PROJECT COULD POTENTIALLY RESULT IN INCREASED RUNOFF AMOUNTS AND DEGRADED WATER QUALITY.

Impact Analysis:

Original Northeast Pump Station

This section analyzes the proposed project conditions and compares them to the existing conditions to determine resultant impacts on drainage, runoff, and water quality during long-term operation of the proposed project.

Upon completion of construction, the project would involve operations of the pump station facility. No increase in impervious surfaces would result upon project completion. Thus, the project would not result in the change in flows experienced at the project site. No increase in flows would occur at City-maintained storm drains and no increase in discharge would result to Newport Bay Channel.

The existing RV storage facility at the pump station site would be redeveloped with a mixed-use development (i.e., the Back Bay Landing project). The proposed pump station would be incorporated into the Back Bay Landing project, and any stormwater originating from the pump station site would be conveyed within the drainage system to be implemented as part of the Back Bay Landing improvements. Based on the Back Bay Landing Planned Community Development Plan (PCDP), drainage from the project would be collected on-site via a proposed storm drain system, and then conveyed to the southwest towards an existing 30-inch storm drain which flows to the Newport Bay Channel.

Storm Water Quality

It is likely that the proposed project would generate pollutants at levels similar to existing conditions. Potential pollutants may include suspended solids/sediments, heavy metals, pathogens, oil and grease, toxic organic compounds, and trash and debris. It is acknowledged that the project would be exempt from the MS4 permitting process. Post-construction water quality impacts would not increase, compared to the existing condition. In addition, as noted within the PCDP, a WQMP would be required as part of the Back Bay Landing project. The Back Bay Landing WQMP would include appropriate site design measures, source control, and low impact development (LID) control features to further minimize impacts related to water quality. Impacts in this regard would be less than significant.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

5.8.5 CUMULATIVE IMPACTS

The following discussions are included per topic area to determine whether a significant cumulative effect would occur.

GRADING, EXCAVATION, AND CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD POTENTIALLY IMPACT WATER QUALITY.

LONG-TERM OPERATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD POTENTIALLY RESULT IN INCREASED AMOUNTS OF RUNOFF AND DEGRADED WATER QUALITY

Impact Analysis:

Original Northeast Pump Station

Cumulative projects would have the potential to affect water quality during construction and long-term operation. The projects would contribute storm water flows to the local and regional drainage facilities. However, construction activities associated with cumulative projects would have a less than significant impact on surface water quality with adherence to State construction requirements. Each project would also be required to comply with existing water quality standards, and include BMPs as necessary. Therefore, overall cumulative impacts would be less than significant.

Development of the proposed project, along with related cumulative projects, would result in increased potential for short-term construction and long-term operational water quality impacts within the area. However, the proposed project would adhere to NPDES requirements and implement a SWPPP with specific BMPs, as required by Mitigation Measures HWQ-1 through HWQ-3 during construction activities. No increases in operational water quality impacts would result. Therefore, the project's incremental effects would not be cumulatively considerable, and impacts in this regard are less than significant.

Cumulative projects would have the potential to affect hydrology and drainage of the area. The projects would contribute storm water flows to the local and regional storm water system and drainage facilities. However, each individual project would be required to submit individual analyses for review and approval prior to issuance of grading or building permits. Each analysis must illustrate how peak flows generated from each related project site would be accommodated by the City's existing and/or proposed storm drainage facilities. Future projects would also be required to comply with existing water quality standards, implement site-specific improvements, and include BMPs as necessary. Therefore, overall cumulative impacts would be less than significant.

Implementation of the proposed project, in conjunction with related cumulative projects, would result in increased potential for hydrology and drainage impacts within the City. However, the project would not increase the impervious surface of the project site and would not increase the resultant flow into

the existing storm drain system. Therefore, the project's incremental effects would not be cumulatively considerable, and impacts in this regard are less than significant.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: The following mitigation measures apply to each site plan concept as specified:

Original Northeast Pump Station

Refer to Mitigation Measures HWQ-1 through HWQ-3.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

Modified Northeast Pump Station

Refer to Mitigation Measures HWQ-1 through HWQ-4.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

South Pump Station

Refer to Mitigation Measures HWQ-1 through HWQ-4.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.8.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No unavoidable significant impacts related to hydrology and water quality have been identified following implementation of the recommended mitigation measures.

5.9 LAND USE AND RELEVANT PLANNING

This section identifies the existing land use conditions, evaluates the project's consistency with relevant planning policies, and recommends mitigation measures that would avoid or lessen the significance of potential impacts. This section identifies on-site and surrounding land use conditions and relevant land use policies and regulations, as set forth by the City of Newport Beach (City). Information in this section is based in part upon the *City of Newport Beach General Plan* (General Plan), the *Newport Beach Municipal Code* (Municipal Code), California Coastal Act (Coastal Act), the *Bay Bridge Pump Station and Force Mains Rehabilitation Study Preliminary Alignment Study Report* (PASR), the *Final Technical Memorandum No. 1 – Alternative 3 Evaluation: Supplement to the PASR* (Technical Memorandum), the *City of Newport Beach Local Coastal Program* (LCP), *City of Newport Beach Coastal Land Use Plan* (CLUP), and the *Back Bay Landing Planned Community Development Plan* (PCDP).

5.9.1 EXISTING SETTING

ON-SITE LAND USES

The proposed project site is located within a fully developed and urbanized area. The existing facility is located immediately north of East Coast Highway. The facility is roughly square shaped with an area of approximately 4,800 square feet, occupied by a one-story pump station building. The perimeter of the pump station building is surrounded by masonry walls on all sides with two entrance gates including one double swing gate and one single swing gate on the southern boundary along the north side of East Coast Highway. The existing pump station building is located within the southern portion of the parcel and is approximately 3,300 square feet in size. The site is surrounded to the north, east, and west by a recreational vehicle (RV) storage area and mobile home park on an approximately 31.4-acre parcel. This parcel is owned by Bayside Village Marina, LLC, and is planned for development as part of the Back Bay Landing Project, a mixed-use waterfront village comprised of recreational and marine-related uses on an approximately seven acre portion of the 31.4-acre parcel.

In addition to the pump station facility, existing force mains consist of dual 24-inch force mains approximately 1,250 feet in length that start from the pump station and route across East Coast Highway, crossing Balboa Marina property just south of East Coast Highway, then routing under the Newport Bay Channel (south of Bay Bridge) to an existing valve vault located on the west side of Bay Bridge approximately 0.25-mile west of the pump station; refer to Exhibit 3-3, *Existing Conditions*.

The project site is designated Mixed-Use Water Related (MU-W2), Recreational and Marine Commercial (CM), and Tidelands and Submerged Lands (TS), and is zoned Back Bay Landing Planned Community (PC-9), Commercial Recreational and Marine (CM 0.3), and Multi-Unit Residential (RM).

SURROUNDING LAND USES

Surrounding uses in proximity to the project site include residential, commercial, and commercial recreational marine uses; refer to Table 3-1, *Surrounding Land Uses*.

5.9.2 REGULATORY SETTING

STATE

California Coastal Act

The California Coastal Act of 1976 (Coastal Act) (see Public Resources Code Division 20) was adopted to protect, maintain, and where feasible, enhance and restore the overall quality of the coastal zone environment and its natural and artificial resources. The Coastal Act is also intended to assure orderly, balanced utilization and conservation of coastal zone resources, and priority for coastal-dependent and coastal-related development over other development on the coast. The Coastal Act policies constitute the statutory standards applied to planning and regulatory decisions made by the California Coastal Commission (CCC) and by local governments, pursuant to the Coastal Act. The Coastal Act includes specific policies that address issues such as shoreline public access and recreation, terrestrial and marine habitat protection, visual resources, industrial uses, water quality, development design, and power plants, among others.

The CCC was made permanent by the Coastal Act to provide for continued state coastal planning and management. In partnership with coastal cities and counties, the CCC plans and regulates the use of land and water in the coastal zone. The coastal zone varies in width from several hundred feet in highly urbanized areas up to five miles in certain rural areas, and offshore the coastal zone includes a three-mile-wide band of ocean.

Implementation of Coastal Act policies is accomplished primarily through the preparation of local coastal programs (LCPs) that are required to be completed by each of the coastal zone counties and cities. An LCP includes a Land Use Plan (LUP) which is typically the Coastal Element or Coastal Land Use Plan of the General Plan, including any maps necessary to administer it; and the Implementation Plan which comprises the zoning ordinances, zoning district maps, and Specific Plans or Planned Community Development Plans necessary to implement the land use plan. Coastal Act policies are the standards by which the CCC evaluates the adequacy of LCPs. To ensure that coastal resources are effectively protected in light of changing circumstances, such as new information or 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 requires a coastal development permit (CDP) be issued by either the CCC or a local government that has a CCC-certified LCP. The City's LCP and associated Coastal Land Use Plan (CLUP) were first approved on October 13, 2005 and adopted December 13, 2005, and last amended June 7, 2017 and adopted July 26, 2017.

REGIONAL

Southern California Association of Governments

Regional planning agencies such as the Southern California Association of Governments (SCAG) recognize that planning issues extend beyond the boundaries of individual cities. Efforts to address regional planning issues such as affordable housing, transportation, and air pollution have resulted in the adoption of regional plans that affect the City of Newport Beach.

SCAG has evolved as the largest council of governments in the United States, functioning as the Metropolitan Planning Organization (MPO) for six counties (Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial) and including 191 cities. As the designated MPO, the Federal government mandates SCAG to research and develop plans for transportation, growth management, hazardous waste management, and air quality. These mandates led SCAG to prepare comprehensive regional plans to address these concerns.

SCAG is responsible for the maintenance of a continuous, comprehensive, and coordinated planning process resulting in a Regional Transportation Plan (RTP) and a Regional Transportation Improvement Program (RTIP). Further, SCAG is responsible for the development of demographic projections, and is also responsible for development of the integrated land use, housing, employment, transportation programs, measures, and strategies for the Air Quality Management Plan (AQMP). Jurisdictions rely on these comprehensive regional plans and often fold goals and policies from the RTP and/or RTIP into their general plan and land use policies.

Orange County Council of Governments

The Orange County Council of Governments (OCCOG) is one of 14 Subregional Organizations that make up SCAG. The OCCOG consists of 34 cities, including Newport Beach, and has a combined population of approximately 3.6 million people. The OCCOG was formed for the following broad purposes, among others:

- To facilitate area-wide planning and coordination in order to provide advice to public entities on a range of issues that affect multiple interests in Orange County;
- To create a unified subregional organization, which will improve Orange County's abilities to be represented in the Southern California region, the State of California, and the nation on issues and matters that affect collective Orange County interests; and
- To accomplish the preparation of subregional plan components mandated by state and federal law.

2016 Regional Transportation Plan/Sustainable Communities Strategy

The passage of California Senate Bill 375 in 2008 requires that an MPO, such as SCAG, prepare and adopt a Sustainable Communities Strategy (SCS) that sets forth a forecasted regional development pattern which, when integrated with the transportation network, measures, and policies, will reduce greenhouse gas emissions from automobiles and light duty trucks (Government Code Section 65080(b)(2)(B)). The SCS outlines certain land use growth strategies that provide for more integrated land use and transportation planning and maximize transportation investments. The SCS is intended to provide a regional land use policy framework that local governments may consider and build upon.

On April 7, 2016, SCAG's Regional Council adopted the *2016 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS). The 2016 RTP/SCS is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. The 2016 RTP/SCS closely integrates land use and transportation so that the region can grow smartly and sustainably. SCAG works closely with local jurisdictions to develop the 2016 RTP/SCS, which incorporates local growth forecasts, projects and programs, and includes complementary regional policies and initiatives. The 2016 RTP/SCS considers new patterns of development as the regional

economy continues to recover and grow, the composition of population changes, the housing market responds to evolving needs, and demands and mobility innovations emerge. The 2016 RTP/SCS also includes a long-term strategic vision for the region that will help guide decisions for transportation and how land is used, as well as the public investments in both, through 2040.

Growth Forecasts

SCAG's Forecasting Section is responsible for producing socio-economic estimates and projections at multiple geographic levels and in multiple years. The Forecasting Section develops, refines, and maintains SCAG's regional and small area socio-economic forecasting/allocation models. Adopted 2016 RTP/SCS Growth Forecasts provide population, household, and employment data for 2040.

Intergovernmental Review

SCAG's Intergovernmental Review Section is responsible for performing consistency review of regionally significant local plans, projects, and programs with SCAG's adopted regional plans. The criteria for projects of regional significance are outlined in *CEQA Guidelines* Sections 15125 and 15206. If considered regionally significant, a proposed plan, project, or program is directed to demonstrate how it is consistent with the 2016 RTP/SCS, which is established through consistency with 2016 RTP/SCS Goals and Adopted Growth Forecasts.

Airport Environs Land Use Plan for John Wayne Airport

John Wayne Airport (JWA) is located approximately 3.65 miles northwest of the project site. JWA is within the oversight of the Orange County Airport Land Use Commission (ALUC). The ALUC is required to prepare and adopt an airport land use plan for each of the airports within its jurisdiction. The ALUC prepared the *Airport Environs Land Use Plan for John Wayne Airport* (amended April 17, 2008). The Airport Environs Land Use Plan (AELUP) intends "to safeguard the general welfare of the inhabitants within the vicinity of the airport and to ensure the continued operation of the airport. Specifically, the plan seeks to protect the public from the adverse effects of aircraft noise, to ensure that people and facilities are not concentrated in areas susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace."[1]

Land uses within the AELUP planning area boundaries are required to conform to safety, noise, and height restrictions. Public Utilities Code Section 21675(c) requires that area surrounding any airport which affects, or is affected by, aircraft operations be embraced by the boundaries of its compatibility plan (i.e., AELUP). The planning area sets limits of the area within which proposed land use projects are to be referred to the ALUC for review. Planning area boundaries are determined by the location and configuration of the airport included in the plan, and the extent of the noise and safety impacts associated with that airport, with certain exceptions. The overall planning area is the furthest extent of the 60 CNEL Contour, the FAR Part 77 Notification Surface, and the runway safety zones associated with the airport. In most instances, the airport influence area is designated by the ALUC as its planning area boundary for the airport and the two terms can be considered synonymous.

[1] County of Orange Airport Land Use Commission, *Airport Environs Land Use Plan for John Wayne Airport*, amended April 17, 2008.

The Orange County Airport Planning Areas map[2] and Airport Influence Area for John Wayne Airport map[3] indicate the AELUP Airport Planning Area in which current or future airport-related noise, overflight, safety, and/or airspace protection factors may significantly affect land uses or necessitate restrictions on those uses. As indicated on the map, the project site is not located with the JWA planning area (i.e., the 60 CNEL Contour, the FAR Part 77 Notification Surface, or the runway safety zones). Therefore, no further analysis regarding compatibility with the AELUP for JWA is warranted.

LOCAL

City of Newport Beach General Plan

The General Plan, adopted July 25, 2006, provides a vision and framework for Newport Beach's long-range physical and economic development and resource conservation that reflects the aspirations of the community; provides strategies and specific implementing actions that will allow this vision to be accomplished; establishes a basis for judging whether specific development proposals and public projects are in harmony with General Plan policies and standards; allows City departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve and enhance critical environmental and historical resources, and minimize hazards; and provides the basis for establishing and setting priorities for detailed plans and implementing programs, such as the Zoning Code, Capital Improvement Plans, facilities plans, and specific plans. The General Plan is founded upon the community's vision for Newport Beach and expresses the community's long-term goals.

Land Use Element

The Land Use Element provides guidance regarding the ultimate pattern of development for Newport Beach at buildout. It is intended to designate the proposed general distribution, location, and extent of land uses within Newport Beach and establish population density and building intensity standards. The Land Use Element serves as the long-range planning guide for development in the City by identifying and analyzing the location and extent of the development to be permitted, and establishing the City's character and identity through 2025.

A general plan land use designation recognizes the type and nature of development permitted in a given location within a city. The Land Use Element contains land use designations under the following land use categories: Residential Neighborhoods; Commercial Districts and Corridors; Commercial Office Districts; Industrial Districts, Airport Supporting Districts, Mixed-Use Districts; and Public, Semi-Public and Institutional. General Plan Land Use Element Figure LU1, *General Plan Overview Map*, depicts the general distribution of uses throughout the City. Land Use Element Figures LU4 through LU15 illustrate the specific categories for each parcel within defined Statistical Areas.

2 County of Orange Airport Land Use Commission, *Airport Planning Areas*, July 21, 2005.
3 County of Orange Airport Land Use Commission, *AELUP Notification Area for JWA*, April 17, 2008.

City of Newport Beach Municipal Code

Municipal Code Title 20, Planning and Zoning

In contrast to a general plan, zoning identifies particular land uses that are legally permitted or prohibited on any given parcel of land consistent with the General Plan. Zoning is the method the City uses to implement land uses in accordance with the General Plan's Goals, Objectives, and Policies. Newport Beach's Zoning law is found in Municipal Code Title 20, *Planning and Zoning*. Municipal Code Title 20 is known as the *City of Newport Beach Zoning Code* (Zoning Code). The purpose of the Zoning Code (in part) is to "promote the orderly development of the City; promote and protect the public health, safety, peace, comfort, and general welfare; protect the character, social, and economic vitality of neighborhoods; and to ensure the beneficial development of the City." The relevant Zoning Code chapter is Chapter 20.14, *Zoning Map*. The City is divided into zoning districts, as outlined in Zoning Code Table 1-1, *Zoning Districts Implementing the General Plan*. The boundaries, designations, and locations of the zoning districts are illustrated on an official map entitled "Zoning Map for the City of Newport Beach, California."

It is acknowledged that pursuant to California Code of Regulations Section 53091(d), building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or transmission of water, wastewater, or electrical energy by a local agency.

City of Newport Beach Local Coastal Program/Coastal Land Use Plan

Local Coastal Programs (LCPs) are basic planning tools used by local governments, in partnership with the CCC, to guide development in the Coastal Zone. LCPs contain the ground rules for future development and protection of coastal resources. The LCPs specify the appropriate location, type, and scale of new or changed uses of land and water. Each LCP includes a land use plan and measures to implement the plan (such as a Zoning Ordinance). These LCPs, which are prepared by local governments, govern decisions that determine the short- and long-term conservation and use of coastal resources. Along with the unique characteristics of individual local coastal communities, the LCPs must also address regional and statewide interests and concerns, in conformity with Coastal Act goals and policies. Following adoption by a city council or county board of supervisors, an LCP is submitted to the CCC for review for consistency with Coastal Act requirements.

The City's LCP and associated Coastal Land Use Plan (CLUP) were first approved on October 13, 2005 and adopted December 13, 2005, and last amended June 7, 2017 and adopted July 26, 2017. The CLUP sets forth goals, objectives, and policies that govern the use of land and water in the coastal zone within the City and its sphere of influence consistent with the General Plan. The CLUP identifies the Coastal Act coastal resources planning and management policies that are relevant to Newport Beach. The CLUP addresses Coastal Act policies within three chapters: Land Use and Development; Public Access and Recreation; and Coastal Resource Protection. Each section or subsection begins with the identification of the Coastal Act sections that are relevant to Newport Beach, followed by a narrative of the local setting and policy direction adopted by the City to address the requirements of the Coastal Act and a listing of specific policies.

Pursuant to Section 21.50.025.C, *Projects Bisected by Different Local Government Jurisdictions*, of the LCP Implementation Plan, where a proposed development is located within both the CCC's and City's

CDP jurisdictions, CDPs are required by both the City and the CCC. Alternatively, if the applicant, the City and the CCC agree, the CCC can process a consolidated CDP application pursuant to the procedures in Public Resources Code Section 30601.3.

Back Bay Landing Planned Community Development Plan

The Back Bay Landing PCDP was adopted on February 25, 2014 and updated on November 22, 2016. The Back Bay Landing Planned Community (PC-9) is an approximately seven-acre area, generally located north of East Coast Highway and northwest of Bayside Drive in the western portion of the City. The PC-9 area is bounded by the Upper Newport Back Bay to the north and west, the Newport Dunes Waterfront Resort and the Bayside Village Mobile Home Park to the east, East Coast Highway and various marina commercial and restaurant uses south of the Highway to the southeast. The purpose of the Back Bay Landing PCDP is to establish appropriate zoning regulations governing land use and development of the site consistent with the General Plan and CLUP. The Back Bay Landing PCDP provides a vision for the land uses on the site, sets the development standards and design guidelines for specific project approvals at the Site Development Review and CDP approval stage, and regulates the long term operation of the developed site.

5.9.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Physically divide an established community (refer to Section 8.0, *Effects Found Not To Be Significant*); and/or
- Cause a significant environmental impact due to a conflict with any land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect (refer to Impact Statements LU-1 through LU-5).

For the purposes of this impact analysis, a significant impact would occur if project implementation would result in inconsistencies or conflicts with the adopted goals and policies of the General Plan and other relevant planning documents, as well as other specified regional and local plans, which result in environmental impact(s). Based on these standards, the project's effects have been categorized as either a "less than significant impact" or "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

5.9.4 IMPACTS AND MITIGATION MEASURES

CALIFORNIA COASTAL ACT

LU-1 THE PROPOSED PROJECT COULD CONFLICT WITH THE COASTAL ACT'S PLANNING AND MANAGEMENT POLICIES.

Impact Analysis:

Original Northeast Pump Station

The Coastal Act (Public Resources Code section 30200, Coastal Resources Planning and Management Policies) contains specific policies pertaining to land use and planning. Table 5.9-1, *California Coastal Act Consistency Analysis*, provides an analysis of the proposed project's consistency with the relevant Coastal Act policies. As shown in Table 5.9-1, the project would be consistent with each of the identified policies, and a less than significant impact would occur in this regard.

Table 5.9-1
California Coastal Act Consistency Analysis

California Coastal Act Policy	Project Consistency Analysis
Public Access	
Section 30212 New development projects: (a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where: 1. It is inconsistent with public safety, military security needs, or the protection of fragile coastal resources; 2. Adequate access exists nearby, or 3. Agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.	Consistent. The existing Bay Bridge Pump Station is a fenced/walled facility located within an existing RV storage facility, which is also secured by fencing. Public access is not currently provided across the existing pump station site or the RV storage facility. The proposed new pump station would be relocated slightly northwest of the existing facility or shifted approximately 200 feet to the west, within the same RV storage facility. It would remain a secured facility for public safety purposes. Since public access to the coast is not currently provided through the pump station site and RV storage facility, the project would be consistent in this regard. In addition, since all force main and gravity sewer improvements would be located underground, coastal access would not be affected by these facilities. It should be noted that the Back Bay Landing project is proposed to replace the existing RV storage facility. The Back Bay Landing project would include mixed-use waterfront uses, and is expected to result in beneficial impacts to coastal access. This project has been subject to its own separate environmental and coastal consistency review.
Marine Environment	
Section 30231 Biological productivity; water quality: The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface waterflow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.	Consistent. Section 5.3, *Biological Resources*, analyzes the project's potential impacts on biological resources, including marine organisms, riparian habitat, and natural vegetation, and concludes the project would result in less than significant impacts with mitigation incorporated. Additionally, as noted in Section 5.8, *Hydrology and Water Quality*, the project would be consistent with applicable short-term and long-term NPDES requirements to ensure water quality for surrounding waterways is not adversely affected. The project would be consistent in this regard.

Table 5.9-1 [continued]
California Coastal Act Consistency Analysis

California Coastal Act Policy	Project Consistency Analysis
Land Resources	
Section 30244 Archaeological or paleontological resources: Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.	Consistent. As noted in Section 5.4, *Cultural Resources*, there are no known archaeological or paleontological resources that would be affected by the proposed project. However, this EIR includes mitigation measures to minimize impacts in the unlikely event resources are encountered during ground disturbing activities. The project would be consistent with this policy.
Development	
Section 30250 Location; existing developed area: (a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.	Consistent. The existing Bay Bridge Pump Station is located on an RV storage facility, and the proposed new location would be situated within the same facility. As such, the pump station would be situated contiguous with existing developed areas. In addition, since all force main and gravity sewer improvements would be located underground, no impacts would occur in regards to conveyance facilities. It should be noted that the Back Bay Landing project is proposed to replace the existing RV storage facility. The Back Bay Landing project would include mixed-use waterfront uses, and as such, the proposed pump station would remain in a location that would be adjacent to a developed use. Moreover, the Back Bay Landing project has been subject to its own separate environmental and coastal consistency review.
Section 30251 Scenic and visual qualities: The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.	Consistent. As noted in Section 5.1, *Aesthetics/Light and Glare*, the project would not result in significant impacts related to scenic vistas, scenic resources, visual character/quality, or light and glare. The project would be consistent with this policy.
Section 30253 Minimization of adverse impacts: New development shall do all of the following: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. (c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.	Consistent. As noted in Section 5.5, *Geology and Soils*, the project would result in less than significant impacts related to geologic hazards and soil instability upon adherence to requirements of the CBC, in addition to OCSD design standards for wastewater facilities. The project would also be consistent with SCAQMD requirements, as analyzed in Section 5.2, *Air Quality*. As such, the project would be consistent in this regard.

Table 5.9-1 [continued]
California Coastal Act Consistency Analysis

California Coastal Act Policy	Project Consistency Analysis
(d) Minimize energy consumption and vehicle miles traveled. (e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.	

Source: Public Resources Code, *California Coastal Act of 1976*.

Modified Northeast Pump Station

Given that the Modified Northeast Pump Station and Original Northeast Pump Station would be located in the same area of the existing RV storage facility and the proposed uses would be the same, the Modified Northeast Pump Station would not impact public access to the beach and would be located in a developed area of the City. Additionally, impacts to biological productivity and water quality; archaeological and paleontological resources; scenic and visual qualities; and other environmental areas would be less than significant. Thus, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

While the South Pump Station would be located slightly south of the Original Northeast Pump Station, it is proposed within the same RV storage facility and would involve similar improvements. Therefore, similar to the Original Northeast Pump Station, the South Pump Station would not impact public access to the beach and would be located within a developed area of the City. Additionally, impacts to biological productivity and water quality; archaeological and paleontological resources; scenic and visual qualities; and other environmental areas would be less than significant. Thus, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

LOCAL COASTAL PROGRAM AND COASTAL LAND USE PLAN

LU-2 THE PROPOSED PROJECT COULD CONFLICT WITH POLICIES PROVIDED IN THE CITY'S LOCAL COASTAL PROGRAM AND COASTAL LAND USE PLAN.

Impact Analysis:

Original Northeast Pump Station

The Coastal Act (Public Resources Code Section 30200, Coastal Resources Planning and Management Policies) contains specific policies pertaining to Public Access, Recreation, Marine Environment, Land Resources, Development, and Industrial Development. The City's CLUP addresses these topics under three chapters: Land Use and Development; Public Access and Recreation; and Coastal

Resource Protection. Table 5.9-2, *Local Coastal Program/Coastal Land Use Plan Consistency Analysis*, provides an analysis of the proposed project's consistency with the relevant CLUP policies.

Table 5.9-2
Local Coastal Program/Coastal Land Use Plan Consistency Analysis

Coastal Land Use Plan Policy	Project Consistency Analysis
2.1.1-1. The land use categories in Table 2.1.1-1 establish the type, density and intensity of land uses within the coastal zone.	Consistent. The proposed pump station site is designated "Mixed-Use Water Related" (MU-W2). The MU-W2 category is intended to provide for commercial development on or near the bay in a manner that will encourage the continuation of coastal-dependent and coastal-related uses and visitor-serving uses, as well as allow for the development of mixed-use structures with residential uses above the ground floor. The proposed project would either relocate the pump station approximately 200 feet to the northeast or approximately 200 feet to the west within the existing RV storage facility. This relocation would not create an inconsistency with the MU-W designation for the site. In addition, the ancillary force main improvements and gravity sewer facilities included as part of the project would occur underground and would not have the capacity to conflict with land use designations in the project area. Thus, the project is consistent in this regard. It should be noted that the Back Bay Landing project is proposed to replace the existing RV storage facility. The Back Bay Landing project would include mixed-use waterfront uses, and has been subject to its own separate environmental and coastal consistency review.
2.1.2-1. Development in each district and corridor shall adhere to policies for land use type and density/intensity contained in Table 2.1.1-1, except as modified in Sections 2.1.3 to 2.1.8.	Consistent. Refer to Response 2.1.1-1.
2.1.7-2. New development shall provide for the protection of the water quality of the bay and adjacent natural habitats. New development shall be designed and sited to minimize impacts to public views of the water and coastal bluffs.	Consistent. Section 5.3 analyzes the project's potential impacts on biological resources, including natural habitats, and concludes the project would result in less than significant impacts with mitigation incorporated. Further, as indicated in Section 5.8, the project would be consistent with applicable short-term and long-term NPDES requirements to ensure water quality for surrounding waterways is not adversely affected. In addition, as noted in Section 5.1, the project would not result in significant impacts related to scenic vistas, scenic resources, and visual character/quality. The project would be consistent with this policy.
2.1.9-1. Land uses and new development in the coastal zone shall be consistent with the Coastal Land Use Plan Map and all applicable LCP policies and regulations.	Consistent. Refer to Response 2.1.1-1.
2.2.1-1. Continue to allow redevelopment and infill development within and adjacent to the existing developed areas in the coastal zone subject to the density and intensity limits and resource protection policies of the Coastal Land Use Plan.	Consistent. Refer to Response 2.1.1-1.

Table 5.9-2 [continued]
Local Coastal Program/Coastal Land Use Plan Consistency Analysis

Coastal Land Use Plan Policy	Project Consistency Analysis
2.2.1-2. Require new development be located in areas with adequate public services or in areas that are capable of having public services extended or expanded without significant adverse effects on coastal resources.	Consistent. As concluded in Section 8.0, *Effects Found Not To Be Significant*, the proposed pump station and associated force mains improvements would not introduce new population growth generating a need for additional public services, and no habitable structures would be included as part of the project. All force main facilities would be located below ground, and the proposed pump station building would not include any uses that would generate an increased need for fire protection and/or police protection. Therefore, the project site is located within an area with adequate public services and would not require expansion of services resulting in a significant adverse effect on coastal resources. The project would be consistent in this regard.
2.8.1-1. Review all applications for new development to determine potential threats from coastal and other hazards.	Consistent. As indicated in Section 5.5, the project site is subject to the potential threat of seismic ground shaking, seismically induced liquefaction, settlement, and lateral spreading, and expansive soils. Implementation of mitigation measures would reduce the potential impacts to a less than significant level. Additionally, Section 5.7, *Hazards and Hazardous Materials*, concludes the potential for hazardous conditions associated with the accidental release of hazardous materials would also be reduced to a less than significant level with implementation of mitigation. As noted within Section 8.0, impacts related to coastal hazards (such as flooding, seiches, and tsunamis) would not be significant since the project would not exacerbate any existing risks related to such hazards as compared to existing conditions. Therefore, the project is consistent in this regard.
2.8.1-2. Design and site new development to avoid hazardous areas and minimize risks to life and property from coastal and other hazards.	Consistent. Refer to Response 2.8.1-1. Additionally, the proposed pump station and associated conveyance improvements would not introduce or generate new population growth and no habitable structures would be included as part of the project, thereby minimizing risks to life.
2.8.1-4. Require new development to assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.	Consistent. Refer to Response 2.8.1-1.
2.8.7-3. Require applications for new development, where applicable [i.e., in areas of known or potential geologic or seismic hazards], to include a geologic/soils/geotechnical study that identifies any geologic hazards affecting the proposed project site, any necessary mitigation measures, and contains a statement that the project site is suitable for the proposed development and that the development will be safe from geologic hazard. Require such reports to be signed by a licensed Certified Engineering Geologist or Geotechnical Engineer and subject to review and approval by the City.	Consistent. A Geology Report was prepared for the proposed project and was utilized as part of the analysis within this EIR; refer to Appendix 11.5, *Geology Report*. As noted in Section 5.5, the project would result in less than significant impacts related to geologic hazards and soil instability upon adherence to requirements of the CBC, in addition to OCSD design standards for wastewater facilities. As such, the project would be consistent in this regard.

Table 5.9-2 [continued]
Local Coastal Program/Coastal Land Use Plan Consistency Analysis

Coastal Land Use Plan Policy	Project Consistency Analysis
3.1.1-1. Protect, and where feasible, expand and enhance public access to and along the shoreline and to beaches, coastal waters, tidelands, coastal parks, and trails.	Consistent. The existing pump station is a fenced/walled facility located within an existing RV storage facility, which is also secured by fencing. Public access is not currently provided across the existing pump station site or the RV storage facility. The proposed pump station would either be relocated slightly northwest or west of the existing facility within the same RV storage facility. It would remain a secured facility for public safety purposes. Since public access to the coast is not currently provided through the pump station site and RV storage facility, the project would be consistent in this regard. In addition, since all force main and gravity sewer improvements would be located underground, coastal access would not be affected by these facilities. It should be noted that the Back Bay Landing project is proposed to replace the existing RV storage facility. The Back Bay Landing project would include mixed-use waterfront uses, and is expected to result in beneficial impacts to coastal access. This project has been subject to its own separate environmental and coastal consistency review.
3.1.1-11. Require new development to minimize impacts to public access to and along the shoreline.	Consistent. Refer to Response 3.1.1-1.
3.1.1-26. Consistent with the policies above, provide maximum public access from the nearest public roadway to the shoreline and along the shoreline with new development except where (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources or (2) adequate access exists nearby.	Consistent. Refer to Response 3.1.1-1.
4.3.2-1. Promote pollution prevention and elimination methods that minimize the introduction of pollutants into coastal waters, as well as the generation and impacts of dry weather and polluted runoff.	Consistent. The proposed pump station would be relocated either slightly to the northeast or west within the same RV storage facility it is currently sited within. There would be no substantial change in impervious surfaces associated with the facility, given the developed nature of the RV storage site. Additionally, the project would be consistent with applicable NPDES requirements to ensure water quality is not adversely affected. The project would be consistent in this regard.
4.3.2-2. Require that development not result in the degradation of coastal waters (including the ocean, estuaries and lakes) caused by changes to the hydrologic landscape**.**	Consistent. Refer to Response 4.3.2-1.
4.3.2-6. Implement and improve upon best management practices (BMPs) for residences, businesses, new development and significant redevelopment, and City operations.	Consistent. Refer to Response 4.3.2-1.
4.3.2-7. Incorporate BMPs into the project design in the following progression: Site Design BMPs; Source Control BMPs; and Treatment Control BMPs. Include site design and source control BMPs in all developments. When the combination of site design and source control BMPs are not sufficient to protect water quality as required by the LCP or Coastal Act, structural treatment BMPs will be implemented along with site design and source control measures.	Consistent. Refer to Response 4.3.2-1.

Table 5.9-2 [continued]
Local Coastal Program/Coastal Land Use Plan Consistency Analysis

Coastal Land Use Plan Policy	Project Consistency Analysis
4.3.2-8. To the maximum extent practicable, runoff should be retained on private property to prevent the transport of bacteria, pesticides, fertilizers, pet waste, oil, engine coolant, gasoline, hydrocarbons, brake dust, tire residue, and other pollutants into recreational waters.	Consistent. Refer to Response 4.3.2-1.
4.3.2-11. Require new development to minimize the creation of and increases in impervious surfaces, especially directly connected impervious areas, to the maximum extent practicable. Require redevelopment to increase area of pervious surfaces, where feasible.	Consistent. Refer to Response 4.3.2-1.
4.4.1-1. Protect and, where feasible, enhance the scenic and visual qualities of the coastal zone, including public views to and along the ocean, bay, and harbor and to coastal bluffs and other scenic coastal areas.	Consistent. As noted in Section 5.1, the project would not result in significant impacts related to scenic vistas, scenic resources, visual character/quality, or light and glare. The project would be consistent with this policy.
4.4.2-2. Continue to regulate the visual and physical mass of structures consistent with the unique character and visual scale of Newport Beach.	Consistent. Refer to Response 4.4.1-1.
4.5.1-1. Require new development to protect and preserve paleontological and archaeological resources from destruction, and avoid and minimize impacts to such resources. If avoidance of the resource is not feasible, require an in situ or site-capping preservation plan or a recovery plan for mitigating the effect of the development.	Consistent. As noted in Sections 5.4 and 5.5, there are no known archaeological or paleontological resources that would be affected by the proposed project. However, mitigation measures are included to minimize impacts in the unlikely event resources are encountered during ground disturbing activities.
4.5.1-2. Require a qualified paleontologist/archaeologist to monitor all grading and/or excavation where there is a potential to affect cultural or paleontological resources. If grading operations or excavations uncover paleontological/archaeological resources, require the paleontologist/archeologist monitor to suspend all development activity to avoid destruction of resources until a determination can be made as to the significance of the paleontological/archaeological resources. If resources are determined to be significant, require submittal of a mitigation plan. Mitigation measures considered may range from in-situ preservation to recovery and/or relocation. Mitigation plans shall include a good faith effort to avoid impacts to cultural resources through methods such as, but not limited to, project redesign, in situ preservation/ capping, and placing cultural resource areas in open space.	Consistent. Refer to Response 4.5.1-1. However, if previously unidentified cultural resources are un-earthed during construction, Mitigation Measure CUL-1 would reduce impacts by requiring construction awareness training, and would also require construction activity to cease work in that area until a qualified archaeologist can assess the significance of a find. If warranted, the archaeologist would be required to collect the resource, and prepare a technical report describing the results of the investigation. The test-level report would evaluate the site including discussion of the significance (depth, nature, condition, and extent of the resource), identify final mitigation recommendations that OCSD or its designee shall incorporate into future construction plans, and provide cost estimates. Further, with compliance with the Coastal Development Permit (CDP), issued by the California Coastal Commission and City of Newport Beach, the project would implement any CDP conditions required by the City of Newport Beach to demonstrate compliance with the CLUP (including Policies 4.5.1-2 and 4.5.1-3).
4.5.1-3. Notify cultural organizations, including Native American organizations, of proposed developments that have the potential to adversely impact cultural resources. Allow qualified representatives of such groups to monitor grading and/or excavation of development sites.	Consistent. Refer to Response 4.5.1-2. Additionally, as CEQA lead agency, OCSD conducted Native American outreach consistent with CEQA requirements and Assembly Bill 52 (AB 52); refer to Section 5.12, *Tribal Cultural Resources*. Thus, the project is considered consistent in this regard.

Table 5.9-2 [continued]
Local Coastal Program/Coastal Land Use Plan Consistency Analysis

Coastal Land Use Plan Policy	Project Consistency Analysis
4.5.1-5. Where there is a potential to affect cultural or paleontological resources, require the submittal of an archeological/cultural resources monitoring plan that identifies monitoring methods and describes the procedures for selecting archeological and Native American monitors and procedures that will be followed if additional or unexpected archeological/cultural resources are encountered during development of the site. Procedures may include, but are not limited to, provisions for cessation of all grading and construction activities in the area of the discovery that has any potential to uncover or otherwise disturb cultural deposits in the area of the discovery and all construction that may foreclose mitigation options to allow for significance testing, additional investigation and mitigation.	Consistent. Refer to Response 4.5.1-1.
4.6-9. Require applications for new development, where applicable, to include a geologic/soils/geotechnical study that identifies any geologic hazards affecting the proposed project site, any necessary mitigation measures, and contains statements that the project site is suitable for the proposed development and that the development will be safe from geologic hazard for its economic life. For development on coastal bluffs, including bluffs facing Upper Newport Bay, such reports shall include slope stability analyses and estimates of the long-term average bluff retreat rate over the expected life of the development. Reports are to be signed by an appropriately licensed professional and subject to review and approval by qualified city staff member(s) and/or contracted employee(s).	Consistent. Refer to Response 2.8.7-3.

Source: *City of Newport Beach Local Coastal Program Coastal Land Use Plan*, first adopted December 13, 2005, as amended periodically since.

As demonstrated in Table 5.9-2, the proposed project is consistent with the relevant CLUP policies. Therefore, there would be a less than significant impact in this regard.

Modified Northeast Pump Station

Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station would be located in the RV storage facility of the Back Bay Landing property and development of the pump station and associated force main improvements would result in less than significant impacts as detailed in Sections 5.0 through 5.12. Given that the proposed use would be the same and within the same general area, the Modified Northeast Pump Station would similarly not conflict with relevant CLUP policies. As such, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

Similar to the Original Northeast Pump Station, the South Pump Station would be located in the RV storage facility of the Back Bay Landing property and development of the pump station and associated force main improvements would result in less than significant impacts as detailed in Sections 5.0 through 5.12. Given that the proposed use would be the same and within the same general area, the

South Pump Station would similarly not conflict with relevant CLUP policies. As such, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

LU-3 THE PROPOSED PROJECT MAY CONFLICT WITH SCAG'S REGIONAL PLANNING EFFORTS.

Impact Analysis:

Original Northeast Pump Station

SCAG's Intergovernmental Review Section is responsible for performing a consistency review of local plans, projects, and programs with regional plans. SCAG utilizes a list of defined criteria for the classification of projects as regionally significant as detailed in *CEQA Guidelines* Section 15206(b). The majority of the criteria pertain to unique or location-specific environmental circumstances, or to specific types of land uses with a minimum number of dwelling units, square feet of development, or acreages. The proposed project does not meet any of these criteria. While there is one criterion related to projects occurring within and substantially impacting an area of critical environmental sensitivity, including the California Coastal Zone (*CEQA Guidelines* Section 15206(b)(4)), the project would not substantially impact sensitive environmental areas due to the developed nature of the site. As such, the project is not considered regionally significant, and would not conflict with SCAG's regional planning efforts. Impacts in this regard would be less than significant.

Modified Northeast Pump Station

Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station does not meet any of the regionally significant project criteria and would not substantially impact sensitive environmental areas due to the developed nature of the site. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

Similar to the Original Northeast Pump Station, the South Pump Station does not meet any of the regionally significant project criteria and would not substantially impact sensitive environmental areas due to the developed nature of the site. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

CITY OF NEWPORT BEACH GENERAL PLAN

LU-4 THE PROPOSED PROJECT MAY CONFLICT WITH CITY OF NEWPORT BEACH GENERAL PLAN POLICIES.

Impact Analysis:

Original Northeast Pump Station

Table 5.9-3, *General Plan Policy Consistency Analysis*, analyzes the project's consistency with the relevant General Plan policies. As demonstrated in Table 5.9-3, the proposed project is consistent with the General Plan goals and policies related to land use and planning. Thus, there would be a less than significant impact in this regard.

Table 5.9-3
General Plan Policy Consistency Analysis

Relevant General Plan Policies	Project Consistency Analysis
Goal LU 1: A unique residential community with diverse coastal and upland neighborhoods, which values its colorful past, high quality of life, and community bonds, and balances the needs of residents, businesses, and visitors through the recognition that Newport Beach is primarily a residential community.	
LU 1.1 Unique Environment: Maintain and enhance the beneficial and unique character of the different neighborhoods, business districts, and harbor that together identify Newport Beach. Locate and design development projects to reflect Newport Beach's topography, architectural diversity, and view sheds.	Consistent. The proposed project would relocate the existing pump station either to the northeast or west within the existing RV storage facility. This relocation would not create an inconsistency with the current land use designation for the site. In addition, the ancillary force main improvements and gravity sewer facilities included as part of the project would occur underground and would not have the capacity to conflict with land use designations in the project area. In addition, as noted in Section 5.1, the project would not result in significant impacts related to scenic vistas, scenic resources, visual character/quality, or light and glare. The project would be consistent with this policy.
LU 1.6 Public Views: Protect and, where feasible, enhance significant scenic and visual resources that include open space, mountains, canyons, ridges, ocean, and harbor from public vantage points.	Consistent. Refer to Response LU 1.1.
Goal LU 2: A living, active, and diverse environment that complements all lifestyles and enhances neighborhoods, without compromising the valued resources that make Newport Beach unique. It contains a diversity of uses that support the needs of residents, sustain and enhance the economy, provide job opportunities, serve visitors that enjoy the City's diverse recreational amenities, and protect its important environmental setting, resources, and quality of life.	
LU 2.8 Adequate Infrastructure: Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, storm drainage, energy, and so on) and public services (schools, parks, libraries, seniors, youth, police, fire, and so on).	Consistent. As concluded in Section 8.0, the proposed pump station and associated force mains improvements would not introduce new population growth generating a need for additional public services, and no habitable structures would be included as part of the project. All force main facilities would be located below ground, and the proposed pump station building would not include any uses that would generate an increased need for fire protection and/or police protection. Rather, the project would represent a beneficial impact in this regard, since it would improve the reliability of the existing aging wastewater infrastructure system in the project area. The project would be consistent in this regard.

Table 5.9-3 [continued]
General Plan Policy Consistency Analysis

Relevant General Plan Policies	Project Consistency Analysis
Goal LU 5.3: Districts where residents and businesses are intermixed that are designed and planned to ensure compatibility among the uses, that they are highly livable for residents, and are of high quality design reflecting the traditions of Newport Beach.	
LU 5.3.3 Parcels Integrating Residential and Nonresidential Uses: Require that properties developed with a mix of residential and nonresidential uses be designed to achieve high levels of architectural quality in accordance with policies LU 5.1.9 and LU 5.2.1 and planned to ensure compatibility among the uses and provide adequate circulation and parking. Residential uses should be seamlessly integrated with nonresidential uses through architecture, pedestrian walkways, and landscape. They should not be completely isolated by walls or other design elements.	Consistent. The proposed Back Bay Landing project would replace the existing RV storage facility where the existing/proposed pump station are sited. The Back Bay Landing project would include a range of uses, including residential. As noted in Section 5.1, *Aesthetics/Light and Glare*, the project would be subject to review and comment by the City of Newport Beach prior to approval by OCSD (Mitigation Measure AES-2), to ensure consistency between residential and non-residential uses. The project would be consistent in this regard.
Goal LU 4: Management of growth and change to protect and enhance the livability of neighborhoods and achieve distinct and economically vital business and employment districts, which are correlated with supporting infrastructure and public services and sustain Newport Beach's natural setting.	
LU 4.1 Land Use Diagram: Accommodate land use development consistent with the Land Use Plan. Figure LU1 depicts the general distribution of uses throughout the City and Figure LU2 through Figure LU15 depict specific use categories for each parcel within defined Statistical Areas. Table LU1 (Land Use Plan Categories) specifies the primary land use categories, types of uses, and, for certain categories, the densities/intensities to be permitted. The permitted densities/intensities or amount of development for land use categories for which this is not included in Table LU1, are specified on the Land Use Plan, Figure LU4 through Figure LU15. These are intended to convey maximum and, in some cases, minimums that may be permitted on any parcel within the designation or as otherwise specified by Table LU2 (Anomaly Locations). The density/intensity ranges are calculated based on actual land area, actual number of dwelling units in fully developed residential areas, and development potential in areas where the General Plan allows additional development. To determine the permissible development, the user should: a. Identify the parcel and the applicable land use designation on the Land Use Plan, Figure LU4 through Figure LU15. b. Refer to Figure LU4 through Figure LU15 and Table LU1 to identify the permitted uses and permitted density or intensity or amount of development for the land use classification. Where densities/ intensities are applicable, the maximum amount of development shall be determined by multiplying the area of the parcel by the density/intensity.	Consistent. The proposed pump station site is designated "Mixed-Use Water Related" (MU-W2). The MU-W2 category is intended to provide for commercial development on or near the bay in a manner that will encourage the continuation of coastal-dependent and coastal-related uses. The proposed project would relocate the existing pump station either to the northeast or west, and it would remain within the existing RV storage facility. This relocation would not create an inconsistency with the MU-W2 designation for the site. In addition, the ancillary force main improvements and gravity sewer facilities included as part of the project would occur underground and would not have the capacity to conflict with land use designations in the project area. Thus, the project is consistent in this regard. It should be noted that the Back Bay Landing project is proposed to replace the existing RV storage facility. The Back Bay Landing project would include mixed-use waterfront uses, and has been subject to its own separate environmental and coastal consistency review.

Table 5.9-3 [continued]
General Plan Policy Consistency Analysis

Relevant General Plan Policies	Project Consistency Analysis
c. For anomalies identified on the Land Use Map by a symbol, refer to Table LU2 to determine the precise development limits. d. For residential development in the Airport Area., refer to the policies prescribed by the Land Use Element that define how development may occur.	

Source: City of Newport Beach, *City of Newport Beach General Plan*, adopted July 25, 2006, as amended periodically since.

Modified Northeast Pump Station

Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station proposes the same uses within the RV storage facility of the Back Bay Landing property and would not conflict with relevant General Plan goals and policies related to land use and planning. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

Similar to the Original Northeast Pump Station, the South Pump Station proposes the same uses within the RV storage facility of the Back Bay Landing property and would not conflict with relevant General Plan goals and policies related to land use and planning. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

BACK BAY LANDING PLANNED COMMUNITY DEVELOPMENT PLAN

LU-5 THE PROPOSED PROJECT COULD CONFLICT WITH THE BACK BAY LANDING PLANNED COMMUNITY DEVELOPMENT PLAN DEVELOPMENT STANDARDS AND DESIGN GUIDELINES.

Impact Analysis:

Original Northeast Pump Station

As noted above, the proposed pump station site is zoned Back Bay Landing Planned Community Development Plan (PC-9) (Back Bay Landing PCDP) by the City's Zoning Map. The Back Bay Landing PCDP is a redevelopment plan involving a mixed-use waterfront project (i.e., the Back Bay Landing project). This project would construct a dry stack boat storage facility for 140 boats, 61,534 square feet of visitor-serving retail and recreational marine facilities, and up to 49 attached residential units. The Back Bay Landing PCDP establishes appropriate zoning regulations governing land use and development of the Planned Community site, consistent with the General Plan and CLUP. The Back Bay Landing PCDP provides a vision for the land uses on the site, sets the development

standards and design guidelines for specific project approvals at the Site Development Review and Community Development Plan approval stage, and regulates the long term operation of the developed site.

The existing and proposed pump station sites are located within Planning Area 1 of the PCDP, which is currently primarily occupied by an existing RV storage facility. The PCDP includes a number of standards, provisions, and guidelines that are relevant to the proposed project, as follows:

- *Permitted Uses:* The PCDP includes a list of permitted uses within each Planning Area. Within Planning Area 1, "Utilities (Wastewater Pump Station)" is listed as a permitted use. As such, the proposed new pump station would be a permitted use under the PCDP.
- *Development Standards:* Required setbacks and permitted heights are detailed in the development standards. The proposed new pump station would meet or exceed all setback requirements identified in the PCDP, including setbacks from Bayside Drive and abutting residential uses. In addition, the proposed pump station would have a maximum building height of 24 feet. This height would be consistent with the permitted height for the eastern-most portion of Planning Area 1, which is 26 feet for flat roofs and 31 feet for sloped roofs. The project would be consistent in this regard.
- *Development Standards – Lighting:* As noted in Section 5.1, the proposed project would include nighttime security lighting. However, as noted in Mitigation Measure AES-4, the project would be reviewed for consistency with PCDP standards for nighttime lighting, which include parameters for shielding, light spill, and fixtures to minimize impacts to adjacent receptors. The project would be consistent in this regard.
- *Design Guidelines:* The PCDP includes design guidelines covering a range of design features, including architecture, site planning, building massing, façade treatments, landscaping, and hardscaping. As noted above, the proposed project would be subject to Site Development Review through the City of Newport Beach to ensure consistency with the stated design guidelines. The project would be consistent in this regard.

Based on the analysis provided above, the proposed project would be consistent with the PCDP, and a less than significant impact would occur in this regard.

Modified Northeast Pump Station

The Modified Northeast Pump Station is listed as a permitted use under the PCDP and would be designed to meet or exceed all setback requirements identified in the PCDP. Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station would have a maximum building height of 24 feet and would have nighttime security lighting that complies with the PCDP standards (e.g., design parameters for shielding, light spill, and fixtures). The pump station design would be the same as the Original Northeast Pump Station and would be subject to review and comment by the City of Newport Beach prior to approval by the OCSD (Mitigation Measure AES-2). As such, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

While the South Pump Station would be located slightly south of the Original Northeast Pump Station, it is listed as a permitted use under the PCDP and would be designed to meet or exceed all setback requirements identified in the PCDP. Similar to the Original Northeast Pump Station, the South Pump Station would have a maximum building height of 24 feet and would have nighttime security lighting that complies with the PCDP standards (e.g., design parameters for shielding, light spill, and fixtures). The pump station design would be the same as the Original Northeast Pump Station and would be subject to review and comment by the City of Newport Beach prior to approval by the OCSD (Mitigation Measure AES-2). As such, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

5.9.5 CUMULATIVE IMPACTS

THE PROPOSED PROJECT COULD CONFLICT WITH POLICIES WITHIN APPLICABLE LOCAL AND REGIONAL PLANS.

Impact Analysis:

Original Northeast Pump Station

As outlined in Table 4-1, *Cumulative Projects List*, and illustrated on Exhibit 4-1, *Cumulative Projects Map*, related projects and other possible development would occur in proximity to the project site. Development projects within the City undergo a similar plan review process to determine potential land use planning policy and regulation conflicts. As noted above, the nearest cumulative project to the site (Back Bay Landing project) includes the PCDP, which incorporates the Bay Bridge Pump Station as a permitted use.

Each cumulative project would be analyzed independent of other projects, within the context of their respective land use and regulatory setting. As part of the review process, each project would be required to demonstrate compliance with the provisions of the applicable land use designation(s) and zoning district(s). Each project would be analyzed in order to ensure that the goals, objectives, and policies of the General Plan, and regulations and guidelines of the Municipal Code are consistently upheld. The project would be consistent with the Coastal Act, LCP/CLUP, SCAG regional plans, and the PCDP. Thus, the project's incremental effect would be less than cumulatively considerable in this regard.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

5.9.6 SIGNIFICANT UNAVOIDABLE IMPACTS

Implementation of the proposed project would not result in any significant and unavoidable impacts pertaining to land use and relevant planning.

5.10 NOISE

The purpose of this section is to evaluate noise source impacts on-site and to surrounding land uses as a result of implementation of the proposed project. This section evaluates short-term construction-related impacts, as well as future buildout conditions. Mitigation measures are also recommended to avoid or lessen the project's noise impacts. Information in this section was obtained from the *City of Newport Beach General Plan* (General Plan) and the *Newport Beach Municipal Code* (Municipal Code).

5.10.1 EXISTING SETTING

NOISE SCALES AND DEFINITIONS

Sound is described in terms of the loudness (amplitude) of the sound and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Since the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against frequencies in a manner approximating the sensitivity of the human ear.

Decibels are based on the logarithmic scale. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range of numbers in a manner similar to the Richter scale used to measure earthquakes. In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud, and 20 dBA higher four times as loud, and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are illustrated on Exhibit 5.10-1, *Common Environmental Noise Levels*.

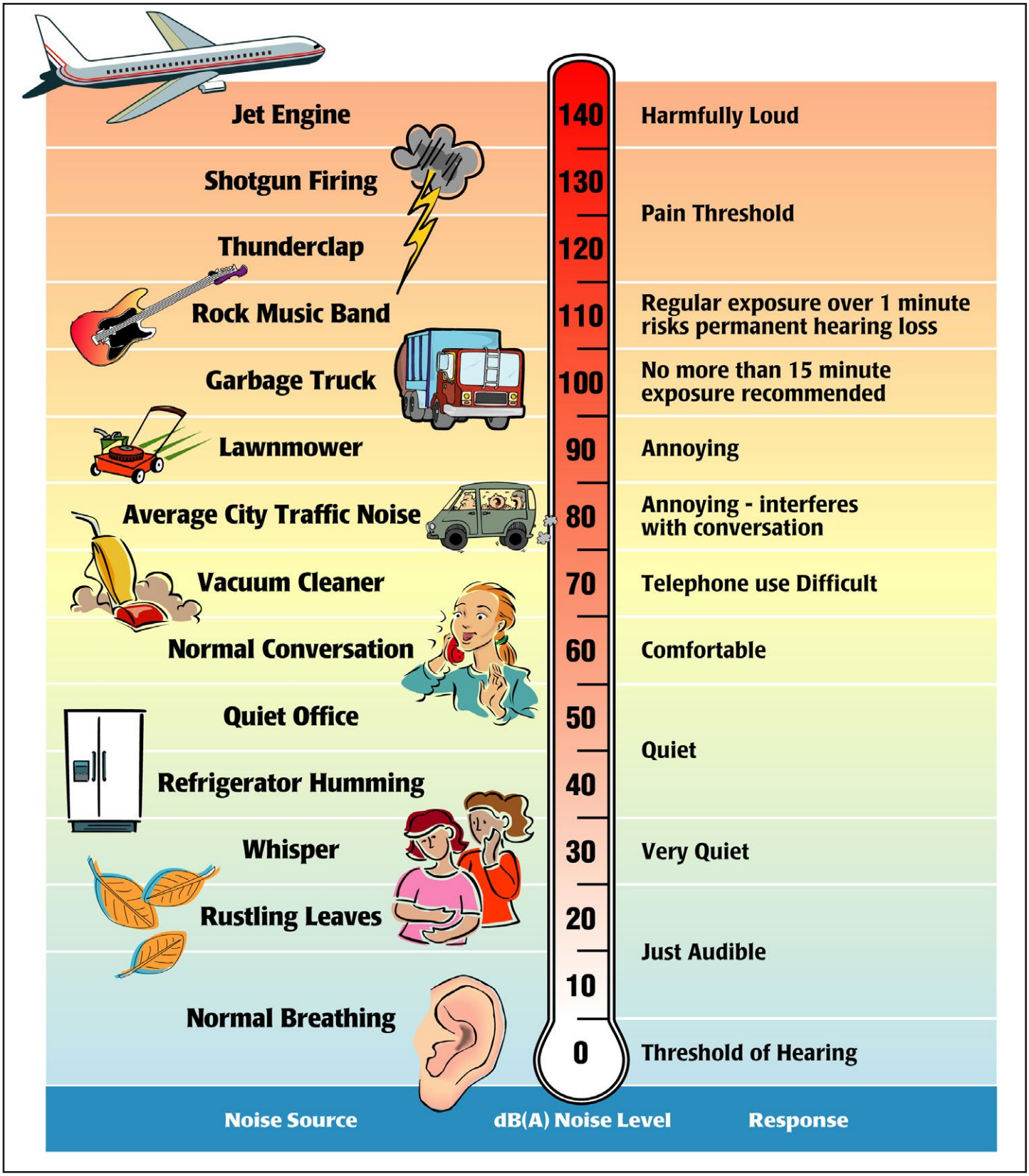
Many methods have been developed for evaluating community noise to account for, among other things:

- The variation of noise levels over time;
- The influence of periodic individual loud events; and
- The community response to changes in the community noise environment.

Numerous methods have been developed to measure sound over a period of time; refer to Table 5.10-1, *Noise Descriptors*.

HEALTH EFFECTS OF NOISE

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. However, many factors influence people's response to noise. The factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person's opinion of the noise source, the ability to adapt to the noise, the attitude towards the source and those associated with it, and the predictability of the noise, all influence people's response. As such, response



Source: Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (EPA/ONAC 550/9-74-004), March 1974.

Common Environmental Noise Levels

Table 5.10-1
Noise Descriptors

Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measured sound to a reference pressure (20 micropascals).
A-Weighted Decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent Sound Level (L_{eq})	The sound level containing the same total energy as a time varying signal over a given time period. The L_{eq} is the value that expresses the time averaged total energy of a fluctuating sound level.
Maximum Sound Level (L_{max})	The highest individual sound level (dBA) occurring over a given time period.
Minimum Sound Level (L_{min})	The lowest individual sound level (dBA) occurring over a given time period.
Community Noise Equivalent Level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments are +5 dBA for the evening, 7:00 PM to 10:00 PM, and +10 dBA for the night, 10:00 PM to 7:00 AM.
Day/Night Average (L_{dn})	The L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the L_{eq}. The L_{dn} is calculated by averaging the L_{eq}'s for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 PM to 7:00 AM) by 10 dBA to account for the increased sensitivity of people to noises that occur at night.
Exceedance Level (L_n)	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% (L_{01}, L_{10}, L_{50}, L_{90}, respectively) of the time during the measurement period.

Source: Cyril M. Harris, *Handbook of Noise Control*, dated 1979.

to noise varies widely from one person to another and with any particular noise, individual responses will range from "not annoyed" to "highly annoyed."

HEALTH EFFECTS OF NOISE

Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. However, many factors influence people's response to noise. The factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person's opinion of the noise source, the ability to adapt to the noise, the attitude towards the source and those associated with it, and the predictability of the noise, all influence people's response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses will range from "not annoyed" to "highly annoyed."

The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on the community can be organized into six broad categories:

- Noise-Induced Hearing Loss;
- Interference with Communication;
- Effects of Noise on Sleep;

- Effects on Performance and Behavior;
- Extra-Auditory Health Effects; and
- Annoyance.

According to the United States Public Health Service, nearly ten million of the estimated 21 million Americans with hearing impairments owe their losses to noise exposure. Noise can mask important sounds and disrupt communication between individuals in a variety of settings. This process can cause anything from a slight irritation to a serious safety hazard, depending on the circumstance. Noise can disrupt face-to-face communication and telephone communication, and the enjoyment of music and television in the home. It can also disrupt effective communication between teachers and pupils in schools, and can cause fatigue and vocal strain in those who need to communicate in spite of the noise.

Interference with communication has proved to be one of the most important components of noise-related annoyance. Noise-induced sleep interference is one of the critical components of community annoyance. Sound level, frequency distribution, duration, repetition, and variability can make it difficult to fall asleep and may cause momentary shifts in the natural sleep pattern, or level of sleep. It can produce short-term adverse effects on mood changes and job performance, with the possibility of more serious effects on health if it continues over long periods. Noise can cause adverse effects on task performance and behavior at work, and non-occupational and social settings. These effects are the subject of some controversy, since the presence and degree of effects depends on a variety of intervening variables. Most research in this area has focused mainly on occupational settings, where noise levels must be sufficiently high and the task sufficiently complex for effects on performance to occur.

Annoyance can be viewed as the expression of negative feelings resulting from interference with activities, as well as the disruption of one's peace of mind and the enjoyment of one's environment. Field evaluations of community annoyance are useful for predicting the consequences of planned actions involving highways, airports, road traffic, railroads, or other noise sources. The consequences of noise-induced annoyance are privately held dissatisfaction, publicly expressed complaints to authorities, and potential adverse health effects, as discussed above. In a study conducted by the United States Department of Transportation, the effects of annoyance to the community were quantified. In areas where noise levels were consistently above 60 dBA CNEL, approximately nine percent of the community is highly annoyed. When levels exceed 65 dBA CNEL, that percentage rises to 15 percent. Although evidence for the various effects of noise have differing levels of certainty, it is clear that noise can affect human health. Most of the effects are, to a varying degree, stress related.

GROUND-BORNE VIBRATION

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. The peak particle velocity (PPV) or the root mean square (RMS) velocity is usually used to describe vibration amplitudes. PPV is defined as the maximum instantaneous peak or vibration signal, while RMS is defined as the square root of the average of the squared amplitude of the signal. PPV is typically used for evaluating potential building damage, whereas RMS is typically more suitable for evaluating human response. Typically, ground-borne vibration, generated by man-made activities, attenuates rapidly with distance from the source

of vibration. Man-made vibration issues are therefore usually confined to short distances (i.e., 500 feet or less) from the source.

Both construction and operation of development projects can generate ground-borne vibration. In general, demolition of structures preceding construction generates the highest vibrations. Construction equipment such as vibratory compactors or rollers, pile drivers, and pavement breakers can generate perceptible vibration during construction activities. Heavy trucks can also generate ground-borne vibrations that vary depending on vehicle type, weight, and pavement conditions.

SENSITIVE RECEPTORS

Human response to noise varies widely depending on the type of noise, time of day, and sensitivity of the receptor. The effects of noise on humans can range from temporary or permanent hearing loss to mild stress and annoyance due to such things as speech interference and sleep deprivation. Prolonged stress, regardless of the cause, is known to contribute to a variety of health disorders. Noise, or the lack thereof, is a factor in the aesthetic perception of some settings, particularly those with religious or cultural significance. Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours. Sensitive uses within the immediate project area include residential uses to the north, east, west, and south. Additional existing sensitive receptors located in the project vicinity include hotels, schools, places of worship, libraries, parks and recreation, and a hospital; refer to Table 5.10-2, *Sensitive Receptors*.

MOBILE SOURCES

The majority of the existing noise in the project area is generated from vehicle sources along the roadways adjacent to the project site including Dover Drive, Coast Highway, and Bayside Drive. As shown in the General Plan EIR Table 4.9-4, *Existing Roadway Noise Levels*, the existing traffic noise levels range from a low of 64.6 CNEL along Dover Drive from Cliff Drive to Coast Highway to a high of 69.4 CNEL along Coast Highway from Bayside Drive to Jamboree Road.

STATIONARY NOISE SOURCES

The project area consists of residential, commercial, and commercial recreational marine uses. The primary sources of stationary noise in the project vicinity are urban-related activities (e.g., parking areas, conversations, and commercial areas). The noise associated with these sources may represent a single-event or a continuous occurrence.

Table 5.10-2
Sensitive Receptors

Type	Name	Approximate Distance from Project Site (feet)	Orientation from Project Site	Location/Description
Residential	Residential Uses	25	North	Single Family Residences
		25	East	Single Family Residences
		25	South	Single Family Residences
		50	West	Single Family Residences
Hotels	Hyatt Regency Newport Beach	3,705	East	1107 Jamboree Road
	Balboa Inn	5,269	South	105 Main Street
Schools	Newport Harbor High School	1,925	Northwest	600 Irvine Avenue
	Horace Ensign Intermediate School	2,765	Northwest	2000 Cliff Drive
	Harper Elementary School	4,546	North	452 E 18th Street, Costa Mesa
	Mariners Elementary School	4,785	North	2100 Mariners Drive
	Newport Elementary School	4,850	Southwest	1327 West Balboa Boulevard
	Children's Center By the Sea	4,910	Southwest	1400 West Balboa Boulevard
	Newport Heights Elementary	4,981	Northwest	300 E 15th Street
Places of Worship	Newport Harbor Lutheran Church	910	North	798 Dover Drive
	St. Andrew's Presbyterian Church	2,047	Northwest	600 St Andrews Road
	St. John Vianney Chapel	4,480	Southeast	314 Marine Avenue
	Christ Church by the Sea	4,910	Southwest	1400 West Balboa Boulevard
	Our Lady of Mount Carmel Church	5,172	Southwest	1441 West Balboa Boulevard
Hospitals	Newport Bay Hospital	1,265	North	1501 East 16th Street
Libraries	Balboa Branch Library	4,277	South	100 East Balboa Boulevard
	Mariners Library	5,182	North	1300 Irvine Avenue
Recreation/ Parks	Bob Henry Park	1,370	North	900 Dover Drive
	Back Bay View Park	2,904	Southeast	Jamboree Road and East Coast Highway
	Back Bay Golf & Fitness	3,724	Northeast	1107 Jamboree Road
	Genoa Park	3,791	West	232 Via Genoa
	Harper Park	4,546	North	452 E 18th Street, Costa Mesa
	Galaxie View Park	4,750	Northeast	1554 Galaxy Drive
	Pinkley Park	4,794	Northwest	360 Ogle Street, Costa Mesa
	Cliff Drive Park	4,840	Northwest	298 Riverside Avenue

Note:
1. Distances are measured from the exterior project boundary only and not from individual construction projects/areas within the interior of the project site.
Source: Google Earth, 2019.

5.10.2 REGULATORY SETTING

This section summarizes the laws, ordinances, regulations, and standards that are applicable to the project. Regulatory requirements related to environmental noise are typically promulgated at the local level. However, Federal and State agencies provide standards and guidelines to the local jurisdictions.

STATE OF CALIFORNIA GUIDELINES

California Environmental Quality Act

CEQA was enacted in 1970 and requires that all known environmental effects of a project be analyzed, including environmental noise impacts. Under CEQA, a project has a potentially significant impact if the project exposes people to noise levels in excess of standards established in the local general plan or noise ordinance. Additionally, under CEQA, a project has a potentially significant impact if the project creates a substantial increase in the ambient noise levels in the project vicinity above levels existing without the project. If a project has a potentially significant impact, mitigation measures must be considered. If mitigation measures to reduce the impact to less than significant levels are not feasible due to economic, social, environmental, legal, or other conditions, the most feasible mitigation measures must be considered.

California Government Code

California Government Code Section 65302(f) mandates that the legislative body of each county, town, and city adopt a noise element as part of their comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of "normally acceptable", "conditionally acceptable," "normally unacceptable," and "clearly unacceptable" noise levels for various land use types. Single-family homes are "normally acceptable" in exterior noise environments up to 60 CNEL and "conditionally acceptable" up to 70 CNEL. Multiple-family residential uses are "normally acceptable" up to 65 CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries, and churches are "normally acceptable" up to 70 CNEL, as are office buildings and business, commercial, and professional uses.

CITY OF NEWPORT BEACH

Newport Beach Noise Ordinance

The City of Newport Beach has a noise ordinance that provides noise guidelines and standards for significant noise generators. Noise standards from Chapter 10.26 (*Community Noise Control*) of Title 10: Offenses and Nuisances of the City's Municipal Code are presented in Table 5.10-3, *City of Newport Beach Exterior Noise Standards*, and Table 5.10-4, *City of Newport Beach Interior Noise Standards*.

Section 10.26.025 Exterior Noise Standards

A. The following noise standards, unless otherwise specifically indicated, shall apply to all property with a designated noise zone:

Table 5.10-3
City of Newport Beach Exterior Noise Standards

Zone	Allowable Exterior Noise Level (L_{eq})[1]	
	7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
1. Single-, two- or multiple-family residential properties	55 dBA	50 dBA
2. Commercial properties	65 dBA	60 dBA
3. Residential portions of mixed-use properties	60 dBA	50 dBA
4. Industrial or manufacturing	70 dBA	70 dBA

1. If the ambient noise level exceeds the resulting standards, the ambient shall be the standard.
Source: Chapter 10.26 (*Community Noise Control*) Section 10.26.025(A) of the City of *Newport Beach Municipal Code*, 2018.

B. It is unlawful for any person at any location within the incorporated area of the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, to exceed the following:

1. The noise standard for the applicable zone for any fifteen-minute period;

2. A maximum instantaneous noise level equal to the value of the noise standard plus twenty (20) dBA for any period of time (measured using A-weighted slow response).

C. In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

D. The Noise Zone III standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property, if the intruding noise originates from that commercial property.

E. If the measurement location is on boundary between two difference noise zones, the lower noise level standard applicable to the noise zone shall apply.

Section 10.26.030 Interior Noise Standards

A. The following noise standard, unless otherwise specifically indicated, shall apply to all residential property within all noise zones:

Table 5.10-4
City of Newport Beach Interior Noise Standards

Noise Zone	Type of Land Use	Allowable Interior Noise Level[1]	
		7 a.m. to 10 p.m.	10 p.m. to 7 a.m.
I	Residential	45 dBA	40 dBA
III	Residential portions of mixed-use properties	45 dBA	40 dBA

1. If the ambient noise level exceeds the resulting standards, the ambient shall be the standard.
Source: Chapter 10.26 (*Community Noise Control*) Section 10.26.030(A) of the City of *Newport Beach Municipal Code*, 2018.

B. It is unlawful for any person at any location within the incorporated area of the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, which causes the noise level when measured on any other property, to exceed the following:

1. The noise standard for the applicable zone for any fifteen-minute period;

2. A maximum instantaneous noise level equal to the value of the noise standard plus twenty (2) dBA for any period of time (measured using A-weighted slow response).

C. In the event the ambient noise level exceeds the noise standard, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

D. The Noise Zone III standard shall apply to that portion of residential property falling within one hundred (100) feet of a commercial property, if the intruding noise originates from that commercial property.

E. If the measurement location is on boundary between two difference noise zones, the lower noise level standard applicable to the noise zone shall apply.

10.28.040 Construction Activity—Noise Regulations.

The following noise regulations regarding construction activity from Chapter 10.28, Loud and Unreasonable Noise, of the City of Newport Beach Municipal Code are applicable to the proposed project:

A. Weekdays and Saturdays. No person shall, while engaged in construction, remodeling, digging, grading, demolition, painting, plastering or any other related building activity, operate any tool, equipment or machine in a manner which produces loud noise that disturbs, or could disturb, a person of normal sensitivity who works or resides in the vicinity, on any weekday except between the hours of seven a.m. and six-thirty p.m., nor on any Saturday except between the hours of eight a.m. and six p.m.

B. Sundays and Holidays. No person shall, while engaged in construction, remodeling, digging, grading, demolition, painting, plastering or any other related building activity, operate any tool, equipment or machine in a manner which produces loud noise that disturbs, or could disturb, a person of normal sensitivity who works or resides in the vicinity, on any Sunday or any federal holiday.

C. No landowner, construction company owner, contractor, subcontractor, or employer shall permit or allow any person or persons working under their direction and control to operate any tool, equipment or machine in violation of the provisions of this section.

Newport Beach General Plan

The City of Newport Beach General Plan discloses guiding information pertaining to noise sensitive land uses and noise sources, and defines areas of noise impact for the purpose of developing policies to ensure that Newport Beach residents will be protected from excessive noise intrusion. The Noise Element includes goals, objectives, and policies that apply to the proposed project, including those identified below.

Goal N 1, Noise Compatibility: Minimized land use conflicts between various noise sources and other human activities.

Policy N 1.1: Require that all proposed projects are compatible with the noise environment through the use of Table N2 (Table 5.10-5, *General Plan Land Use Noise Compatibility Matrix*, below), and enforce the interior and exterior noise standards shown in Table N3 (Tables 5.10-3 and 5.10-4 above).

Table 5.10-5
General Plan Land Use Noise Compatibility Matrix

Land Use Categories		Community Noise Equivalent Level (CNEL)						
Categories	**Uses**	**<55**	**55-60**	**60-65**	**65-70**	**70-75**	**75-80**	**>80**
Residential	Single Family, Two Family, Multiple Family	A	A	B	C	C	D	D
Residential	Mixed Use	A	A	A	C	C	C	D
Residential	Mobile Home	A	A	B	C	C	D	D
Commercial Regional, District	Hotel, Motel, Transient Lodging	A	A	B	B	C	C	D
Commercial Regional, Village District, Special	Commercial Retail, Bank, Restaurant, Movie Theatre	A	A	A	A	B	B	C
Commercial Industrial Institutional	Office Building, Research and Development, Professional Offices, City Office Building	A	A	A	B	B	C	D
Commercial Recreational / **Institutional Civic Center**	Amphitheatre, Concert Hall Auditorium, Meeting Hall	B	B	C	C	D	D	D
Commercial Recreation	Children's Amusement Park, Miniature Golf Course, Go-cart Track, Equestrian Center, Sports Club	A	A	A	B	B	D	D
Commercial General, Special / **Industrial, Institutional**	Automobile Service Station, Auto Dealership, Manufacturing, Warehousing, Wholesale, Utilities	A	A	A	A	B	B	B
Institutional	Hospital, Church, Library, Schools' Classroom	A	A	B	C	C	D	D
Open Space	Parks	A	A	A	B	C	D	D
Open Space	Golf Course, Cemeteries, Nature Centers Wildlife Reserves, Wildlife Habitat	A	A	A	A	B	C	C
Agriculture	Agriculture	A	A	A	A	A	A	A

Source: Newport Beach Noise Element, 2006

Zone A: Clearly Compatible—Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Zone B: Normally Compatible—New construction or development should be undertaken only after detailed analysis of the noise reduction requirements and are made and needed noise insulation features in the design are determined. Conventional construction, with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Zone C: Normally Incompatible—New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of noise reduction requirements must be made and needed noise insulation features included in the design.

Zone D: Clearly Incompatible—New construction or development should generally not be undertaken.

Policy N 1.2: Applicants for proposed projects that require environmental review and are, located in areas projected to be exposed to a CNEL of 60 dBA and higher, as shown on Figure N4, Figure N5, and Figure N6 (see pages 12-17 through 12-22 of the City's General Plan Noise Element) may conduct a field survey, noise measurements or other modeling in a manner acceptable to the City to provide evidence that the depicted noise contours do not adequately account for local noise exposure circumstances due to such factors as, topography, variation in traffic speeds, and other applicable conditions. These findings shall be used to determine the level of exterior or interior, noise attenuation needed to attain an acceptable noise exposure level and the feasibility of such mitigation when other planning considerations are taken into account.

Policy N 1.3: Require that all remodeling and additions of structures comply with the noise standards shown in Table N3 (Tables 5.10-3 and 5.10-4 above).

Policy N 1.8: Require the employment of noise mitigation measures for existing sensitive uses when a significant noise impact is identified. A significant noise impact occurs when there is an increase in the ambient CNEL produced by new development impacting existing sensitive uses. The CNEL increase is shown in Table 5.10-6, *General Plan Noise Increase Significance Criteria*.

Table 5.10-6
General Plan Noise Increase Significance Criteria

CNEL (dBA)	dBA Increase
55	3
60	2
65	1
70	1
Over 75	Any increase is considered significant

Source: City of Newport Beach Noise Element, 2006.

Goal N 4, Minimization of Non-transportation-Related Noise: Minimized non-transportation-related noise impacts on sensitive noise receptors.

Policy N 4.1: Enforce interior and exterior noise standards outlined in Table N3 (Tables 5.10-3 and 5.10-4 above), and in the City's Municipal Code to ensure that sensitive noise receptors are not exposed to excessive noise levels from stationary noise sources, such as heating, ventilation, and air conditioning equipment.

Policy N 4.6: Enforce the Noise Ordinance noise limits and limits on hours of maintenance or construction activity in or adjacent to residential areas, including noise that results from in-home hobby or work related activities.

Policy N 4.8: Regulate the use of mechanized landscaping equipment.

Goal N 5, Minimized excessive construction-related noise.

Policy N 5.1: Enforce the limits on hours of construction activity.

5.10.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies (refer to Impact Statement N-1, N-3, and N-4);
- Generation of excessive ground borne vibration or groundborne noise levels (refer to Impact Statement N-2); and/or
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels (refer to Section 8.0, *Effects Found Not To Be Significant*).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

5.10.4 IMPACTS AND MITIGATION MEASURES

SHORT-TERM CONSTRUCTION NOISE IMPACTS

N-1 GRADING AND CONSTRUCTION WITHIN THE AREA COULD RESULT IN SIGNIFICANT TEMPORARY NOISE IMPACTS TO NEARBY NOISE SENSITIVE RECEIVERS.

Impact Analysis:

Original Northeast Pump Station

Construction activities associated with the Original Northeast Pump Station would generate perceptible noise levels during the demolition, grading, paving, and building construction phases. Construction for the Newport Bay Channel Crossing force main improvements would require laydown areas and staging of contractor equipment, as shown in Exhibit 3-8, *Original Northeast Pump Station Work Areas.* Construction of the West Coast Highway force main improvements would require laydown areas, jacking shaft and reception shaft work areas, and additional space to account for extra excavations necessary for force main connections and placement; refer to Exhibit 3-9, *Original Northeast Pump Station Construction* and Exhibit 3-10, *Temporary Pipe Stringing Alignment Option*. Proposed

access to the site for the removal of excavated soils and delivery of heavy equipment would primarily occur via Bayside Drive in the eastern portion of the project site as well as Dover Drive and East Coast Highway to the west of the project site. High groundborne noise levels and other miscellaneous noise levels can be created by the operation of heavy-duty trucks, backhoes, bulldozers, cranes, excavators, front-end loaders, forklifts, and other heavy-duty construction equipment. Table 5.10-7, *Maximum Noise Levels Generated by Construction Equipment*, indicates the anticipated noise levels of typical construction equipment. The average noise levels presented in Table 5.10-7 are based on the quantity, type, and Acoustical Use Factor for each type of equipment that is anticipated to be used.

Table 5.10-7
Maximum Noise Levels Generated by Construction Equipment

Type of Equipment	Acoustical Use Factor[1] (percent)	L_{max} at 50 Feet (dBA)
Crane	16	81
Dozer	40	82
Excavator	40	81
Generator	50	81
Horizontal Boring Hydraulic Jack	25	82
Other Equipment (greater than five horse power)	50	85
Paver	50	77
Pile Driver (impact)	20	101
Pile Driver (sonic)	20	96
Roller	20	80
Tractor	40	84
Truck	40	80
Welder	40	73

Note:
1. Acoustical use factor (percent): Estimates the fraction of time each piece of construction equipment is operating at full power (i.e., its loudest condition) during a construction operation.

Source: Federal Highway Administration, Roadway Construction Noise Model (FHWA-HEP-05-054), January 2006.

Grading would require the export of approximately 1,210 cubic yards of soil for the bore pits for the Newport Channel force main improvements, the import and export of approximately 3,022 cubic yards of soil for open cut trenching through an area within the southern portion of Castaways Park, the export of 542 cubic yards of a reception shaft and connections for the Coast Highway force main improvements, the import of approximately 1,400 cubic yards of soil for the construction of the pump station improvements, and the import and export of approximately 1,200 cubic yards of soil for gravity sewer reroutes to the new pump station. The highest noise levels are anticipated during earthwork activities (use of excavators, tractors/loaders/backhoes, a dozer, crane, paver, concrete/industrial saw, generator set, and other construction equipment), and building construction (use of forklifts, tractors/loaders/backhoes, a crane, generator set, welder, and other construction equipment). It is noted that pile driving would not be required for the Original Northeast Pump Station. Point sources of noise emissions are atmospherically attenuated by a factor of 6.0 dBA per doubling of distance. This assumes a clear line-of-sight and no other machinery or equipment noise that would mask project

construction noise. The shielding of buildings and other barriers that interrupt line-of-sight conditions further reduce noise levels from point sources.

Construction noise impacts generally occur when construction activities occur in areas immediately adjoining noise sensitive land uses, during noise sensitive times of the day, or when construction durations last over extended periods of time. The closest existing sensitive receptors to the construction areas are residential uses to the north, east, and south of the project site boundary. These sensitive uses may be exposed to elevated noise levels during project construction. However, Mitigation Measure NOI-1 would reduce short-term construction noise impacts by requiring mobile equipment to be muffled and requiring best management practices for hauling activities. Additionally, section 10.28.040(A) of the Municipal Code does not establish quantitative construction noise standards. Instead, the City of Newport Beach exempts construction noise from adherence to noise standards as long as activity occurs during permissible hours of 7:00 a.m. to 6:30 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays. Unless conditional approval is provided by the review authority pursuant to Municipal Code Section 10.28.040(D)(2), construction activities are not permitted outside the allowable time window or on Sundays and National Holidays.

Horizontal directional drilling (HDD)/microtunneling would be required to occur on a 24 hour per day basis for construction of the Original Northeast Pump Station, which would require drilling outside of the City of Newport Beach hour limitations for construction. HDD/microtunneling construction would occur in two separate areas on either side of the Newport Bay Channel. Based on FHWA data, HDD/microtunneling activity is estimated to be 82 dBA at 50 feet. The closest sensitive receptors to the HDD/microtunneling activity would be the residences located approximately 50 feet north of the proposed pump station and residences located approximately 80 feet to the east across Bayside Drive; refer to Exhibit 3-7, *Original Northeast Pump Station Work Areas*. As such, HDD/microtunneling activity would expose sensitive receptors to temporary elevated noise levels (78 to 82 dBA). Pursuant to Municipal Code section 10.28.040(A), the City of Newport Beach exempts construction noise between the hours of 7:00 a.m. to 6:30 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays. However, in accordance with Municipal Code sections 10.26.025(A) and 10.26.030(A), residential exterior and interior noise levels should not exceed should not exceed 50 dBA and 40 dBA, respectively, during nighttime hours (i.e. 10:00 p.m. to 7:00 a.m., when most people are sleeping). Therefore, noise levels that exceed the City's nighttime exterior and/or interior noise standards would disturb residential uses (i.e. sensitive receptors) near the site. Exterior and interior noise levels would range from 78 to 82 dBA, and 58 to 62 dBA,[1] respectively, at the nearest sensitive receptors during HDD/microtunneling activities and would exceed the City's 50 dBA nighttime exterior noise standard and 40 dBA nighttime interior noise standard. Therefore, mitigation would be required to reduce construction noise levels below the City's nighttime noise standards to ensure nearby sensitive receptors would not be disturbed.

Temporary construction noise barriers or enclosures can provide a sound reduction 35 dBA or greater.[2] To be effective, a noise enclosure/barrier must physically fit in the available space, must completely break the line of sight between the noise source and the receptors, must be free of degrading holes or gaps, and must not be flanked by nearby reflective surfaces. Noise barriers must be sizable enough to cover the entire noise source, and extend length-wise and vertically as far as

1 Assuming a 20-dBA outdoor-indoor noise attenuation rate, per the U.S. Department of Housing and Urban Development, *The Noise Guidebook*, March 2009, page 14.

2 Western Electro-Acoustic Laboratory, Inc., *Sound Transmission Sound Test* Laboratory *Report No. TL 96-186*. November 30, 2000.

feasibly possible to be most effective. The limiting factor for a noise barrier is not the component of noise transmitted through the material, but rather the amount of noise flanking around and over the barrier. In these cases, the enclosure/barrier system must either be very tall or have some form of roofed enclosure if protection of upper-story receptors is a concern.

Mitigation Measure NOI-2 is required in order to ensure nighttime HDD/microtunneling activities comply with the City's noise standards. Mitigation Measure NOI-2 requires the preparation of a Construction Noise Control Plan to demonstrate sensitive receptors would not be disturbed by construction noise levels. The Construction Noise Control Plan would identify noise reduction measures (e.g., temporary construction noise barriers, sound-attenuating enclosures, etc.) to minimize construction noise levels at off-site sensitive receptors and demonstrate compliance with Municipal Code Chapter 10.26 and 10.28. Compliance with Municipal Code Chapter 10.26 and 10.28 would ensure sensitive receptors are not disturbed outside of allowable construction hours. With the implementation of Mitigation Measure NOI-2, nighttime HDD/microtunneling noise levels would be reduced below the City's nighttime noise standards. As such, sensitive receptors would not be disturbed by construction noise as mitigated nighttime construction noise would not exceed the City's exterior nighttime noise standard of 50 dBA and/or interior nighttime noise standard of 40 dBA.

Construction activities would also cause increased noise along access routes to and from the site due to movement of equipment and workers. Although HDD/microtunneling would occur at night, activities along access routes would be limited to passenger vehicles and would only occur during daytime hours (7:00 a.m. to 6:30 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturdays). As such, all remaining construction would be limited to daytime hours, per Municipal Code Section 10.28.040, and noise from vehicles accessing the project site is not anticipated to be significant.

Adherence to the Municipal Code Chapter 10.26 and 10.28 requirements, and compliance with Mitigation Measures NOI-1 and NOI-2 would reduce short-term construction noise impacts by requiring mobile equipment to be muffled and requiring a Construction Noise Control Plan to minimize construction noise levels at off-site sensitive receptors. In addition, Mitigation Measure NOI-1 would require a disturbance coordinator to respond to construction noise complaints and direct equipment away from sensitive receptors to further reduce construction-related noise. Construction of the proposed project is anticipated to occur over a 44-month period and would begin in one improvement area and subsequently move to the other improvement areas as the construction process progresses. Therefore, sensitive receptors would not be exposed to significant construction noise levels over an extended period of time. As construction would be limited to daytime hours, with the exception of HDD/microtunneling, per Municipal Code Section 10.28.040 and due to the specific nature of construction activities, construction-related noise would be less than significant with mitigation.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the construction activities required would be similar to those proposed under the Original Northeast Pump Station. However, construction of the Modified Northeast Pump Station proposes an alternative dredging construction method for force main improvements. As such, the project may require the use of sonic pile driving equipment and would be shorter in duration than the Original Northeast Pump Station. These construction variations are discussed in more detail below.

Similar to the Original Northeast Pump Station, the Modified Northeast Pump Station proposes microtunneling as a potential construction method to install the force main improvements across the Newport Bay Channel to the south of Bay Bridge. However, the Modified Northeast Pump Station also proposes dredging as a potential construction method, as opposed to microtunneling, across the Newport Bay Channel. The dredging construction method would require trenching of approximately 3,870 cubic yards of cut and 3,730 cubic yards of fill. Dredging activities would require the use of excavator clamshell dredge/backfill equipment which produce noise levels of approximately 77 dBA at 50 feet.[3] As such, construction noise levels generated during dredging activities would not exceed typical construction noise levels analyzed under the Original Northeast Pump Station. Additionally, HDD would not be an option for the Modified Northeast Pump Station design and therefore laydown areas for pipe staging activities would not be necessary.

In addition, all components of Modified Northeast Pump Station construction could involve sonic pile driving activities. Based on FHWA data, sonic pile driving activity is estimated to be 96 dBA at 50 feet. The closest sensitive receptors to the sonic pile driving activity would be the residences located approximately 50 feet north of the proposed pump station location. Residences are also located approximately 80 feet to the east across Bayside Drive and approximately 112 feet south of West Coast Highway. Although construction noise is exempt during daytime hours (per Municipal Code Section 10.28.040), Mitigation Measure NOI-2 would require the preparation of a Construction Noise Control Plan to demonstrate sensitive receptors would not be disturbed by construction noise levels. The Construction Noise Control Plan would identify noise reduction measures (e.g. temporary construction noise barriers) to minimize construction noise levels at off-site sensitive receptors, demonstrating compliance with Municipal Code Chapter 10.26 and 10.28. As discussed previously, temporary construction noise barriers can provide a sound reduction of up to 35 dBA. With implementation of Mitigation Measure NOI-2, sonic pile driving noise levels would be reduced to as low as 61 dBA at the closest receptors to the north. As shown in Exhibit 5.10-1, human response to noise levels reaching 61 dBA are considered comfortable. Further, construction would be required to implement Mitigation Measures NOI-1 and NOI-2, as well as comply with Municipal Code Section 10.28.040 limiting construction to daytime hours. Thus, construction-related noise would be less than significant with incorporation of Mitigation Measures NOI-1 and NOI-2.

South Pump Station

The analyses for the Original Northeast Pump Station and Modified Northeast Pump Station are also applicable to the South Pump Station. Development of the South Pump Station would involve shifting and expanding the existing pump station facility site approximately 200 feet to the west and constructing a new pump station building. Pump station improvements construction activities for the South Pump Station would be similar to that of the Original Northeast Pump Station and Modified Northeast Pump Station. The South Pump Station improvements would require approximately 2,800 cubic yards of cut and 500 cubic yards of fill. Similar to the Modified Northeast Pump Station, the South Pump Station would install force mains across the Newport Bay Channel via either dredging or microtunneling. Thus, the analyses for the Original Northeast Pump Station and Modified Northeast

[3] Epsilon Associates, Inc., Hudson River PCBs Superfund Site Phase 1 Final Design Report, Attachment J – Noise Impact Assessment, https://www3.epa.gov/hudson/pdf/2006_03_21%20Phase%20I%20FDR%20 ATTACHMENT%20J.pdf, accessed February 15, 2019.

Pump Station would be applicable to the South Pump Station and construction-related noise would be less than significant with incorporation of Mitigation Measures NOI-1 and NOI-2.

Mitigation Measures: The following mitigation measures apply to each site plan concept as specified:

Original Northeast Pump Station

NOI-1 Prior to the initiation of construction, the Orange County Sanitation District shall confirm that the Grading Plan, Building Plans, and specifications stipulate that:

- All construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other State required noise attenuation devices.
- The Orange County Sanitation District shall provide a "Noise Disturbance Coordinator." The Disturbance Coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the Disturbance Coordinator shall determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall implement measures to resolve the complaint and comply with the City Noise Ordinance. The construction hotline telephone number shall be clearly posted on-site.
- Construction haul routes shall be designed to avoid noise sensitive uses (e.g., residences, schools, hospitals, etc.) to the greatest extent possible.
- During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers.
- Construction activities that produce noise shall not take place outside of the allowable hours specified by the City of Newport Beach Municipal Code, with the exception of the 24 hour per day operation of HDD/microtunneling/dredging (pursuant to Mitigation Measure NOI-2). Alternative work hours may be designated by the City to reduce other impacts, such as traffic.

NOI-2 Prior to issuance of Demolition or Building Permits, the Orange County Sanitation District, or designee, shall retain an Acoustical Engineer to prepare a Construction Noise Control Plan. The Construction Noise Control Plan shall identify the types, location, and duration of equipment to be used during project construction. Construction noise levels shall be quantified and estimated at the nearest sensitive uses (i.e., residences, schools, churches, recreation/park facilities, hospitals, libraries, etc.) within 1,000 feet of the project construction area. Based on proposed construction hours and equipment to be used, the Construction Noise Control Plan shall identify noise reduction measures to minimize construction noise levels at off-site sensitive uses, demonstrating compliance with the Newport Beach Municipal Code Chapter 10.26 and 10.28. Noise reduction measures may include the use of sound blankets, sound walls/barriers, noise shrouds, and/or limiting the use of heavy noise-emitting equipment to non-sensitive hours (during daytime work hours and not after 5:00 p.m., etc.). The noise reduction measures shall be included in the

project engineering drawings and specifications, and/or contractor shop drawings for review by the City of Newport Beach Planning Division. All noise reduction measures identified in the Construction Noise Control Plan approved by the City of Newport Beach shall be included in all project designs and construction plans for the project.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

Modified Northeast Pump Station

Refer to Mitigation Measures NOI-1 and NOI-2.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

South Pump Station

Refer to Mitigation Measures NOI-1 and NOI-2.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

VIBRATION IMPACTS

N-2 PROJECT IMPLEMENTATION WOULD NOT RESULT IN SIGNIFICANT VIBRATION IMPACTS TO NEARBY SENSITIVE RECEPTORS.

Impact Analysis:

Original Northeast Pump Station

Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. This evaluation uses the FTA architectural damage criterion for continuous vibrations at non-engineered timber and masonry buildings of 0.2 inch-per-second PPV. Based on the California Department of Transportation (Caltrans) guidance, construction vibration would cause human annoyance if an exceedance of the 0.4 inch-per-second PPV criteria occurred.[4]

Construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances

[4] California Department of Transportation, *Transportation and Construction Vibration Guidance* Manual, *Table 20*, September 2013.

beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. The typical vibration produced by construction equipment is illustrated in Table 5.10-8, *Typical Vibration Levels for Construction Equipment*.

Table 5.10-8
Typical Vibration Levels for Construction Equipment

Equipment	Approximate peak particle velocity (inches/second) at:[1, 2]		
	25 feet	50 feet	100 feet
Large bulldozer	0.089	0.031	0.01
Loaded trucks	0.076	0.027	0.01
Small bulldozer	0.003	0.001	0.00
Jackhammer	0.035	0.012	0.00
Caisson drilling[3]	0.089	0.031	0.01

Notes:
1. Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006.
2. Calculated using the following formula: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$
3. Horizontal Directional Drilling (HDD) and caisson drilling are used interchangeably.

where: PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV (ref) = the reference vibration level in in/sec from Table 12-2 of the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
D = the distance from the equipment to the receiver

As indicated in Table 5.10-8, based on the FTA data, vibration velocities from typical heavy construction equipment that would be used during project construction range from 0.003 to 0.089 inch-per-second PPV at 25 feet from the source of activity. With regard to the proposed project, groundborne vibration would be generated primarily during HDD, on-site grading activities, and by off-site haul-truck travel. These activities would occur at distances of 25 to 50 feet or more from the closest sensitive receptors to the north, east, south, and west. Therefore, as demonstrated in Table 5.10-8, the anticipated vibration levels at 25 feet or more would not exceed the 0.2 inch-per-second PPV significance threshold during construction. It should be noted that 0.2 inch-per-second PPV is a conservative threshold, as that is the construction vibration damage criteria for non-engineered timber and masonry buildings.[5] Further, construction vibration would not cause excessive human annoyance as the highest groundborne vibration nearest sensitive receptors (i.e. 0.089 inch-per-second PPV) would not exceed the 0.4 inch-per-second PPV human annoyance criteria. Therefore, proposed construction activities associated with the project would not expose sensitive receptors to excessive groundborne vibration levels. Vibration impacts associated with construction would be less than significant and no mitigation measures are required.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. However, all components of Modified Northeast Pump Station construction may require the use of a sonic pile driver and vibratory compactor/roller. Based on the FTA data, typical vibration velocities from sonic pile driver and vibratory compactor/roller activities range from 0.17 to 0.21 inch-per-second PPV at 25 feet from the source of activity, which would exceed the 0.20 inch-per-second PPV significance threshold. At a distance of 26 feet, vibration velocities from sonic pile

5 Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006.

driver and vibratory roller activities would range from 0.16 to 0.19 inch-per-second PPV, which would be below the 0.20 PPV significance threshold. Additionally, construction vibration would not cause excessive human annoyance as the highest groundborne vibration nearest sensitive receptors (i.e. 0.19 inch-per-second PPV) would not exceed the 0.4 inch-per-second PPV human annoyance criteria. Therefore, the Modified Northeast Pump Station would be required to implement Mitigation Measure NOI-3 during operation of a sonic pile driver or vibratory compactor/roller, which prohibits sonic pile driver and vibratory compactor/roller activities within 26 feet of any structure. As such, vibration impacts would not exceed the 0.20 inch-per-second PPV significance threshold with incorporation of Mitigation Measure NOI-3 and impacts would be less than significant.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station. Thus, vibration impacts associated with construction would be less than significant with implementation of Mitigation Measure NOI-3.

Mitigation Measures: The following mitigation measures apply to each site plan concept as specified:

Original Northeast Pump Station

No mitigation measures are required

Level of Significance: Less Than Significant Impact.

Modified Northeast Pump Station

NOI-3 Prior to initiation of construction, the Orange County Sanitation District shall ensure that construction plans prohibit the use of vibratory roller and sonic pile driver equipment within 26 feet of any structure to minimize vibration impacts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

South Pump Station

Refer to Mitigation Measure NOI-3.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

LONG-TERM (MOBILE) NOISE IMPACTS

N-3 TRAFFIC GENERATED BY THE PROPOSED PROJECT WOULD NOT SIGNIFICANTLY CONTRIBUTE TO EXISTING TRAFFIC NOISE IN THE AREA OR EXCEED THE CITY'S ESTABLISHED STANDARDS.

Impact Analysis:

Original Northeast Pump Station

The project proposes improvements to bring the pump station facilities and force mains to current design and reliability standards to ensure continuous service for the OCSD service area. The proposed project would not result in off-site mobile noise impacts, since it is not considered a trip generating land use project and the traffic would not increase with implementation of the project. The project would generate up to a maximum of 15 vehicle trips per week for periodic maintenance and inspections. As the project would generate a nominal amount of vehicular trips for maintenance and/or inspection purposes, these trips occur under existing conditions and would continue under the proposed project. The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above existing conditions. Thus, impacts would be less than significant in this regard.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, traffic generated by the proposed project would not significantly contribute to existing traffic noise in the area or exceed the City's established standards. Impacts would be less than significant in this regard.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, traffic generated by the proposed project would not significantly contribute to existing traffic noise in the area or exceed the City's established standards. Impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

LONG-TERM (STATIONARY) NOISE IMPACTS

N-4 THE PROPOSED PROJECT WOULD NOT RESULT IN A SIGNIFICANT INCREASE IN LONG-TERM STATIONARY AMBIENT NOISE LEVELS.

Impact Analysis:

Original Northeast Pump Station

Upon project completion, noise in the project area would not significantly increase. The project involves construction of new pump station facilities (pump station, generator, and odor control facilities) and associated force main improvements. Primary noise sources associated with these facilities and improvements are the mechanical equipment (i.e., pumps and the odor control scrubber system).

Stationary noise from the proposed project would be similar to the existing conditions and would continue under the proposed project. Currently, OCSD operates the existing pump station with two large variable frequency drive (VFD) pumps to convey full peak wet weather flows and the smaller duty VFD pumps to convey low flows. OCSD recently added a large standby pump to the existing Bay Bridge Pump Station for desired contingency during peak wet weather flow should one of their large duty pumps become disabled. The proposed project would include the installation of five pumps (three large pumps and two smaller pumps) to meet existing peak flow of 18.5 MGD and provide required contingency/redundancy. The proposed pump station building would be constructed with a below-grade concrete dry-pit, which would house the pumps, motors, and other mechanical equipment. As the pumps would be located within a below-grade concrete dry-pit, below the electrical room, the layout of the mechanical equipment would attenuate noise generated from the pumps' operation. In addition, noise impacts to surrounding uses would be masked by traffic noise along Bayside Drive and East Coast Highway. Therefore, impacts are anticipated to be less than significant.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Thus, the Modified Northeast Pump Station would not result in a significant increase in long-term stationary ambient noise levels and impacts would be less than significant.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station would not result in a significant increase in long-term stationary ambient noise levels and impacts would be less than significant.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

5.10.5 CUMULATIVE IMPACTS

Table 4.1, *Cumulative Projects List*, identifies the related projects and other possible development in the area determined as having the potential to interact with the proposed project to the extent that a significant cumulative effect may occur. The following discussions are included per topic area to determine whether a significant cumulative effect would occur.

SHORT-TERM CONSTRUCTION NOISE IMPACTS

GRADING AND CONSTRUCTION WITHIN THE AREA COULD RESULT IN SIGNIFICANT SHORT-TERM NOISE IMPACTS TO NEARBY NOISE SENSITIVE RECEIVERS.

Impact Analysis:

Original Northeast Pump Station

Construction activities associated with the proposed project and cumulative projects may overlap, resulting in construction noise in the area. However, construction noise impacts primarily affect the areas immediately adjacent to the construction site. The closest cumulative project is the Back Bay Landing project (redevelopment involving a mixed-use waterfront project), located at and adjacent to the existing OCSD Bay Bridge Pump Station. The two projects (proposed project and Back Bay Landing project) would be adjacent to each other. However, it should be noted that the proposed project involves pump station improvements that would occur on-site and pipeline improvements that would occur off-site. As such, project construction would not be concentrated in the area adjacent to the Back Bay Landing Project for extended periods of time. The pump station improvements could occur at the same time as the Back Bay Landing project, which could result in elevated construction noise levels at sensitive receptors in the project area. Because of the logarithmic nature of decibel addition, two equally loud noise sources would be 3 dB louder than either one individually, which is a barely perceptible increase. Therefore, the cumulative effects of both construction projects may not be noticeable. Similar to the proposed project, construction-related noise and vibration levels from the related projects would be intermittent, temporary, and would comply with the City's Municipal Code limitations on allowable hours for construction noise. Cumulative projects would also be required to mitigate potential noise exceedances to the extent feasible. The proposed project would also implement Mitigation Measure NOI-1 and NOI-2 to reduce construction noise impacts to less than significant levels. Therefore, the project's incremental contribution to cumulative noise impacts would not be cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. However, all components of Modified Northeast Pump Station construction could involve sonic pile driving activities. As such, Mitigation Measure NOI-2 would implement noise reduction measures (e.g. temporary construction noise barriers) in order to reduce noise levels associated with sonic pile driver activities. Thus, the Modified Northeast Pump Station's incremental contribution to cumulative noise impacts would not be cumulatively considerable with incorporation of Mitigation Measures NOI-1 and NOI-2.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station's incremental contribution to cumulative noise impacts would be less than cumulatively considerable with incorporation of Mitigation Measures NOI-1 and NOI-2.

Mitigation Measures: Refer to Mitigation Measures NOI-1 and NOI-2 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

VIBRATION IMPACTS

PROJECT IMPLEMENTATION WOULD NOT RESULT IN SIGNIFICANT VIBRATION IMPACTS TO NEARBY SENSITIVE RECEPTORS.

Impact Analysis:

Original Northeast Pump Station

As stated above, construction activities associated with the proposed project and cumulative projects may overlap. Despite the potential for overlap, groundborne vibration generated at the project site during construction would not be in exceedance of the FTA 0.2 inch/second threshold. In addition, there would be no vibration impacts associated with operations at the project site. The nearest cumulative project is the Back Bay Landing project, located at and adjacent to the existing OCSD Bay Bridge Pump Station. Although construction of this cumulative project may occur at the same time as the proposed project, cumulatively significant construction vibration would generally only occur when construction activities on the sites occur in close vicinity of one another in a way that concentrates the vibration. The further construction activities occur from one another on each respective project site, the quicker the vibration dissipates by the time it reaches a sensitive receptor. Additionally, because heavy construction equipment moves around a project site and would only occur for limited durations, average vibration levels at the nearest structures would diminish with increasing distance between the structures and construction activities. As such, cumulative construction vibration impacts would not occur. Both the proposed project and cumulative development projects would be required to comply with the City's Municipal Code limitations on allowable hours for construction and mitigate their respective construction vibration impacts, as required. Therefore, the project's incremental contribution to cumulative vibration impacts would be less than cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. However, all components of Modified Northeast Pump Station construction may require the use of a sonic pile driver and/or vibratory roller which would exceed the FTA 0.2 inch/second threshold. As such, the Modified Northeast Pump Station would be required to implement Mitigation Measure NOI-3 during project construction activities, which prohibits sonic pile driver and vibratory compactor/roller activities within 26 feet of any structure. With implementation of Mitigation Measure NOI-3 vibration impacts would not exceed the 0.20 inch-per-second PPV significance threshold. Therefore, the Modified Northeast Pump Station's incremental contribution to cumulative vibration impacts would be less than cumulatively considerable.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station. Thus, the project's incremental contribution to cumulative vibration impacts would be less than cumulatively considerable with implementation of Mitigation Measure NOI-3.

Mitigation Measures: The following mitigation measures apply to each site plan concept as specified:

Original Northeast Pump Station

No mitigation measures are required.

Level of Significance: Less Than Significant Impact.

Modified Northeast Pump Station

Refer to Mitigation Measure NOI-3.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

South Pump Station

Refer to Mitigation Measure NOI-3.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

LONG-TERM (MOBILE) NOISE IMPACTS

TRAFFIC GENERATED BY THE PROPOSED PROJECT WOULD NOT SIGNIFICANTLY CONTRIBUTE TO EXISTING TRAFFIC NOISE IN THE AREA OR EXCEED THE CITY'S ESTABLISHED STANDARDS.

Impact Analysis:

Original Northeast Pump Station

Although the related cumulative projects have been identified within the project study area, the long-term mobile noise generated by future development projects cannot be quantified due to the speculative nature of each development. However, each cumulative project would require separate discretionary approval and CEQA assessment, which would address potential noise impacts and identify necessary attenuation measures, where appropriate.

As discussed above, the proposed project would not result in long-term mobile noise impacts based on project generated traffic. Given the project would generate a nominal amount of vehicular trips for maintenance and/or inspection purposes, the proposed project's incremental contribution to cumulative mobile noise impacts would be less than cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. As such, the Modified Northeast Pump Station's contribution to cumulative mobile noise impacts would be less than significant.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Thus, the South Pump Station's contribution to cumulative mobile noise impacts would be less than significant.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

LONG-TERM (STATIONARY) NOISE IMPACTS

THE PROPOSED PROJECT WOULD NOT RESULT IN A SIGNIFICANT INCREASE IN LONG-TERM STATIONARY AMBIENT NOISE LEVELS.

Impact Analysis:

Original Northeast Pump Station

Although the related cumulative projects have been identified within the project study area, the noise generated by stationary equipment on-site cannot be quantified due to the speculative and conceptual nature of each development. However, each cumulative project would require separate discretionary approval and CEQA assessment, which would address potential noise impacts and identify necessary attenuation measures, where appropriate. Additionally, as noise dissipates as it travels away from its source, noise impacts from stationary sources would be limited to each of the respective sites and their vicinities. The nearest cumulative project to the project site is the Back Bay Landing project, located adjacent to the existing OCSD Bay Bridge Pump Station. As noted above, the proposed project would not result in significant stationary noise impacts. The proposed project would not result in stationary long-term equipment that would significantly affect surrounding sensitive receptors. Thus, the proposed project and identified cumulative projects are not anticipated to result in a significant cumulative impact.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. As such, the Modified Northeast Pump Station and identified cumulative projects are not anticipated to result in a significant increase in long-term stationary ambient noise levels and cumulative impacts would be less than significant.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. As such, the South Pump Station and identified cumulative projects are not anticipated to result in a significant increase in long-term stationary ambient noise levels and cumulative impacts would be less than significant.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

5.10.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No unavoidable significant impacts related to noise have been identified following implementation of the recommended Mitigation Measure NOI-1 through NOI-3, as well as compliance with the applicable Federal, State, and local regulatory requirements.

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5.11 TRANSPORTATION

This section is based upon the *City of Newport Beach General Plan* (General Plan), the *Bay Bridge Pump Station and Force Mains Rehabilitation Study Preliminary Alignment Study Report* (PASR), and the *Final Technical Memorandum No. 1 – Alternative 3 Evaluation: Supplement to the PASR* (Technical Memorandum). This section evaluates development of the proposed project from a transportation standpoint. Mitigation measures are recommended, if necessary, to avoid or reduce project impacts on transportation.

5.11.1 EXISTING SETTING

STUDY AREA

Local Roadways

As shown on Exhibit 3-2, *Site Vicinity*, the study area includes the following local roadways.

Coast Highway (State Route 1). In the project vicinity, Coast Highway[1] trends in an east/west direction and is designated State Route 1 (SR-1). The posted speed limit on Coast Highway through the project area is 50 miles per hour in the project study area. From Bayside Drive to Newport Bay Bridge, East Coast Highway is a seven-lane divided roadway (four lanes in the westbound direction and three lanes in the eastbound direction) with a raised median within the project vicinity.

From Newport Bay Bridge to Dover Drive-Bayshore Drive, West Coast Highway remains a seven-lane divided roadway (four lanes in the westbound direction and three lanes in the eastbound direction) with a painted median. From Dover Drive-Bayshore Drive to the west, West Coast Highway is a five-lane divided roadway (three lanes in the westbound direction and two lanes in the eastbound direction), with a painted median and no on-street parking.

Dover Drive. Dover Drive, north of West Coast Highway, is a four-lane divided roadway with a raised median trending in a north/south direction in the project study area. The posted speed limit on Dover Drive is 45 miles per hour. On-street parking is prohibited.

Bayshore Drive. Bayshore Drive, south of West Coast Highway is a two-lane undivided roadway trending in a north/south direction within the project study area. There is no posted speed limit on Bayshore Drive. On-street parking is permitted.

Bayside Drive. Bayside Drive, south of East Coast Highway, is a four-lane divided roadway with a painted median trending in a north-south direction. The posted speed limit is 40 miles per hour. Bayside Drive, north of East Coast Highway, is a two-lane undivided roadway with no posted speed limit. On-street parking is permitted on Bayside Drive within the project area.

[1] This roadway is designated as West Coast Highway west of the Bay Bridge, and East Coast Highway east of the Bay Bridge. However, for the purposes of this impact section and for simplicity, the roadway is simply referred to as "Coast Highway" unless a differentiation is required.

EXISTING TRANSIT SERVICE

Existing Orange County Transportation Authority (OCTA) bus transit service serves the project area (Bus Routes 1 and 55). Route 1 provides service between Long Beach and San Clemente via Coast Highway, while Route 55 provides service between Santa Ana and Newport Beach via Standard Avenue, Bristol Street, Fairview Street, and 17th Street. Existing bus stops in the project vicinity include the following:

- *Dover-Cliff (Stop ID No. 4971)* – Located to the west of Dover Drive, north of West Coast Highway;
- *Dover-Coast (Stop ID No. 4968)* – Located to the east of Dover Drive, north of West Coast Highway;
- *Coast-Bayshore (Stop ID No. 4933)* – Located to the south of West Coast Highway and east of Bayshore Drive;
- *Coast-Dover (Stop ID No. 4959)* – Located to the north of West Coast Highway and west of Dover Drive;
- *Coast-Bayside (Stop ID No. 4958)* – Located to the north of East Coast Highway and west of Bayside Drive; and
- *Coast Bayside (Stop ID No. 4934)* – Located to the south of East Coast Highway and east of Bayside Drive.

Pedestrian access to the existing bus stops adjacent to the project site is currently permitted along Coast Highway.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

Recreational use of alternative travel modes (particularly bicycle and pedestrian travel) is prevalent in the project area. According to General Plan Figure CE4, *Bikeways Master Plan*, existing bicycle facilities include Class I (Off-Road Paved) facilities along Coast Highway, Bayside Drive (south of East Coast Highway), and within Castaways Park. Class II (On-Road Striped Lane) bicycle facilities are present along Coast Highway and Dover Drive. Class III (Signed Only) bicycle facilities are present along West Coast Highway (west of Dover Drive). Other modes of non-vehicular access in the project area, include existing kayak and stand-up paddleboard travel modes along Newport Bay Channel and the marina.

5.11.2 REGULATORY SETTING

STATE LEVEL

California Department of Transportation

The California Department of Transportation (Caltrans) publishes a document entitled *Guide for the Preparation of Traffic Impact Studies* (Guide), which provides guidelines and recommended elements of traffic studies for projects that could potentially impact State facilities such as State Route highways

and freeway facilities. This is a State-level document that is used by each of the Caltrans District offices.

The Guide defines when traffic studies should be conducted to address impacts to state facilities, but does not define quantitative impact standards. The Guide states that Measures of Effectiveness (MOEs) are used to evaluate Caltrans facilities, and that the agency strives to maintain a level of service (LOS) value of C on its facilities. However, the Guide states that the appropriate target LOS varies by facility and congestion level, and is defined differently by Caltrans depending on the analyzed facility.

LOCAL

City of Newport Beach General Plan

City policies pertaining to transportation are contained in the Circulation Element of the General Plan.

Circulation Element

The Circulation Element of the General Plan serves as the City's primary guide for transportation planning. The Circulation Element is concerned with accommodating the transportation needs of those living, working, and visiting the City. The goals and policies are intended to provide the best possible balance between the City's future growth and land use development, roadway size, traffic service levels and community character.

The Circulation Element focuses on roadways and other transportation modes, including public transit, bicycle paths, pedestrian corridors, trails, and Newport Harbor. Also included is an assessment of the City's current roadway system and recommendations for the improvements necessary to maintain acceptable levels of service on this system in the forecast General Plan buildout.

Goals:

CE 2.1: A roadway system that provides for the efficient movement of goods and people in the City of Newport Beach, while maintaining the community's character and its residents' quality of life.

Policies:

CE 2.1.1 *Level of Service Standards*: Plan the arterial roadway system to accommodate projected traffic at the following level of service standards:

A. Level of Service (LOS) "D" throughout the City, unless otherwise noted

B. LOS "E" at any intersection in the Airport Area shared with Irvine

C. LOS "E" at Coast Highway (EW) and Dover Drive (NS) due to right-of-way limitations

D. LOS "E" at Marguerite Avenue (NS) and Coast Highway (EW) in the pedestrian oriented area of Corona del Mar

E. LOS "E" at Goldenrod Avenue (NS) and Coast Highway (EW) in the pedestrian oriented area of in Corona del Mar (Imp 16.3)

City of Newport Beach Bicycle Master Plan

On October 28, 2014, the City adopted the *City of Newport Beach Bicycle Master Plan* (Bicycle Master Plan), a broad vision, along with strategies and actions, to improve conditions for bicycling throughout the City. As a means of bettering the bicycling environment, the Bicycle Master Plan provides direction for expanding the existing bikeway network, connecting gaps within the City, and connecting to adjacent cities. In addition to providing recommendations for bikeways and support facilities, the Bicycle Master Plan offers recommendations for education, encouragement, enforcement, and evaluation programs.

5.11.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities (refer to Impact Statement TRA-1);
- Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways[2] (refer to Section 8.0, *Effects Found Not To Be Significant*);
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (refer to Impact Statement TRA-2); and
- Result in inadequate emergency access (refer to Impact Statement TRA-3).

5.11.4 IMPACTS AND MITIGATION MEASURES

ROADWAY, TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

TRA-1 PROJECT CONSTRUCTION COULD ADVERSELY IMPACT PLANS RELATED TO ROADWAY, TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES.

2 While this Appendix G Checklist Question has been modified by the Natural Resources Agency to address consistency with *CEQA Guidelines* section 15064.3, subdivision (b), which relates to use of the vehicle miles traveled (VMT) as the methodology for evaluating traffic impact, OCSD has not yet adopted a VMT methodology to address this updated Appendix G Checklist Question. Thus, the analysis is based on OCSD's adopted traffic analysis methodology, which requires use of level of service to evaluate traffic impacts of a project.

Impact Analysis:

Original Northeast Pump Station

Roadway

Short-term increases in vehicle trips on the circulation system would occur during construction. Construction-related trips would occur during the 44 months required for grading, demolition, and building construction. Traffic would include the transfer of construction equipment/materials, construction work trips, and hauling trips for soil. Construction associated with trucks and employees traveling to and from the project site may result in minor increases in vehicles on the circulation system. Grading activities would require approximately 21 trips per day (including eight haul trips), demolition activities would require approximately 10 trips per day (no haul trips), and construction would require approximately 14 trips per day (no haul trips). These nominal increases would be temporary and would cease upon completion of construction. Further, these construction-related vehicle trips would occur throughout the day, and hauling or transport of oversize loads would only occur between the hours of 9:00 a.m. and 3:00 p.m., Monday through Friday; refer to Mitigation Measure TRA-1. Thus, construction-related vehicle trips on the roadway circulation system would be less than significant.

Following construction, the proposed project would require a maximum of approximately 15 vehicle trips per week for OCSD staff to perform periodic maintenance, inspections of facilities and equipment, and/or chemical deliveries. However, development of the proposed project would result in no new vehicle trips on the circulation system, since these vehicle trips are currently required for maintenance/inspection of the existing pump station, and because no new employees would need to be hired as part of the project. As such, the project would not result in any long-term operational impacts on the surrounding roadway network.

Transit, Bicycle, Pedestrian Facilities

Operations of the proposed pump station facility would be similar to the existing pump station, and would not introduce any new land uses that could affect public transit, bicycle, or pedestrian travel. However, temporary construction-related traffic may disrupt transit, pedestrian and bicycle traffic through the project area. During project construction, the following temporary lane closures would be required along East Coast Highway, Dover Drive, and Bayside Drive to allow for the following construction activities:

- *East Coast Highway:* Temporary closure of one eastbound lane of traffic to allow for construction of the gravity sewer improvements and temporary closure of one westbound lane of traffic to demolish existing manhole and abandon the existing 42-inch sewer. Construction of this gravity line would take between two to four weeks.
- *West Coast Highway:* Temporary closure of one eastbound lane of traffic and bus turnout area to allow for connection of the two force mains to the existing system. Construction of this gravity line would take between two to four weeks.
- *Bayside Drive:* Temporary closure of one lane of traffic north of East Coast Highway and two lanes of traffic south of East Coast Highway for the proposed gravity sewer improvements and access pit. Construction of this gravity line would take between two to four weeks.

- *Dover Drive:* Temporary closure of one northbound lane of traffic during off-peak hours (i.e., hours outside of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.) for staging and pipe stringing activities to support the directional drilling of force mains across Newport Bay Channel. The force mains would be staged on Dover Drive and fused in one continuous pipe string.
- *Bayside Drive*: If pipe staging activities on Dover Drive are not possible, temporary closure of one northbound lane of traffic on Bayside Drive may occur during off-peak hours (i.e., hours outside of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.) for staging and pipe stringing activities; refer to Exhibit 3-10, *Temporary Pipe Stringing Alignment Option*. The pipe staging activity would occur for approximately four to six weeks.

These proposed lane closures could temporarily impact transit, bicycle, and pedestrian circulation in the project area. To reduce the potential impacts of construction-related vehicles interacting with pedestrians and other local traffic, a Construction Management Plan would be required per Mitigation Measure TRA-1, which would implement a variety of measures to minimize traffic safety impacts. The Construction Management Plan would be required to include, but not be limited to, the following:

- Advanced mailings notifying surrounding property owners of project activities;
- Construction signage;
- A construction flagperson, as necessary, to assist in maintaining efficient vehicle travel in both directions;
- Prohibition of construction worker parking along local streets;
- Identification of appropriate haul routes to avoid traffic disruptions; and
- Limitation of hauling activities to off-peak hours.

Compliance with Mitigation Measure TRA-1 would ensure pedestrian and bicyclist access would be maintained during construction. Advanced notification to surrounding property owners, a construction flagperson, and construction signage to reroute pedestrians and bicyclists around the affected areas would be required during all construction activities. Thus, with implementation of Mitigation Measure TRA-1, the project would not conflict with policies related to public transit, bicycle, or pedestrian facilities, as access would be maintained to the greatest extent possible and no permanent impacts to these facilities would result. Impacts in this regard would be reduced to less than significant levels.

Modified Northeast Pump Station

The Modified Northeast Pump Station would result in a similar number of construction-related vehicle trips and construction duration. Lane closures on East Coast Highway, West Coast Highway, and Bayside Drive (for gravity sewer improvements and access pit) would be similar to the Original Northeast Pump Station; lane closures on Bayside Drive and Dover Drive (for pipe stringing activities) would not occur with the Modified Northeast Pump Station. Additionally, operations of the Modified Northeast Pump Station would similarly require a maximum of 15 vehicle trips per week for OCSD staff to perform periodic maintenance and/or inspections of facilities and equipment. At project completion, operations of the Modified Northeast Pump Station would be similar to the existing pump station and Original Northeast Pump Station and would not impact public transit, bicycle, or

pedestrian travel. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The South Pump Station would result in a similar number of construction-related vehicle trips and construction duration. The South Pump Station would only result in temporary lane closures along East Coast Highway and West Coast Highway. Additionally, operations of the South Pump Station would similarly require a maximum of 15 vehicle trips per week for OCSD staff related to periodic maintenance, inspections of facilities and equipment, and/or chemical deliveries. At project completion, operations of the South Pump Station would be similar to the existing pump station and Original Northeast Pump Station and would not impact public transit, bicycle, or pedestrian travel. Therefore, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: The following mitigation measures apply to all site plan concepts:

TRA-1 Prior to initiation of construction activities, engineering drawings and specifications, and/or contractor shop drawings shall be submitted for review and approval by the Orange County Sanitation District, California Department of Transportation, and the City Public Works Department. These documents shall, at a minimum, address the following:

- Traffic control for any lane closure, detour, or other disruption to traffic circulation, including bicycle and pedestrian trails. Bicycle and pedestrian trails shall remain open, to the greatest extent possible, during construction or re-routed to ensure continued connectivity.
- Bus stop access impacts shall be coordinated with, and approved by, the Orange County Transportation Authority.
- At least three business days before any construction activities that would affect travel on nearby roadways, the construction contractor shall notify the City of Newport Beach Public Works Department of construction activities that could impede movement (such as lane closures) along roadways, to allow for uninterrupted emergency access. Surrounding property owners shall also be notified of project activities through advanced mailings.
- Identify construction vehicle haul routes for the delivery of construction materials (i.e., lumber, tiles, piping, windows, etc.) to the site; necessary traffic controls and detours; and a construction phasing plan for the project.
- Identify any off-site construction staging or material storage sites.
- Specify the hours during which transport activities can occur and methods to mitigate construction-related impacts to adjacent streets.
- Require the Contractor to keep all haul routes clean and free of debris, including but not limited, to gravel and dirt resulting from its operations. The Contractor

shall clean adjacent streets, as directed by the Orange County Sanitation District, of any material which may have been spilled, tracked, or blown onto adjacent streets or areas.

- Hauling or transport of oversize loads shall be allowed between the hours of 9:00 a.m. and 3:00 p.m. only, Monday through Friday. No hauling or transport shall be allowed during nighttime hours, weekends, or Federal holidays. Any oversized loads utilizing Coast Highway shall obtain a Caltrans permit for such activities.
- Use of local streets shall be prohibited, except what is required to provide direct access to the project site.
- Haul trucks entering or exiting public streets shall yield to public traffic at all times.
- If hauling operations cause any damage to existing pavement, streets, curbs, and/or gutters along the haul route, the contractor shall be fully responsible for repairs. The repairs shall restore the damaged property to its original condition.
- All constructed-related staging of vehicles shall be kept out of the adjacent public roadways and shall occur on-site or within other off-street areas.
- Construction-related lane closures would only occur between the hours of 8:30 a.m. and 3:30 p.m., Monday through Friday. More or less restrictive closure hours may be prescribed by the City.
- Use of a construction flagperson to assist in maintaining efficient vehicle travel in both directions, particularly during peak travel hours, and use of construction signage and safe detour routes for pedestrians and bicyclists when travel lanes and sidewalks along Coast Highway, Dover Drive, and Bayside Drive are affected.
- The engineering drawings and specifications shall meet standards established in the current California Manual on Uniform Traffic Control Device (MUTCD).

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

HAZARDOUS DESIGN FEATURES

TRA-2 THE PROJECT COULD SUBSTANTIALLY INCREASE HAZARDS DUE TO SHORT-TERM CONSTRUCTION ACTIVITIES WITHIN SURROUNDING ROADWAYS.

Impact Analysis:

Original Northeast Pump Station

Construction

As stated above, temporary lane closures would be required along East Coast Highway, Dover Drive, and Bayside Drive to allow for project construction activities. These proposed lane closures could

result in temporary traffic hazard conditions. Therefore, to reduce the potential impacts of construction-related vehicles interacting with pedestrians and other local traffic, Mitigation Measure TRA-1 requires a Construction Management Plan be developed to implement a variety of measures to minimize traffic safety impacts. Implementation of Mitigation Measure TRA-1 would reduce the project's temporary construction-related hazards within surrounding roadways and impacts in this regard would be less than significant.

Operations

Upon completion of construction activities, no permanent changes to the local circulation system would result, such that hazardous geometric roadway design features (e.g., sharp curves or dangerous intersections) would result. In addition, the proposed project would not result in any new land uses that would involve incompatible features or equipment that could cause a hazard on roadways in the project area. Rather, the project would increase transportation safety by redirecting OCSD vehicles through the Bayside Village Marina, LLC property via Bayside Drive rather than via the existing driveway along East Coast Highway. As such, impacts in this regard would be less than significant.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. However, it should be noted that, operational access to the South Pump Station would be provided via East Coast Highway rather than Bayside Drive as proposed under the Original Northeast Pump Station and Modified Northeast Pump Station conceptual site plans. Nevertheless, the existing pump station is accessed via East Coast Highway, and thus, access to the South Pump Station along East Coast Highway would not result in an increase in hazardous geometric roadway design features. Impacts in this regard would be less than significant.

Mitigation Measures: Refer to Mitigation Measure TRA-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

EMERGENCY ACCESS

TRA-3 IMPLEMENTATION OF THE PROJECT COULD RESULT IN INADEQUATE EMERGENCY ACCESS.

Impact Analysis:

Original Northeast Pump Station

Construction

As discussed in Impact Statement TRA-1, the project may require temporary lane closures during project construction to allow for construction activities, staging and work areas, and access for pump station construction and force main improvements. Implementation of Mitigation Measure TRA-1 would ensure emergency access is maintained during all construction activities. Further, Mitigation Measure TRA-1 would require that at least three business days before any off-site roadway improvements, the construction contractor shall notify the Newport Beach Fire Department, Newport Beach Police Department, and City of Newport Beach Public Works Department, of construction activities that could impede movement (such as lane closures) along roadways, to allow for uninterrupted emergency access. Thus, with implementation of the Mitigation Measure TRA-1, impacts in this regard would be less than significant.

Operations

The project is not anticipated to result in any long-term operational impacts related to emergency access, since the project involves relocating the existing pump station facility within the same parcel. The project would not result in any new vehicle trips that would result in additional congestion on the roadway network that could affect emergency access. Impacts in this regard would be less than significant.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: Refer to Mitigation Measure TRA-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.11.5 CUMULATIVE IMPACTS

ROADWAY, TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD CONFLICT WITH ADOPTED POLICIES, PLANS, OR PROGRAMS REGARDING ROADWAY, PUBLIC TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES.

Impact Analysis:

Original Northeast Pump Station

Roadway

Although project operations would not increase vehicle trips on the circulation system, construction-related vehicles as well as other potential cumulative project-related vehicle trips may overlap, resulting in cumulative traffic impacts to local roadways. However, construction of the proposed project would only increase vehicle trips nominally and temporarily, which would not be considered a significant cumulative contribution to overall traffic impacts. In addition, cumulative development projects would also be required to reduce construction traffic impacts on the local circulation system and implement any required mitigation measures that may be prescribed pursuant to CEQA provisions. Therefore, the project's incremental contribution to cumulative construction traffic impacts would be less than cumulatively considerable.

Transit, Bicycle, and Pedestrian Facilities

Cumulative projects would be required to comply with the City's adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities on a project-by-project basis. Individual projects would be required to implement required mitigation measures that may be prescribed pursuant to CEQA provisions. Construction activities, staging and access for pump station construction and force main improvements may affect the pedestrian, bicycle, and bus stop access through the project area during construction. However, with implementation of Mitigation Measure TRA-1, the proposed project would be required to maintain these alternative transportation modes during construction. With compliance with Mitigation Measure TRA-1, the project would not cumulatively contribute to a conflict with any of the applicable policies related to public transit, bicycle, or pedestrian facilities, and the project's incremental contribution would be less than cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: Refer to Mitigation Measure TRA-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

HAZARDOUS DESIGN FEATURES

IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD SUBSTANTIALLY INCREASE HAZARDS DUE TO A PROPOSED DESIGN FEATURE.

Impact Analysis:

Original Northeast Pump Station

Cumulative development projects could result in increased design hazards during construction and operations. Each project would be required to comply with the existing City standards and regulations pertaining to circulation design. Further, if necessary, pursuant to CEQA, mitigation measures would be required to minimize potential impacts on a project-by-project basis. As discussed in Impact Statement TRA-1, the proposed project would require temporary closure of traffic lanes along East Coast Highway, Dover Drive, and Bayside Drive to accommodate construction activities. However, with implementation of Mitigation Measure TRA-1, the proposed project would not substantially increase hazards due to a proposed design feature. Implementation of the proposed project would not involve incompatible features or equipment that could cause a hazard on roadways in the project area. No changes to the existing roadway system would occur. As such, the project's incremental contribution to cumulative traffic hazard impacts would be less than cumulatively considerable with compliance with Mitigation Measure TRA-1.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: Refer to Mitigation Measure TRA-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

EMERGENCY ACCESS

IMPLEMENTATION OF THE PROPOSED PROJECT AND OTHER RELATED CUMULATIVE PROJECTS COULD RESULT IN INADEQUATE EMERGENCY ACCESS.

Impact Analysis:

Original Northeast Pump Station

The Newport Beach Fire Code requires approved fire apparatus access roads for every facility, building, or portion of a building. Individual development projects would be reviewed on a project-

by-project basis to ensure adequate emergency access is provided. As stated in Impact Statement TRA-3, the project would require maintenance of emergency access during lane closures during construction. With implementation of Mitigation Measure TRA-1, the proposed project's incremental effect would not be cumulatively considerable in this regard.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: Refer to Mitigation Measure TRA-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.11.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts related to transportation have been identified following implementation of mitigation measures referenced in this section.

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5.12 TRIBAL CULTURAL RESOURCES

The purpose of this section is to identify existing tribal cultural resources within and around the project site and to assess the significance of such resources. Mitigation measures are recommended, as necessary, to minimize impacts to tribal cultural resources resulting from the proposed project. The information in this section is based on the General Plan and *Revised Cultural/Paleontological Resources Assessment for the Proposed Bay Bridge Pump Station and Force Mains Rehabilitation Project* (Cultural/Paleontological Assessment), prepared by Duke CRM, dated March 20, 2019. The Cultural/Paleontological Assessment is provided as Appendix 11.4, *Cultural/Paleontological Resources Assessment*.

5.12.1 EXISTING SETTING

ETHNOGRAPHIC OVERVIEW

Ethnographic information is data about a particular culture or group gathered from members of that culture or group. The first generally accepted period of human occupation of Southern California began at about the end of the Pleistocene Epoch, about 10,000 to 12,000 years ago. Archaeological sites around Upper Newport Bay have yielded some of the evidence for the earliest human occupation of Orange County and date to about 9,500 years before present (BP). Over 50 sites have been documented in the Planning Area, including the recently annexed Newport Coast area and in the Newport Banning Ranch portion of the City's Sphere of Influence (SOI). Many of these sites have yielded, or have been determined to have the potential to yield, substantial information regarding the prehistory of the City and County, and have included human burials.

At least two and possibly three distinct cultural groups inhabited the area, and later period sites indicate that the area was heavily populated at the time of European contact. Ethnographically, the City falls within a region in which tribal boundaries are unclear: both the Gabrielino and the Luiseño/Juaneño lay ancestral territorial claims. The territory of the Juaneño Band of Mission Indians may have extended north to the Santa Ana River drainage; however, Gabrielino territory is thought by some to extend south of the Santa Ana River Drainage to Aliso Creek, and possibly even further south.

The Luiseño/Juaneño were hunters/gatherers, organized into sedentary and semi-sedentary, autonomous villages. A large village was typically 30 square miles, and contained several hunting, fishing, and collecting areas in different ecological zones. Seasonal moves to exploit resources outside a village's territory occurred during several weeks of the year.

The coastal Luiseño/Juaneño bands exploited a variety of plant food resources. Seeds and acorns accounted for up to 75 percent of the typical diet. Many fruits, berries, bulbs, and roots were used as medicines, beverage bases, and manufacturing materials as well as food. Terrestrial game accounted for an estimated five to ten percent of the coastal Luiseño/Juaneño diet; fish and marine mammals represented an additional 20 to 35 percent. Luiseño/Juaneño material culture associated with food procurement includes tools such as manos and metates, as well as mortars and pestles for processing acorns and seeds, and pulverizing pulpy materials and small game. They probably hunted first with spears, and then later with bows and arrows. The projectiles themselves would have had fire-hardened

wood or chipped stone tips. Near-shore fishing and marine mammal hunting were accomplished with light balsa or dugout canoes.

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM SEARCH

As detailed in Section 5.4, *Cultural Resources*, Duke CRM conducted a records search at the South Central Coastal Information Center (SCCIC) on December 6, 2016. The SCCIC is part of the California Historical Resources Information System (CHRIS) and is located at California State University, Fullerton. The records search included a review of all recorded historic and prehistoric archaeological sites within a ½ mile radius of the project area, as well as a review of known cultural resource survey and excavation reports. In addition, Duke CRM examined the California State Historic Property Data File (HPD), which includes the National Register of Historic Places (National Register), California Register of Historical Resources (California Register), California Historical Landmarks (CHL), and California Points of Historical Interest (CPHI). Table 5.4-1, *Cultural Resources Within A Half Mile of the Project Boundaries*, of Section 5.4, details those cultural resources found within ½ mile of the project boundaries. Twenty-one cultural resource reports are on file within a half mile of the project boundaries. Eleven cultural resources are mapped within a half mile of the project boundaries. However, none of these resources are situated within the project area.

Michael Baker contacted the Native American Heritage Commission (NAHC) to request a review of the Sacred Lands File (SLF). The NAHC responded on May 31, 2016 stating that a search of the SLF revealed a negative result. However, it is acknowledged that the absence of specific site information in the SLF does not indicate the absence of Native American tribal cultural resources.

FIELD SURVEY

A reconnaissance survey of the project area and immediate surroundings was conducted by Matthew Stever, Duke CRM, on January 16, 2017. Ground visibility within the project's area of potential effects was poor overall (less than 5 percent) due to the built environment. The project boundaries are obscured by asphalt, concrete, or other modern construction. The survey confirmed that the project area is characterized as built environment and that exposed areas of soil adjacent to and beneath the bridge are highly disturbed by construction related earth disturbing activities and dredging of the channel. There is a very slight possibility of disturbed prehistoric artifacts along the extreme northern margin of Castaways Park where the bluff is eroding into the channel, but none were observed on the surface. No cultural resources were identified during the survey.

TRIBAL CONSULTATION

OCSD initiated the tribal consultation process for the purposes of Assembly Bill 52 (AB 52) for the proposed project on June 7, 2016. The NAHC provided OCSD a contact list, for the purposes of AB 52, of 10 tribal groups or individuals who may have knowledge of cultural resources within the project area. On June 7, 2016, OCSD provided notification to each of these listed tribes of the opportunity to consult with OCSD regarding the proposed project. Two tribes (the Gabrielino Band of Mission Indians-Kizh Nation and the United Coalition to Protect Panhe) responded to OCSD. A follow-up letter was also sent out to these two tribes on February 21, 2017, discussing minor changes that had occurred since original notification, as discussed in detail below.

Gabrieleno Band of Mission Indians-Kizh Nation

Andrew Salas, Chairman, of the Gabrieleno Band of Mission Indians-Kizh Nation (Gabrieleno-Kizh Nation tribe) responded via letter on June 16, 2016 providing qualifications of tribal members available to support OCSD with Native American monitoring for the proposed project. A follow-up letter was also sent to OCSD on June 27, 2016, providing additional information regarding the sensitivity of the project site to the tribe. Per this letter, the Gabrieleno-Kizh Nation tribe expressed concerns for cultural resources at the project site. According to the letter, the project site lies in an area where the Ancestral territories of the Kizh (Kitc) Gabrieleño's villages adjoined and overlapped with each other, at least during the Late Prehistoric and Protohistoric Periods.

Per a follow-up correspondence between Gabrieleno-Kizh Nation tribe and OCSD on February 24, 2017 conducted via email, the tribe acknowledged that no sacred sites were determined to be present by NAHC. However, the Gabrieleno-Kizh Nation tribe considers the project area as culturally sensitive and reiterated a desire to provide a Native American monitor for construction.

Due to the project location and the high sensitivity of the area location, the tribe has requested that one of their certified Native American Monitors be on site during any and all ground disturbances (including but not limited to pavement removal, post holing, auguring, boring, grading, and/or excavation and trenching) to protect any tribal cultural resources that may be affected during construction or development.

United Coalition to Protect Panhe

OCSD received a response letter from the United Coalition to Protect Panhe (UCPP) regarding AB 52 consultation request on July 12, 2016 via email, as well as a follow up correspondence via e-mail on March 21, 2017. The UCPP acknowledged that they are unaware of any specific archaeological sites within the project area. However, the UCPP considers the coastal area of Newport Beach as culturally sensitive. The UCPP requested that a literature/records search be performed at the SCCIC for the project area. Further, the UCPP identified that should native soils be encountered during earth disturbing activities, it is their opinion that monitoring of ground disturbing construction should be conducted by a qualified archaeologist and Native American.

5.12.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act of 1966

Enacted in 1966 and amended in 2000, the NHPA declared a national policy of historic preservation and instituted a multifaceted program, administered by the Secretary of the Interior, to encourage the achievement of preservation goals at the Federal, State, and local levels. The NHPA authorized the expansion and maintenance of the National Register of Historic Places (NRHP), established the position of State Historic Preservation Officer (SHPO) and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP).

Section 106 Process

Through regulations associated with the NHPA, an impact to a cultural resource would be considered significant if government action would affect a resource listed in or eligible for listing in the NRHP. The NHPA codifies a list of cultural resources found to be significant within the context of national history, as determined by a technical process of evaluation. Resources that have not yet been placed on the NRHP, and are yet to be evaluated, are afforded protection under the Act until shown to be not significant.

Section 106 of the NHPA and its implementing regulations (36 Code of Federal Regulations Part 800) note that for a cultural resource to be determined eligible for listing in the NRHP, the resource must meet specific criteria associated with historic significance and possess certain levels of integrity of form, location, and setting. The criteria for listing on the NRHP are applied within an analysis when there is some question as to the significance of a cultural resource. The criteria for evaluation are defined as the quality of significance in American history, architecture, archeology, engineering, and culture. This quality must be present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- *Criterion A:* It is associated with events that have made a significant contribution to the broad patterns of our history; or
- *Criterion B:* It is associated with the lives of persons significant in our past; or
- *Criterion C:* It embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- *Criterion D:* It has yielded, or may be likely to yield, information important in prehistory or history.

Criterion (D) is usually reserved for archaeological resources. Eligible cultural resources must meet at least one of the above criteria and exhibit integrity, measured by the degree to which the resource retains its historical properties and conveys its historical character.

The Section 106 evaluation process does not apply to projects undertaken under OCSD environmental compliance jurisdiction. However, should the undertaking require funding, permits, or other administrative actions issued or overseen by a federal agency, analysis of potential impacts to cultural resources following the Section 106 process would likely be necessary. The Section 106 process typically excludes cultural resources created less than 50 years ago unless the resource is considered highly significant from the local perspective. Finally, the Section 106 process allows local concerns to be voiced and the Section 106 process must consider aspects of local significance before a significance judgment is rendered.

Secretary of the Interior's Standards for the Treatment of Historic Properties

Evolving from the *Secretary of the Interior's Standards for Historic Preservation Projects with Guidelines for Applying the Standards* that were developed in 1976, the *Secretary of the Interior's Standards for the Treatment*

of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings were published in 1995 and codified as 36 CFR 67. Neither technical nor prescriptive, these standards are "intended to promote responsible preservation practices that help protect our Nation's irreplaceable cultural resources." "Preservation" acknowledges a resource as a document of its history over time, and emphasizes stabilization, maintenance, and repair of existing historic fabric. "Rehabilitation" not only incorporates the retention of features that convey historic character, but also accommodates alterations and additions to facilitate continuing or new uses. "Restoration" involves the retention and replacement of features from a specific period of significance. "Reconstruction," the least used treatment, provides a basis for recreating a missing resource. These standards have been adopted, or are used informally, by many agencies at all levels of government to review projects that affect historic resources.

STATE

California Environmental Quality Act

CEQA requires that a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code Section 21084.1). A historical resource is a resource listed in, or determined to be eligible for listing, in the CRHR, a resource included in a local register of historical resources, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

A resource is considered historically significant if it meets any of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

2. Is associated with the lives of persons important in our past;

3. 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; or

4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (Public Resources Code Section 21083.2[a], [b], and [c]). Public Resources Code Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or

3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

California Register of Historical Resources

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by State and local agencies, private groups, and citizens to identify the State's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys or designated by local landmarks programs, may be nominated for inclusion in the CRHR. A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the criteria modeled on the NRHP criteria.

Assembly Bill 52

On September 25, 2014 Governor Brown signed Assembly Bill 52 (AB 52). In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and respecting the interests and roles of project proponents, it is the intent AB 52 to accomplish all of the following:

1. Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.

2. Establish a new category of resources in CEQA called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.

3. Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.

4. Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because CEQA calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.

5. In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in CEQA environmental review process, so that tribal cultural resources can be

identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision making body of the lead agency.

6. Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to CEQA.

7. Ensure that local and tribal governments, public agencies, and project proponents have information available, early in CEQA environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.

8. Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources.

9. Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.

LOCAL

City of Newport Beach General Plan

City policies pertaining to cultural resources are contained in the Historic Element of the City's General Plan. The Historic Resources Element describes methods for protecting archaeological and historical resources, and provides local policies to guide the implementation of cultural resource preservation, beyond the protections afforded by applicable Federal, State, and local laws. These policies include, but are not limited to, the following:

Historic Resources Element

Goals:

HR 1: Recognize and protect historically significant landmarks, sites, and structures.

HR 2: Identification and protection of important archaeological and paleontological resources within the City.

Policies:

HR 1.5 *Historical Elements within New Projects:* Require that proposed development that is located on a historical site or structure incorporate a physical link to the past within the site or structural design, if preservation or adaptive reuse is not a feasible option. For example, incorporate historical photographs or artifacts within the proposed project or preserve the location and structures of existing pathways, gathering places, seating areas, rail lines, roadways, or viewing vantage points within the proposed site design (Imp 29.2).

HR 2.1 *New Development Activities:* Require that, in accordance with CEQA, new development protect and preserve paleontological and archaeological resources from destruction, and avoid and mitigate impacts to such resources. Through planning policies and permit conditions, ensure the preservation of significant archaeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA (Imp 11.1).

HR 2.2 *Grading and Excavation Activities:* Maintain sources of information regarding paleontological and archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological or archaeological findings. Require a qualified paleontologist/archaeologist to monitor all grading and/or excavation where there is a potential to affect cultural, archaeological, or paleontological resources. If these resources are found, the applicant shall implement the recommendations of the paleontologist/archaeologist, subject to the approval of the City Planning Department (Imp 11.1).

HR 2.3 *Cultural Organizations:* Notify cultural organizations, including Native American organizations, of proposed developments that have the potential to adversely impact cultural resources. Allow representatives of such groups to monitor grading and/or excavation of development sites (Imp 11.1).

HR 2.4 *Paleontological or Archaeological Materials*: Require new development to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable repository, located within Newport Beach, or Orange County, whenever possible (Imp. 11.1).

In addition, the City's Natural Resources Element also provides for the protection of cultural resources with the following Goal and Policies:

Natural Resources Element

Goal:

NR 18: Protection and preservation of important paleontological and archaeological resources.

Policies:

NR 18.1 *New Development:* Require new development to protect and preserve paleontological and archaeological resources from destruction, and avoid and minimize impacts to such resources in accordance with the requirements of CEQA. Through planning policies and permit conditions, ensure the preservation of significant archaeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA (Imp 7.1).

NR 18.2 *Maintenance of Database Information:* Prepare and maintain sources of information regarding paleontological or archaeological sites and the names and addresses of

responsible organizations and qualified individuals who can analyze, classify, record, and preserve paleontological and archaeological findings (Imp 10.1).

NR 18.4 *Donation of Materials:* Require new development, where onsite preservation and avoidance are not feasible, to donate scientifically valuable paleontological or archaeological materials to a responsible public or private institution with a suitable repository, located within Newport Beach or Orange County, whenever possible (Imp 11.1).

Newport Beach City Council Policy Manual

The Newport Beach City Council Manual identifies policies applicable to cultural resources. These policies are discussed below.

Places of Historical and Architectural Significance (K-2). This regulation establishes City Council authority to designate any building, object, structure, monument, or collection having importance to the history or architecture of the City and provides procedures for listing. Accordingly, the City Clerk is required to maintain the City of Newport Beach Register of Historical Property. The City Council may at any time repeal, revise, or modify any such designation upon reconsideration of the historical or architectural importance of the structure.

Archaeological Guidelines (K-5). The policies set forth within these guidelines are used to guide the development or redevelopment of land within the City. The City is required, through its planning policies and permit conditions, to ensure the preservation of significant archaeological resources and require that the impact caused by any development be mitigated in accordance with CEQA. The City is to prepare and maintain sources of information regarding archaeological sites and the names and addresses of responsible organizations and qualified individuals who can analyze, classify, record, and preserve archaeological findings.

If determined necessary by the Planning Director, it is the responsibility of the developer to examine the site to determine the existence and extent of archaeological resources. Qualified observers are to prepare and submit a written report describing the findings and making recommendations for further action, which may include monitoring. Based on the report and recommendations, the City is required to ensure that the findings or sites are recorded, preserved, and protected.

City of Newport Beach Local Coastal Program

The CLUP sets forth goals, objectives, and policies that govern the use of land and water in the coastal zone within the City and its sphere of influence, with the exception of Newport Coast and Banning Ranch. Coastal Act policies related to tribal cultural resources that are relevant to Newport Beach include the following:

- *30244*. Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

PALEONTOLOGICAL AND ARCHEOLOGICAL RESOURCES

The following CLUP policies are applicable to the proposed project:

4.5.1-3 Notify cultural organizations, including Native American organizations, of proposed developments that have the potential to adversely impact cultural resources. Allow qualified representatives of such groups to monitor grading and/or excavation of development sites.

4.5.1-5 Where there is a potential to affect cultural or paleontological resources, require the submittal of an archeological/cultural resources monitoring plan that identifies monitoring methods and describes the procedures for selecting archeological and Native American monitors and procedures that will be followed if additional or unexpected archeological/cultural resources are encountered during development of the site. Procedures may include, but are not limited to, provisions for cessation of all grading and construction activities in the area of the discovery that has any potential to uncover or otherwise disturb cultural deposits in the area of the discovery and all construction that may foreclose mitigation options to allow for significance testing, additional investigation and mitigation.

5.12.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

The purpose of this analysis is to identify any potential tribal cultural resources within or adjacent to the project site, and to assist the Lead Agency in determining whether such resources meet the official definitions of "historical resources," as provided in the Public Resource Code, in particular CEQA.

SIGNIFICANCE GUIDELINES

Historical Resources

Impacts to a significant cultural resource that affect characteristics that would qualify it for the NRHP or that adversely alter the significance of a resource listed in or eligible for listing in the CRHR are considered a significant effect on the environment. These impacts could result from "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (*CEQA Guidelines*, Section 15064.5 [b][1], 2000). Material impairment is defined as demolition or alteration "in an adverse manner [of] those characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register," or a local register of historical resources (*CEQA Guidelines* Section 15064.5[b][2]).

Tribal Cultural Resources

AB 52 established a new category of resources to be evaluated under CEQA called Tribal Cultural Resources. (Public Resources Code Section 21074.) "Tribal cultural resources" are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also created a process for consultation with California Native American Tribes in the CEQA process. Tribal Governments can request consultation with a lead agency and give input into potential impacts to tribal cultural resources before the agency decides what kind of environmental assessment is appropriate for a proposed project. The Public Resources Code now requires avoiding damage to tribal cultural resources, if feasible. If not, lead agencies must mitigate impacts to Tribal Cultural Resources to the extent feasible.

CEQA SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
  - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k) (refer to Impact Statement TCR-1); or
  - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe (refer to Impact Statement TCR-1).

Based on these standards/criteria, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." If a potentially significant impact cannot be reduced to a less than significant level through the application of goals, policies, standards, or mitigation, it is categorized as a significant and unavoidable impact.

5.12.4 IMPACTS AND MITIGATION MEASURES

TRIBAL CULTURAL RESOURCES

TCR-1 THE PROPOSED PROJECT COULD CAUSE A SIGNIFICANT IMPACT TO A TRIBAL CULTURAL RESOURCE.

Impact Analysis:

Original Northeast Pump Station

Per Section Public Resources Code Section 21074, tribal cultural resources are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also created a process for consultation with California Native American Tribes in the CEQA process. Tribal Governments can request consultation with a lead agency and give input into potential impacts to tribal cultural resources before the agency decides what kind of environmental assessment is appropriate for a proposed project. The Public Resources Code now requires avoiding damage to tribal cultural resources, if feasible. If not, lead agencies must mitigate impacts to Tribal Cultural Resources to the extent feasible.

Tribal Consultation

As stated above, OCSD sent letters inviting tribes to consult on the project per AB 52 on June 7, 2016. Two tribes (the Gabrielino Band of Mission Indians-Kizh Nation and the United Coalition to Protect Panhe) responded to OCSD. A follow-up letter was also sent out to these two tribes on February 21, 2017, discussing minor changes that had occurred since original notification

Gabrieleno-Kizh Nation

The Gabrieleno-Kizh Nation indicated that the coastal area of Newport Beach is a culturally sensitive area to the tribe. The Gabrieleno-Kizh Nation tribe is concerned that any ground disturbing activities may have the potential to impact buried tribal cultural resources. The tribe has requested that one of their certified Native American Monitors be on site during any and all ground disturbances (including

but not limited to pavement removal, post holing, auguring, boring, grading, and/or excavation and trenching) to protect any tribal cultural resources which may be affected during construction or development. OCSD responded to Gabrielino-Kizh Nation via email to solicit tribal consultation for the project on July 7, 2016; however, no response from the tribe was received.

United Coalition to Protect Panhe (UCPP)

The UCPP indicated that the coastal area of Newport Beach is a culturally sensitive area to the tribe. The UCPP acknowledged that they are unaware of any specific archaeological sites within the project area. The UCPP identified that should native soils be encountered during earth disturbing activities, it is their opinion that monitoring of ground disturbing construction should be conducted by a qualified archaeologist and Native American. The UCPP requested that a literature/records search be performed at the SCCIC for the project area, and this literature/records search has been provided as part of Appendix 11.4. The UCPP did not request tribal consultation under AB 52.

Tribal Cultural Resource Determination

Based on the Cultural/Paleontological Assessment, the findings of the records search/field survey, and the AB 52 consultation process, OCSD has determined that no tribal cultural resources are known to exist on the project site. The project site is not included or determined to be eligible for inclusion in the CRHR, nor is the project included in a local register of historical resources as defined in subdivision (k) of Section 5020.1. No evidence to support the presence of known tribal cultural resources on-site was noted during the preparation of this EIR. Notwithstanding, there is the potential for unknown tribal cultural resources to be discovered on-site during site disturbance activities. Thus, as part of Mitigation Measure CUL-1, cultural awareness training would be provided to the construction contractor's representative, and the training would be open to Native American tribal representative(s), to assist in training for the identification of tribal cultural resources. In the event evidence of tribal cultural resources is found, ground disturbing activities would cease within 50 feet of the find until a qualified archaeologist can assess the significance of the find. If the archaeologist determines that the find is prehistoric or includes Native American materials, affiliated Native American groups shall be invited to contribute to the assessment and recovery of the resource, as applicable. The archaeologist and any applicable Native American contacts shall prepare a test-level report that would evaluate the site including discussion of the significance (depth, nature, condition, and extent of the resource), final mitigation recommendations, and cost estimates. Last, with compliance with the Coastal Development Permit (CDP), issued by the California Coastal Commission and City of Newport Beach, the project would implement any CDP conditions required by the City of Newport Beach to demonstrate compliance with the CLUP (including Policy 4.5.1-3). Therefore, with implementation of Mitigation Measure CUL-1 and requirements of the CDP, impacts to tribal cultural resources would be reduced to less than significant levels.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station. Although there are no known tribal cultural resources, there is the potential for development of the Modified Northeast Pump Station to encounter undiscovered resources. Similar to the Original Northeast Pump Station, development of the Modified Northeast Pump Station would be required to comply with Mitigation Measure CUL-1 which would provide construction awareness training and require construction activity to cease work if previously unidentified cultural resources

are un-earthed during construction and a qualified archaeologist to assess the significance of the find. If it is determined that the find includes Native American materials, affiliated Native American groups would be contacted. Compliance with Mitigation Measure CUL-1 and requirements of the CDP would ensure potential impacts to tribal cultural resources associated with the Modified Northeast Pump Station are reduced to less than significant levels.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station. Compliance with Mitigation Measure CUL-1 and requirements of the CDP would ensure potential impacts to tribal cultural resources associated with the South Pump Station are reduced to less than significant levels.

Mitigation Measures: Refer to Mitigation Measure CUL-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.12.5 CUMULATIVE IMPACTS

Table 4-1, *Cumulative Projects List*, identifies the related projects and other possible development in the area determined as having the potential to interact with the proposed project to the extent that a significant cumulative effect may occur.

THE PROPOSED PROJECT, COMBINED WITH OTHER RELATED CUMULATIVE PROJECTS, COULD CAUSE A SIGNIFICANT IMPACT TO A TRIBAL CULTURAL RESOURCE.

Impact Analysis:

Original Northeast Pump Station

Due to the location of the cumulative projects and the sensitivity for tribal cultural resources to occur within the coastal areas of Newport Beach, there is the potential that tribal cultural resources could occur at one or more of the cumulative project sites. The potential destruction of these tribal cultural resources during ground disturbing activities at the project site and cumulative project sites could be cumulatively considerable, due to the collective loss of these resources. However, individual projects would be evaluated on a project-by-project basis to determine the extent of potential impacts to tribal cultural resources. Adherence to AB 52 requirements on a project-by-project basis would ensure that known tribal cultural resources are considered and monitoring is conducted, as necessary.

As discussed above, there are no known tribal cultural resources present on-site. Compliance with Mitigation Measure CUL-1 would result in less than significant impacts to unknown tribal cultural resources during site disturbance activities. Thus, implementation of Mitigation Measure CUL-1 and requirements of the CDP, would ensure the Original Northeast Pump Station project's incremental contribution to cumulative impacts involving tribal cultural resources is less than cumulatively considerable.

Overall, given that the project's potential impacts would be less than significant with mitigation incorporated, and since the potential impacts would be contained to the project area, the project's incremental effects involving tribal cultural resources are not cumulatively considerable.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

Mitigation Measures: Refer to Mitigation Measure CUL-1 for all site plan concepts.

Level of Significance: Less Than Significant Impact With Mitigation Incorporated.

5.12.6 SIGNIFICANT UNAVOIDABLE IMPACTS

No unavoidable significant impacts related to tribal cultural resources have been identified.

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6.0 OTHER CEQA CONSIDERATIONS

Pursuant to *CEQA Guidelines* Section 15126.2, the following is a discussion of short- and long-term effects of the proposed project on the environment; significant irreversible environmental changes that would be caused by the proposed project should it be implemented; growth-inducing impacts; and energy impacts.

6.1 SHORT- AND LONG-TERM IMPLICATIONS OF THE PROPOSED PROJECT

If the proposed project is approved and constructed, a variety of short- and long-term impacts would occur on a local level. During project grading and construction, portions of surrounding uses would be temporarily impacted by dust and noise. Short-term soil erosion would occur during grading. There would also be an increase in vehicle pollutant emissions caused by grading and construction activities. However, these disruptions would be temporary and may be avoided or lessened to a large degree through mitigation cited in this Recirculated Draft EIR and through compliance with Federal, State, and local regulations; refer to Section 5.0, *Environmental Analysis*.

Development of the project site would create long-term environmental consequences associated with implementation of the project. Long-term physical consequences of the project include hydrology and water quality impacts and increased energy and natural resource consumption. Incremental degradation of local and regional air quality would also occur as a result of stationary source emissions generated from the consumption of natural gas and electricity.

6.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES THAT WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

According to *CEQA Guidelines* Sections 15126(c) and 15126.2(c), an EIR is required to address any significant irreversible environmental changes that would occur should the project be implemented. As stated in *CEQA Guidelines* Section 15126.2(d):

> *"Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified."*

The project would consume limited, slowly renewable, and non-renewable resources. This consumption would occur during the construction phase of the project and would continue throughout its operational lifetime. Project development would require a commitment of resources

that would include: (1) building materials, (2) fuel and operational materials/resources, and (3) the transportation of goods and people to and from the project site. Project construction would require the consumption of resources that are not renewable, or which may renew so slowly as to be considered non-renewable. These resources would include construction supplies, such as aggregate materials used in concrete and asphalt, metals, and water. Fossil fuels such as gasoline and oil would also be consumed in the use of construction vehicles and equipment.

The resources that would be committed during project operation would be similar to those currently consumed to operate the existing OCSD pump station. Resources would include energy resources such as electricity and natural gas, petroleum-based fuels required for vehicle trips, fossil fuels, chemicals for odor control (e.g., magnesium hydroxide and calcium nitrate), and water. Fossil fuels would represent the primary energy source associated with both construction and ongoing operation of the project and the existing, finite supplies of these natural resources would be incrementally reduced. Project operation would occur in accordance with Title 24, Part 6 of the *California Code of Regulations*, which sets forth conservation practices that would limit the amount of energy consumed by the project. However, the energy requirements associated with the project would, nonetheless, represent a long-term commitment of essentially non-renewable resources.

In summary, project construction and operation would result in the irretrievable commitment of limited, slowly renewable, and nonrenewable resources, which would limit the availability of these particular resource quantities for future generations or for other uses during the life of the project. The project would involve the use of building materials and energy, some of which are non-renewable resources. Consumption of these resources would occur with any development in the region and are not unique to the project. Additionally, increasingly efficient building fixtures and vehicular engines are expected to offset this demand to some degree. Continued use of such resources would also be on a relatively small scale and consistent with regional and local growth forecasts in the area. As such, although irreversible environmental changes would result from the project, such changes would not be considered significant.

6.3 GROWTH-INDUCING IMPACTS

Section 15126 of the *CEQA Guidelines* requires that an EIR discuss the project's potential to foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. The *CEQA Guidelines* also indicate that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. This section analyzes such potential growth-inducing impacts, based on criteria suggested in the *CEQA Guidelines*.

In general terms, a project may foster spatial, economic, or population growth in a geographic area if it meets any one of the following criteria:

- Removal of an impediment to growth (e.g., establishment of an essential public service and provision of new access to an area);
- Fostering economic expansion or growth (e.g., changes in revenue base and employment expansion);

- Fostering of population growth (e.g., construction of additional housing), either directly or indirectly;
- Establishment of a precedent-setting action (e.g., an innovation, a change in zoning, and general plan amendment approval); or
- Development of or encroachment on an isolated or adjacent area of open space (being distinct from an in-fill project).

Should a project meet any one of the above-listed criteria, it may be considered growth inducing. Generally, growth-inducing projects are either located in isolated, undeveloped, or underdeveloped areas, necessitating the extension of major infrastructure such as sewer and water facilities or roadways, or encourage premature or unplanned growth. Note that the *CEQA Guidelines* require an EIR to "discuss the ways" a project could be growth inducing and to "discuss the characteristics of some projects that may encourage…activities that could significantly affect the environment." However, the *CEQA Guidelines* do not require that an EIR predict (or speculate) specifically where such growth would occur, in what form it would occur, or when it would occur. The answers to such questions require speculation, which CEQA discourages (refer to *CEQA Guidelines* Section 15145).

In accordance with the *CEQA Guidelines* and based on the above-listed criteria, the project's potential growth-inducing impacts are evaluated below.

IMPACT ANALYSIS

Removal of an Impediment to Growth

The main objective of the proposed project is to improve OCSD's existing collection infrastructure and avoid spills during the next design lifespan (50 years), and would not increase the capacity of the facility. Thus, the project would not induce growth either directly or indirectly. The project would not result in the removal of an impediment to growth.

Economic Growth

One of the objectives of the proposed project is to accommodate the growth anticipated under the General Plan. This growth may include both population growth and economic growth. As explained in the section above, however, the proposed project and any resulting expansion of the current wastewater system would not directly lead to significant economic or population growth by itself. Rather, the proposed project would accommodate, rather than induce, future economic and population growth in the Newport Beach area that is currently constrained by factors other than the existing sewerage facilities.

Population Growth

Population

County of Orange. The County encompasses approximately 798 square miles. It is bordered by Los Angeles County to the north and northwest, San Bernardino County to the northeast, Riverside County to the east, San Diego County to the southeast, and the Pacific Ocean to the west. As of

January 2018, the County of Orange had a population of 3,221,103. This represents an increase of approximately 7.0 percent over the County's April 2010 population of 3,010,232.[1]

The Southern California Association of Governments (SCAG) serves as the Metropolitan Planning Organization (MPO) for Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial counties. Generally, SCAG serves as the regional planning organization for growth management, transportation, and a range of additional planning and environmental issues within southern California. As part of its *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016 RTP/SCS) growth forecast, SCAG projects that the County's population will reach 3,461,500 by 2040.[2]

City of Newport Beach. On a local level, the City of Newport Beach's January 2018 population was 87,182. This represents an increase of approximately 2.3 percent over the City's April 2010 population of 85,186.[3] SCAG projects that the City's population will reach 92,700 by 2040.[4]

Table 6-1, *Population Estimates*, provides a summary of both 2010 and 2018 population estimates for Orange County and the City of Newport Beach.

Table 6-1
Population Estimates

Year	Orange County Population	City of Newport Beach Population
2010	3,010,232	85,186
2018	3,221,103	87,182
Change	+7.0%	+2.3%

Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark, Sacramento, California, May 2018.

Project Site. The project site currently consists of utility, commercial, open space, and roadway uses and does not include a resident population.

Housing

County of Orange. The County's housing stock is estimated to be 1,094,169 as of January 2018. This represents an increase of approximately 4.6 percent over the estimated 1,046,118 housing units reported in April 2010. The vacancy rate in April 2010 was estimated to be approximately 5.4 percent,

1 State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark, Sacramento, California, May 2018.
2 Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategies, Demographics & Growth Forecasts Appendix*, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed February 27, 2019.
3 State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark, Sacramento, California, May 2018..
4 Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategies, Demographics & Growth Forecasts Appendix*, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed February 27, 2019.

with approximately 2.99 persons per household.[5] SCAG projections indicate that the number of households within the County will increase to 1,152,300 by 2040.[6]

City of Newport Beach. As of January 2018, the City's housing stock is estimated to be 44,670. This represents an increase of approximately 1.1 percent over the estimated 44,193 housing units reported in April 2010. The vacancy rate in April 2010 was estimated to be approximately 12.3 percent, with 2.19 persons per household.[7] According to SCAG projections, the number of households in the City is expected to be 41,700 by 2040.[8]

Table 6-2, *Housing Estimates*, provides a summary of both 2000 and 2010 housing estimates for Orange County and the City of Newport Beach.

Table 6-2
Housing Estimates

Year	Orange County Housing	City of Newport Beach Housing
2010	1,046,118	44,193
2018	1,094,169	44,670
Change	+4.6%	+1.1%

Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark, Sacramento, California, May 2018.

Project Site. The project site currently consists of utility, commercial, open space, and roadway uses and does not include a resident population. No residential structures are currently present on-site.

Employment

County of Orange. According to the California Employment Development Department, the civilian labor force within Orange County totaled approximately 1,639,300 as of December 2018. An estimated 2.8 percent of the County's workforce (45,900 persons) was unemployed.[9] SCAG projections indicate that the number of employees within the County will be approximately 1,898,900 by 2040.[10]

City of Newport Beach. According to the California Employment Development Department, the civilian labor force within the City of Newport Beach totaled approximately 46,500 persons as of

5 State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark, Sacramento, California, May 2018.
6 Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategies, Demographics & Growth Forecasts Appendix*, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed February 27, 2019.
7 State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011-2018 with 2010 Census Benchmark, Sacramento, California, May 2018.
8 Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategies, Demographics & Growth Forecasts Appendix*, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed February 27, 2019.
9 State of California Employment Development Department, Labor Market Information Division, *Monthly Labor Force Data for Cities and Census Designated Places (CDP), December 2018 - Preliminary*, January 18, 2019.
10 Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategies, Demographics & Growth Forecasts Appendix*, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed February 27, 2019.

December 2018. An estimated 2.5 percent of the City's workforce (1,100 persons) was unemployed.[11] SCAG projections indicate that the number of employees within the City will be 79,100 by 2040.[12]

Project Site. As stated above, the majority of the project site currently consists of utility, commercial, open space, and roadway uses. A nominal number of employees currently serve the existing OCSD pump station facility.

Population Growth

A project could induce population growth in an area either directly or indirectly. More specifically, the development of new residences or businesses could induce population growth directly, whereas the extension of roads or other infrastructure could induce population growth indirectly. The proposed project involves improvements to a sewer facility and does not include housing that could directly induce population growth within the project area. Further, the proposed pump station facility would replace the existing facility; therefore, no additional employees would be generated by the project. As such, project implementation would not result in a substantial number of people relocating to the City and the project would not directly or indirectly result in population growth within the City.

Precedent Setting Action

The project involves improvements to the existing pump station and associated force mains and gravity sewers, and would not require a precedent-setting action, such as a General Plan Amendment or Zone Change that would alter the City's long-term development plan for the project area. Thus, the project is not considered growth-inducing in this regard.

Development or Encroachment of Open Space

The project site is located in a disturbed and urbanized area, surrounded by developed uses. Although open space uses are present in the area (i.e., Castaways Park and Newport Bay), these uses are designated such and are already surrounded by development. The project would not result in the development/encroachment of any areas of open space. Therefore, the proposed project would not be growth-inducing with respect to development or encroachment into an isolated or adjacent area of open space.

Summary

Overall, project implementation would not be considered growth inducing, because it would not foster significant economic expansion and growth opportunities. The project would not remove a significant existing impediment to growth and would not develop or encroach into an isolated or adjacent area of open space. The proposed project would not foster significant population growth in the project area, as described above. Development within the project area would not require substantial development of unplanned and unforeseen support uses and services.

11 State of California Employment Development Department, Labor Market Information Division, *Monthly Labor Force Data for Cities and Census Designated Places (CDP), December 2018 - Preliminary*, January 18, 2019.
12 Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategies, Demographics & Growth Forecasts Appendix*, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_DemographicsGrowthForecast.pdf, accessed February 27, 2019.

In addition to inducing growth, a project may create a significant environmental impact if it would displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere and/or displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. Implementation of the proposed project would not displace any existing housing or persons. Therefore, the project would not result in an impact with regard to the displacement of persons, housing, and businesses.

6.4 ENERGY

Public Resources Code Section 21100(b)(3) and *CEQA Guidelines* Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, largely in response to the oil crisis of the 1970s, the California State Legislature adopted Assembly Bill 1575 (AB 1575), which created the California Energy Commission (CEC). The CEC's statutory mission is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct state responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project. Thereafter, the State Resources Agency created *CEQA Guidelines* Appendix F.

CEQA Guidelines Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. Additionally, as of December 2018, the updated *CEQA Guidelines* includes Energy in the Appendix G, *Environmental Checklist Form*. Therefore, the discussion below analyzes the proposed project's energy consumption and energy plan consistency impacts.

6.4.1 EXISTING SETTING

Energy consumption is analyzed in this Recirculated Draft EIR due to the potential direct and indirect environmental impacts associated with the project. Such impacts include the depletion of nonrenewable resources (e.g., oil, natural gas, coal, etc.) and emissions of pollutants during both project construction and operations.

ELECTRICITY/NATURAL GAS SERVICES

Southern California Edison (SCE) provides electrical services to Orange County through State-regulated public utility contracts. Over the past 15 years, electricity generation in California has undergone a transition. Historically, California has relied heavily on oil- and gas-fired plants to generate electricity. Spurred by regulatory measures and tax incentives, California's electrical system has become more reliant on renewable energy sources, including cogeneration, wind energy, solar energy, geothermal energy, biomass conversion, transformation plants, and small hydroelectric plants. Unlike petroleum production, generation of electricity is usually not tied to the location of the fuel source and can be delivered great distances via the electrical grid. The generating capacity of a unit of electricity is expressed in megawatts (MW). Net generation refers to the gross amount of energy produced by a unit, minus the amount of energy the unit consumes. Generation is typically measured in megawatt-hours (MWh), kilowatt-hours (kWh), or gigawatt-hours (GWh).

The Southern California Gas Company (SCG) provides natural gas services to Orange County. The project would not consume natural gas as all the treatment equipment and conveyance equipment would be powered by electricity. Natural gas is a hydrocarbon fuel found in reservoirs beneath the earth's surface and is composed primarily of methane (CH_4). It is used for space and water heating, process heating and electricity generation, and as transportation fuel. Use of natural gas to generate electricity is expected to increase in coming years because it is a relatively clean alternative to other fossil fuels like oil and coal. In California and throughout the western United States, many new electrical generation plants that are fired by natural gas are being brought online. Thus, in the future there may be increased interest in importing liquefied natural gas from other parts of the world. Nearly 33 percent of the electricity consumed in California was generated using natural gas.[13]

Electricity and natural gas service is available to locations where land uses could be developed. Orange County's ongoing development review process includes a review and comment opportunity for privately owned utility companies, including SCE, to allow informed input from each utility company on all development proposals. The input facilitates a detailed review of all projects by service purveyors to assess the potential demands for utility services on a project-by-project basis. The ability of utility providers to provide services concurrently with each project is evaluated during the development review process. Utility companies are bound by contract to update energy systems to meet any additional demand.

Energy Usage

Energy usage is typically quantified using the British Thermal Unit (BTU). Total energy usage in California was 7,830.3 trillion BTU in 2016 (the most recent year for which this specific data is available), which equates to an average of 198 million BTU per capita.[14] Of California's total energy usage, the breakdown by sector is roughly 40 percent transportation, 24 percent industrial, 19 percent commercial, and 17 percent residential.[15] Electricity and natural gas in California are generally consumed by stationary users such as residences and commercial and industrial facilities, whereas petroleum consumption is generally accounted for by transportation-related energy use. In 2018, taxable gasoline sales (including aviation gasoline) in California accounted for 15,589,042,965 gallons of gasoline.[16]

The electricity consumption attributable to Orange County from 2006 to 2017 is shown in Table 6-3, *Electricity Consumption in Orange County 2006-2017*. As indicated in Table 6-3, energy consumption in Orange County remained relatively constant between 2006 and 2017, with no substantial increase.

13 California Energy Commission, *Supply and Demand of Natural Gas in California*, https://www.energy.ca.gov/almanac/naturalgas_data/overview.html, accessed March 15, 2019.
14 United States Energy Information Administration, *Table F30: Total Energy Consumption, Price, and Expenditure Estimates, 2016*, https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_te.html&sid=US, accessed March 15, 2019.
15 Ibid.
16 California Department of Tax and Fee Administration, N*et Taxable Gasoline Gallons*, http://www.cdtfa.ca.gov/taxes-and-fees/MVF-10-Year-Report.pdf, accessed March 15, 2019.

Table 6-3
Electricity Consumption in Orange County 2006-2017

Year	Electricity Consumption (in millions of kilowatt hours)
2005	20,551
2006	21,186
2007	21,096
2008	21,514
2009	20,651
2010	19,789
2011	20,009
2012	20,621
2013	20,389
2014	20,827
2015	20,927
2016	20,391
2017	20,030

Source: California Energy Commission, *Electricity Consumption by County*, http://www.ecdms.energy.ca.gov/elecbycounty.aspx, accessed March 15, 2019.

The natural gas consumption in Orange County from 2006 to 2017 is shown in Table 6-4, *Natural Gas Consumption in Orange County 2006-2017*. Similar to electricity consumption, natural gas consumption in Orange County remained relatively constant between 2006 and 2017, with no substantial increase.

Table 6-4
Natural Gas Consumption in Orange County 2006-2017

Year	Natural Gas Consumption (in millions of therms)
2006	636
2007	644
2008	633
2009	611
2010	636
2011	639
2012	613
2013	636
2014	545
2015	545
2016	570
2017	576

Source: California Energy Commission, *Gas Consumption by County*, http://www.ecdms.energy.ca.gov/gasbycounty.aspx, accessed March 15, 2019.

Automotive fuel consumption in Orange County from 2006 to 2018 is shown in Table 6-5, *Automotive Fuel Consumption in Orange County 2006-2018*. As shown in Table 6-5, on-road automotive fuel consumption in Orange County has declined steadily, since 2006. Heavy-duty vehicle fuel consumption dropped in 2008 and 2009 and has steadily risen since that time.

Table 6-5
Automotive Fuel Consumption in Orange County 2006-2018

Year	On-Road Automotive Fuel Consumption (Gallons)	Heavy-Duty Vehicle/Diesel Fuel Consumption (Gallons)
2006	1,435,462,257	139,055,699
2007	1,423,778,297	140,962,964
2008	1,365,076,979	130,526,813
2009	1,357,149,650	118,572,627
2010	1,363,676,577	121,946,393
2011	1,349,691,464	128,731,296
2012	1,323,464,829	132,391,898
2013	1,309,170,033	136,506,102
2014	1,310,499,602	140,126,848
2015	1,302,220,609	146,075,106
2016	1,295,517,278	151,612,836
2017	1,280,170,453	155,501,327
2018	1,248,703,310	159,431,547

Source: California Air Resources Board, EMFAC2014.

6.4.2 REGULATORY SETTING

The following is a description of State and local environmental laws and policies that are relevant to the CEQA review process.

STATE

California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24)

In 1978, the CEC established Title 24 of the California Code of Regulations, California's energy efficiency standards for residential and non-residential buildings, in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and non-residential buildings. The 2016 Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6), commonly referred to as "Title 24," became effective on January 1, 2017. In general, Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2016 Title 24 standards are 28 percent more efficient than previous standards for residential development.[17] The standards offer developers better windows, insulation, lighting, ventilation systems, and other features that reduce energy consumption in homes and businesses. Further, the 2019 Building Energy Efficiency Standards, which take effect on January 1, 2020, will promote photovoltaic systems in newly constructed residential buildings. With rooftop solar

17 California Energy Commission, *2016 Energy Standards Overview*, https://www.lgc.org/wordpress/wp-content/uploads/2016/02/2016-Energy-Standards-Overview-California-Energy-Commission.pdf, accessed March 15, 2019.

electricity generation, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards.[18]

California Green Building Standards Code

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, is a Statewide mandatory construction code that was developed and adopted by the California Building Standards Commission and the California Department of Housing and Community Development. CALGreen standards require new residential and commercial buildings to comply with mandatory measures under five topical areas: planning and design; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality. CALGreen also provides voluntary tiers and measures that local governments may adopt which encourage or require additional measures in the five green building topics. The most recent update to the CALGreen Code was adopted in 2016 and went into effect January 1, 2017.

LOCAL

City of Newport Beach Energy Action Plan

On July 2013, the City prepared the *City of Newport Beach Energy Action Plan* (Energy Action Plan), created in partnership with SCE and SCG. The Energy Action Plan provides the City guidance in reducing greenhouse emissions by lowering municipal and community wide energy use. The primary goal of the Energy Action Plan is to provide a roadmap for the City to reduce GHG emission through reductions in energy used in facility buildings and operations. The Energy Action Plan assists in identifying a clear path to successfully implementing goals, policies, and actions that will achieve the City's reduction targets.

The City's long-term vision for energy efficiency focuses around three primary objectives:

1. Reduce the City's carbon footprint and its adverse effect on the environment;
2. Conserve energy at the local government facilities; and
3. Raise energy awareness in local community and improve the quality of life.

6.4.3 IMPACT THRESHOLDS AND SIGNIFICANCE CRITERIA

Appendix G of the *CEQA Guidelines* contains the Environmental Checklist form used during preparation of this EIR. Accordingly, a project may create a significant adverse environmental impact if it would:

18 California Energy Commission, *2019 Building Energy Efficiency* Standards, https://www.energy.ca.gov/title24/2019standards/documents/2018_Title_24_2019_Building_Standards_FAQ.pdf, accessed March 19, 2019.

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation (refer to Impact Statement EN-1); and/or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency (refer to Impact Statement EN-1).

Based on these standards, the effects of the proposed project have been categorized as either a "less than significant impact" or a "potentially significant impact." Mitigation measures are recommended for potentially significant impacts. If a potentially significant impact cannot be reduced to a less than significant level through the application of mitigation, it is categorized as a significant and unavoidable impact.

METHODOLOGY

The following impact analysis focuses on the three sources of energy that are relevant to the proposed project: electricity; natural gas; and transportation fuel for vehicle trips associated with the project as well as the fuel necessary for project construction. It is noted that the project would not directly consume natural gas, as all the pumps and treatment equipment would be powered by electricity. However, project operations could indirectly involve the consumption of natural gas if the project's electricity supply originates from a natural gas-fired power plant or if final engineering/design requirements necessitate gas-fired pump stations.

6.4.4 IMPACTS AND MITIGATION MEASURES

ENERGY CONSUMPTION

EN-1 THE PROJECT COULD RESULT IN WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES AND CONFLICT WITH A RENEWABLE ENERGY OR ENERGY EFFICIENCY PLAN.

Impact Analysis:

Original Northeast Pump Station

The project's estimated energy consumption is summarized in Table 6-6, *Energy Consumption*. Currently there are two 250 horsepower pumps and two 50 horsepower pumps operating on-site. The project proposes one additional 250 horsepower pump, for a total of three 250 horsepower pumps and two 50 horsepower pumps proposed to operate on-site. As shown in Table 6-6, the electricity usage as a result of the one additional pump would constitute an approximate 0.008 percent increase over Orange County's typical annual electricity consumption. The project would not directly consume natural gas as all the conveyance equipment and treatment equipment would be powered by electricity. The project-related heavy-duty vehicle diesel fuel consumption would increase Orange County's consumption by 0.0008 percent. Additionally, the project involves upgrading an existing pump station and would not increase operational vehicle trips as maintenance trips would remain the same. As such, automotive fuel consumption would not increase.

Table 6-6
Energy Consumption

Energy Type	Project Annual Energy Consumption	Orange County Annual Energy Consumption	Percentage Increase Countywide[6]
Electricity Consumption[1]	1,633 MWh	20,03,000 MWh	0.008%
Natural Gas Consumption[2]	0 therms	576,000,000 therms	0.000%
Fuel Consumption			
• Operational Automotive Fuel Consumption[3]	0 gallons	155,501,327 gallons	0.000%
• Construction (Heavy-Duty Diesel Vehicle) Fuel Consumption[4,5]	113,274 gallons	159,431,547 gallons	0.0008%

Notes:
1. Based on total electricity consumption for the additional 250 horsepower pump (currently there are two 250 horsepower pumps and two 50 horsepower pumps operating on-site. The proposed project would have a total of three 250 horsepower pumps and two 50 horsepower pumps).
2. The project would not consume natural gas as all the pumps and treatment equipment are electrical.
3. Project operations would not increase the number of maintenance trips (15 per week) or other vehicle trips compared to existing conditions. Therefore, the operational automotive fuel consumption for the proposed project is not included in this table/analysis.
4. Construction fuel consumption is based on equipment usage factors within the California Emissions Estimator Model (CalEEMod v. 2016.3.1)
5. Countywide fuel consumption is from the California Air Resources Board EMFAC2014 model.
6. The project increases in electricity and natural gas consumption are compared with the total consumption in Orange County in 2017. The project increases in automotive fuel consumption are compared with the countywide fuel consumption in 2018.

Construction-Related Energy Consumption

Project construction would consume energy in two general forms: (1) the fuel energy consumed by construction vehicles and equipment; and (2) bound energy in construction materials, such as asphalt, steel, concrete, pipes, and manufactured or processed materials such as lumber and glass.

Fossil fuels used for construction vehicles and other energy-consuming equipment would be used during site clearing, grading, and construction. Fuel energy consumed during construction would be temporary and would not represent a significant demand on energy resources. In addition, some incidental energy conservation would occur during construction through compliance with State requirements that equipment not in use for more than five minutes be turned off. Project construction equipment would also be required to comply with the latest Environmental Protection Agency and California Air Resources Board engine emissions standards. These emissions standards require highly efficient combustion systems that maximize fuel efficiency and reduce unnecessary fuel consumption. Due to increasing transportation costs and fuel prices, contractors and owners have a strong financial incentive to avoid wasteful, inefficient, and unnecessary consumption of energy during construction. There is growing recognition among developers and retailers that sustainable construction is not prohibitively expensive, and that there is a significant cost-savings potential in green building practices and materials.

Substantial reductions in energy inputs for construction materials can be achieved by selecting building materials composed of recycled materials that require substantially less energy to produce than non-recycled materials. The project-related incremental increase in the use of energy related to construction materials such as asphalt, steel, concrete, pipes, and manufactured or processed materials (e.g., lumber and gas) would not substantially increase demand for energy compared to overall local and regional demand for construction materials. It is reasonable to assume that production of building materials such as concrete, steel, etc., would employ all reasonable energy conservation practices in the interest in minimizing the cost of doing business.

As indicated in Table 6-6, the project's fuel consumption during the entire construction period would be 113,274 gallons, which would increase fuel use in Orange County by 0.0008 percent. As such, project construction would have a nominal effect on the local and regional energy supplies. It is noted that construction fuel use is temporary and would cease upon completion of construction activities. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. Therefore, construction fuel consumption would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature. As such, a less than significant impact would occur in this regard.

Operational Energy Consumption

Transportation Energy Demand

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration is responsible for establishing additional vehicle standards and for revising existing standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States. As described above, the project proposes improvements to a pump station and force mains and project operations would not increase existing maintenance vehicle trips. The project does not involve the development of a new trip generating land use and would not increase Countywide automotive fuel consumption. The project would not result in any unusual characteristics that would result in excessive operational fuel consumption. Fuel consumption associated with project-related vehicle trips would not be considered inefficient, wasteful, or unnecessary in comparison to other similar developments in the region. As such, a less than significant impact would occur in this regard.

Electricity Demand

The project's net electrical energy demand is estimated to increase the pump station's electricity demand by approximately 1,633 MWh per year.[19] The electricity provider in Orange County, SCE, is subject to California's Renewables Portfolio Standard (RPS). The RPS requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020 and to 50 percent of total procurement by 2030. Renewable energy is generally defined as energy that comes from resources that are naturally replenished within a human timescale, such as sunlight, wind, tides, waves, and geothermal heat. The increase in reliance of such energy resources further ensures projects would not result in the waste of the finite energy resources. Project implementation would not require upgrades to the SCE electrical power grid as the facility would expand from approximately 4,800 square feet to approximately 10,000 square feet (an increase of 5,200 square feet). SCE has an adequate supply capacity to support project operations.

As indicated in Table 6-6, operational energy consumption would represent an approximate 0.008 percent increase in electricity consumption over the current Countywide usage. The project would not require natural gas and the proposed wastewater treatment equipment would incorporate the most

19 The electricity consumption is based on the energy usage of the additional 250 horsepower pump and conservatively assumes the pump would operate 24 hours per day for 365 days per year and 0.75 kilowatts per horsepower conversion factor.

energy efficient technology available. The project would not result in the inefficient, wasteful, or unnecessary consumption of building energy. Additionally, the project would not result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure.

Conclusion

The project includes a pump station, force mains, and gravity sewer improvements, and does not include any significant growth-inducing land uses that increase energy consumption in the City. Rather, the project would improve operational reliability and accommodate long-range, planned regional growth within the OCSD service area based on regional growth forecasts.

The project would be subject to compliance with all Federal, State, and local requirements for energy efficiency. As shown in Table 6-6, the net increase in electricity, natural gas, and construction fuel consumption over existing conditions is minimal (0.008 percent or less). For the reasons described above, the project would not place a substantial demand on regional energy supply or require significant additional capacity, or significantly increase peak and base period electricity demand, or cause wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, and/or maintenance, or preempt future energy development or future energy conservation. Project impacts would be less than significant in this regard.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the operation and construction activities required would be similar to those proposed under the Original Northeast Pump Station. However, construction of the Modified Northeast Pump Station proposes an alternative dredging construction method for force main improvements. As such, the project may require alternative construction equipment and would be shorter in duration than the Original Northeast Pump Station. HDD would not be an option for the Modified Northeast Pump Station. Construction-related energy consumption as a result of dredging operations would not vary significantly from construction-related energy consumption analyzed under the Original Northeast Pump Station. As such, the Modified Northeast Pump Station would not place a substantial demand on regional energy supply or require significant additional capacity, or significantly increase peak and base period electricity demand, or cause wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, and/or maintenance, or preempt future energy development or future energy conservation. Thus, impacts would be less than significant in this regard.

South Pump Station

The analyses for the Original Northeast Pump Station and Modified Northeast Pump Station are also applicable to the South Pump Station. Development of the South Pump Station would involve shifting and expanding the existing pump station facility site approximately 200 feet to the west and constructing a new pump station building. Pump station improvements construction activities for the South Pump Station would be similar to that of the Original Northeast Pump Station and Modified Northeast Pump Station. Similar to the Modified Northeast Pump Station, the South Pump Station would install force mains across the Newport Bay Channel via either dredging or microtunneling. Thus, the analyses for the Original Northeast Pump Station and Modified Northeast Pump Station would be applicable to the South Pump Station. As such, the South Pump Station would not place a

substantial demand on regional energy supply or require significant additional capacity, or significantly increase peak and base period electricity demand, or cause wasteful, inefficient, and unnecessary consumption of energy during project construction, operation, and/or maintenance, or preempt future energy development or future energy conservation. Thus, impacts would be less than significant in this regard.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

EN-2 THE PROJECT COULD CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY.

Impact Analysis:

Original Northeast Pump Station

The City's Energy Action Plan is intended to provide a roadmap that the City can follow to meet its long-term energy efficiency and sustainability goals. The proposed project would replace the existing Bay Bridge Pump Station and associated force mains to bring the pump station facility and force mains to current design and reliability standards to ensure continuous service for the Newport service area. This rehabilitation would involve construction of new pump station facilities including a pump station, generator, and odor control facilities. As a new OSCD facility, the project would comply with the goals of the Energy Action Plan to reduce its energy usage by using newer pumps. Additionally, these facilities would be in compliance with Title 24 and CALGreen standards, which would ensure the project incorporates energy efficient insulation, lighting, ventilation systems. Adherence to the Title 24 energy requirements would ensure conformance with the State's goal of promoting energy and lighting efficiency, and the City's Energy Action Plan. Therefore, the proposed project would result in less than significant impacts associated with renewable energy or energy efficiency plans.

Modified Northeast Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station, as the operation and construction activities required would be similar to those proposed under the Original Northeast Pump Station. Therefore, the Modified Northeast Pump Station would result in less than significant impacts associated with renewable energy or energy efficiency plans.

South Pump Station

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station, as the operation and construction activities required would be similar to those proposed under the Original Northeast Pump Station. Therefore, the South Pump Station would result in less than significant impacts associated with renewable energy or energy efficiency plans.

Mitigation Measures: No mitigation measures are required for any site plan concepts.

Level of Significance: Less Than Significant Impact.

6.4.5 SIGNIFICANT UNAVOIDABLE IMPACTS

No significant unavoidable impacts related to energy have been identified.

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7.0 ALTERNATIVES TO THE PROPOSED PROJECT

Under CEQA, the identification and analysis of alternatives to a project is a fundamental part of the environmental review process. Public Resources Code Section 21002.l(a) establishes the need to address alternatives in an EIR by stating that in addition to determining a project's significant environmental impacts and indicating potential means of mitigating or avoiding those impacts, "the purpose of an environmental impact report is . . . to identify alternatives to the project."

Direction regarding the definition of project alternatives is provided in the *CEQA Guidelines* as follows:

> *An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.*[1]

The *CEQA Guidelines* emphasize that the selection of project alternatives be based primarily on the ability to reduce significant effects relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."[2] The *CEQA Guidelines* further direct that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasoned choice are addressed.[3]

In selecting project alternatives for analysis, potential alternatives must pass a test of feasibility. *CEQA Guidelines* Section 15126.6(f)(1) states that:

> *Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site. . .*

Beyond these factors, *CEQA Guidelines* require the analysis of a "no project" alternative and an evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated as such. If the environmentally superior alternative is the No Project Alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives.[4] In addition, *CEQA Guidelines* Section 15126.6(c) requires that an EIR identify any alternatives that were considered for analysis but rejected as infeasible and discuss the reasons for their rejection.

The following are the project's goals and objectives, which were developed by OCSD:

- Increase reliability since the existing Bay Bridge Pump Station is approximately 52 years old, outdated, and no longer meets structural, electrical, or maintenance standards. In addition, since the existing force mains are located under the Newport Bay Channel, thorough

1 *CEQA Guidelines* Section 15126.6(a).
2 *CEQA Guidelines* Section 15126.6(b).
3 *CEQA Guidelines* Section 15126.6(f).
4 *CEQA Guidelines* Section 15126.6(e)(2).

inspection to predict the remaining life span is not possible. Thus, replacement of the force mains would reduce the risk of failure and prevent possible releases of sewage into the Newport Bay Channel;

- Increase safety for OCSD Operations & Maintenance personnel where safe entry and exit can be made and maintenance crews and drivers can easily access the site. The existing pump station is accessed directly from East Coast Highway, where adjacent traffic creates safety hazards for OCSD vehicles. Maintenance trucks accessing the site require that they back into oncoming traffic; and
- Improve odor control through a new 620 square foot odor control facility, which houses a vapor-phase odor control scrubber system that would remove odorous vapors from the incoming waste system as well as two 10-foot diameter tanks to accommodate liquid phase odor control.

The range of feasible alternatives shall be selected and discussed in a manner that fosters meaningful public participation and informed decision making. The range of potential alternatives to the proposed project shall also include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. Among the factors that may be considered when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, General Plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent). Only locations that would avoid or substantially lessen any of the project's significant effects need be considered for inclusion. An alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative need not be considered.

Only those impacts found significant and unavoidable are relevant in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. The proposed project would not result in any significant and unavoidable impacts and all potential impacts were reduced to less than significant levels.

OCSD prepared a *Preliminary Alignment Study Report* (PASR), dated May 2015, to develop three alignment alternatives for the upgrade of Bay Bridge Pump Station and its associated force mains based on existing conditions of the project area, utility research, predetermined evaluation criteria, and a preliminary cost analysis. The PASR was used as the basis for the preliminary design for the project. Based on feedback from OCSD and stakeholder agencies the following alternatives were evaluated in the PASR:

- *Alternative 1A:* Expand the pump station facility immediately west of its existing location and realign the force mains through the Newport Bay Channel.
- *Alternative 1B:* Rehabilitate the existing pump station within its current boundaries and realign the force mains through the Newport Bay Channel.
- *Alternative 2:* Construct a new pump station within the southwesterly portion of the Back Bay Landing Property (to the south of East Coast Highway and immediately east of Newport Bay Channel) and realign the force mains through the Newport Bay Channel.

Per the PASR recommendations, OCSD selected Alternative 1A as the preferred alternative (which was the subject of the Initial Study (IS) for the *Bay Bridge Pump Station and Force Mains Replacement Project Draft Environmental Impact Report* (2017 Bay Bridge EIR) (State Clearinghouse No. 2016111031). Minor refinements to Alternative 1A were determined to be required by OCSD subsequent to preparation of the IS and was fully analyzed in the 2017 Bay Bridge EIR as the proposed project. The Section 7.0, *Alternatives*, of the 2017 Bay Bridge EIR analyzed the PASR's Alternative 1A and Alternative 2, in addition to the "no project" alternative.

As discussed in detail in Section 3.2, *Project Background*, the 2017 Bay Bridge EIR was not certified at that time due to conflicts with the planned development of the Back Bay Landing Project. Since then, OCSD has been in negotiations with Bayside Village Marina, LLC, to identify potential site plan alternatives to the original project. As such, this Recirculated EIR analyzes three conceptual site plans: the Original Northeast Pump Station, Modified Northeast Pump Station, and South Pump Station. The Original Northeast Pump Station is the conceptual site plan previously analyzed in the 2017 Bay Bridge EIR and the South Pump Station reflects the PASR's Alternative 1A. Since PASR Alternative 1A has been analyzed in detail as the South Pump Station in Sections 5.0 through 5.12 of this Recirculated EIR, analysis of PASR Alternative 1A has been removed from this section.

As such, for the purposes of this analysis, the "no project" alternative and PASR Alternative 2 were selected for consideration of potential environmental impacts compared to the proposed project:

- "No Project/Future Back Bay Landing Development" Alternative; and
- "Pump Station South Relocation" Alternative (PASR Alternative 2).

Throughout the following analysis, the alternatives' impacts are analyzed for each environmental issue area, as examined in Sections 5.1 through 5.12 of this EIR. In this manner, each alternative can be compared to the proposed project on an issue-by-issue basis. Table 7-1, *Comparison of Alternatives*, which is included at the end of this section, provides an overview of the alternatives analyzed and a comparison of each alternative's impact in relation to the proposed project. This section also identifies alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process. Among the factors used to eliminate alternatives from detailed consideration are: failure to meet most of the basic project objectives; infeasibility; or inability to avoid significant environmental impacts. Section 7.4, *Environmentally Superior Alternative*, references the "environmentally superior" alternative, as required by the *CEQA Guidelines*.

In accordance with *CEQA Guidelines* Section 15126.6(c), an EIR should identify any alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for their rejection. According to the *CEQA Guidelines*, among the factors that may be used to eliminate alternatives from detailed consideration are the alternative's failures to meet most of the basic project objectives, the alternative's infeasibility, or the alternative's inability to avoid significant environmental impacts. The following alternatives were considered and rejected as infeasible, which are summarized as follows:

- *PASR Alternative 1B*. PASR Alternative 1B was rejected from further consideration. Rehabilitation of the existing pump station within its current boundaries would only provide for a 20- to 30-year design service life, and expansion of this facility would most likely be needed for future demand peak wet weather flows (which is represented by Alternative 1A discussed above and considered as part of this alternatives analysis). Since this Alternative

would not meet a critical objective of the project, it has been rejected from further consideration by OCSD.

- *Alternate Location Alternative*. The project site is available for development because it is a RV storage lot within the City of Newport Beach, and future development on the RV storage facility (the Back Bay Landing project) has accounted for a future pump station facility on-site. Compared to the proposed project, it is unlikely that OCSD would be able to acquire another property within the City on which to develop a project of similar size and scale while also retaining the ability to connect to existing wastewater facilities. The proposed project is location-dependent, in that it must be sited in proximity to existing wastewater conveyance facilities for operational efficiency. As such, this alternative has been rejected from further consideration by OCSD.

7.1 "NO PROJECT/FUTURE BACK BAY LANDING DEVELOPMENT" ALTERNATIVE

In accordance with the *CEQA Guidelines*, "the no project analysis shall discuss the existing conditions . . ., as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services."[5] The *CEQA Guidelines* continue to state that "in certain instances, the no project alternative means 'no build' wherein the existing environmental setting is maintained."[6] The "No Project/Future Back Bay Landing Development" Alternative includes a discussion and analysis of the existing baseline conditions at the time the Notice of Preparation was published on November 10, 2016. The "No Project" scenario is described and analyzed in order to enable the decision-makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.

DESCRIPTION OF ALTERNATIVE

Under the "No Project/Future Back Bay Landing Development" Alternative, the pump station and force mains would remain in their current location and condition. The existing pump station and force mains would not be improved to meet current structural and maintenance standards, would not increase safety for OCSD Operations & Maintenance personnel, and would not construct new on-site odor control infrastructure. As part of this Alternative, the planned development for the Back Bay Landing Project would occur. The development would include dry stack boat storage facility for 140 boats, 61,534 square feet of visitor-serving retail and recreational marine facilities, and up to 49 attached residential units. This Alternative assumes that development associated with the Back Bay Landing project would occur at the project's relocated pump station sites, including the northeast and south pump station sites proposed under the Original Northeast Pump Station, Modified Northeast Pump Station, and South Pump Station conceptual site plans.

The following discussion evaluates the potential environmental impacts associated with the "No Project/Future Back Bay Landing Development" Alternative, as compared to impacts from the proposed project's three conceptual site plans.

5 *CEQA Guidelines* Section 15126.6(e)(2).
6 *CEQA Guidelines* Section 15126.6(e)(3)(B).

IMPACT COMPARISON TO THE PROPOSED PROJECT

Aesthetics/Light and Glare

The short-term visual impacts associated with grading, staging, and construction activities that would occur with any of the three proposed conceptual site plans would not occur with the "No Project/Future Back Bay Landing Development" Alternative. Therefore, the project's construction-related impacts to the visual character/quality of the project site and its surroundings would be avoided. No mitigation measures for construction activities, including nighttime lighting would be necessary with implementation of this alternative.

Under this Alternative, the existing Bay Bridge Pump Station and associated force mains would not be improved. The existing Bay Bridge facilities are outdated and no longer meet structural or maintenance standards. The proposed project is needed to ensure continuous service to the community and avoid spills for the next design lifespan (an additional 50 years). As such, under the "No Project/Future Back Bay Landing Development" Alternative, there is a potential for increased construction activities due to maintenance and repair of aging facilities, as compared to the proposed project. These construction activities would result in short-term impacts to the visual character/ quality of the project area, which would otherwise not occur (or occur to a lesser extent) under the proposed project.

On a long-term operational basis, the project site's visual character would not be altered. The existing pump station would remain, and the development associated with the Back Bay Landing project would be constructed surrounding the pump station site. View impacts from public view points would be similar to the proposed project, as the existing pump station would remain, and new structures associated with the Back Bay Landing project would be constructed. As the pump station and force mains would remain in their current location and condition, no change to view impacts along East Coast Highway would result.

The "No Project/Future Back Bay Landing Development" Alternative would be environmentally superior to the proposed project regarding aesthetics/light and glare, given it would generally reduce construction-related less than significant impacts, but would result in similar operational impacts to scenic views, visual character and quality, and light and glare.

Air Quality

Table 5.2-5, *Maximum Daily Construction Emissions*, presents the project's maximum anticipated daily short-term construction emissions and indicates that maximum construction activities associated with the three conceptual site plans would result in less than significant impacts with mitigation incorporated. Short-term air quality impacts from demolition, grading, and construction activities would not occur with the "No Project/Future Back Bay Landing Development" Alternative. Therefore, the short-term air quality impacts that would occur with the proposed project would be avoided with this Alternative.

Under this Alternative, the existing Bay Bridge Pump Station and associated force mains would not be improved. The existing Bay Bridge facilities are outdated and no longer meet structural or maintenance standards. The proposed project is needed to ensure continuous service to the community and avoid spills for the next design lifespan. As such, under the "No Project/Future Back

Bay Landing Development" Alternative, there is a potential for increased construction activities due to maintenance and repair of aging facilities, as compared to the proposed project. These construction activities would result in short-term impacts related to air quality, which would otherwise not occur (or occur to a lesser extent) under the proposed project.

The proposed project would not exceed the South Coast Air Quality Management District's (SCAQMD) regional emissions thresholds or localized significance thresholds (LST), as indicated in Table 5.2-6, *Localized Significance of Emissions*. Although similar to existing conditions, the project's long-term air quality impacts from mobile and area source pollutant emissions would not occur with the "No Project/Future Back Bay Landing Development" Alternative. Therefore, the air quality emissions that would occur with the proposed project would be avoided with this Alternative.

The "No Project/Future Back Bay Landing Development" Alternative would be environmentally superior to the proposed project regarding air quality, given it would result in no long-term air quality impacts.

Biological Resources

Project implementation would result in a less than significant impact with regards to terrestrial and marine wildlife species in the project area with implementation of Mitigation Measures BIO-1 through BIO-3. If project construction involves dredging (proposed under the conceptual site plans for the Modified Northeast Pump Station and South Pump Station), the project would require a Section 404 and Section 10 Permit authorization from the U.S. Army Corps of Engineers (Corps) and Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB). Under the "No Project/Future Back Bay Landing Development" Alternative, no construction activities would occur with respect to the proposed project, and the pump station and force mains would remain in their current condition. Therefore, although less than significant, the project's impacts would be avoided. Therefore, no impact to special status plant species, sensitive vegetation communities, wetlands, jurisdictional waters, or wildlife movement corridors would occur with this Alternative.

The "No Project/Future Back Bay Landing Development" Alternative would be environmentally superior to the proposed project regarding biological resources.

Cultural Resources

There are no cultural resources that have been identified on the project site. Project implementation would require demolition of the pump station structure, grading/trenching, and excavation for the purposes of dredging, HDD, and/or microtunneling, which are expected to have a less than significant impact. Mitigation Measure CUL-1 would reduce potential impacts regarding unknown archaeological resources to less than significant levels. With the "No Project/Future Back Bay Landing Development" Alternative, there would be no potential for impacts to archaeological resources, given no ground-disturbing activities related to the proposed project would occur. However, site disturbance would still occur as a result of future development of the Back Bay Landing Project. As this Alternative would avoid ground disturbance for the purposes of dredging, HDD, microtunneling, grading, and trenching, reduced impacts to cultural resources would result.

The "No Project/Future Back Bay Landing Development" Alternative would be environmentally superior to the proposed project regarding cultural resources, given it would avoid site disturbances to the west of Newport Bay Channel and within roadway right-of-way.

Geology and Soils

The project site is susceptible to strong seismic ground shaking, seismic hazards (i.e., seismically induced liquefaction, lateral spreading, and settlement), soil erosion, and hazardous (expansive and corrosive) soils. However, compliance with the Seismic Hazards Mapping Program, OCSD sewer pipeline design standards, California Geological Survey (CGS) guidelines, California Building Code (CBC), and State regulations, would reduce potentially significant impacts regarding geology and soil under the three conceptual site plans to a less than significant level. Additionally, potential project impacts to paleontological resources would be reduced with implementation of Mitigation Measure GEO-1. Implementation of the "No Project/Future Back Bay Landing Development" Alternative would not expose additional structures to potential adverse effects associated with seismic, geologic, or soil hazards with regard to the proposed project. While site disturbance would still occur as a result of the Back Bay Landing Project, this Alternative would avoid ground disturbance on the existing pump station site, areas to the west of Newport Bay Channel, and within roadway right-of-way, which would reduce potential paleontological impacts. Comparatively, a less than significant impact would occur with the proposed project, while no new impacts would occur with this Alternative. However, this alternative would not result in the upgrade of existing facilities to the current CBC and State regulations, which would reduce the risk of loss as a result of seismic, geologic, or soil hazards.

The "No Project/Future Back Bay Landing Development" Alternative would be neither environmentally superior nor inferior to the proposed project regarding geology and soils, as the existing site would remain susceptible to the same geologic conditions and hazards that were identified for the proposed project.

Greenhouse Gas Emissions

As indicated in Table 5.6-1, *Project Related Greenhouse Gas Emissions*, project implementation would result in 546.74 metric ton of carbon dioxide equivalent per year ($MTCO_2eq/yr$), which is below the 3,000 $MTCO_2eq/yr$ significance threshold established by SCAQMD. Thus, less than significant short-term and operational greenhouse gas (GHG) emission impacts would occur with the proposed project. GHG emissions from construction activities related to development of a new pump station facility and force mains would not occur with the "No Project/Future Back Bay Landing Development" Alternative.

Under this Alternative, the existing Bay Bridge Pump Station and associated force mains would not be improved. The existing Bay Bridge facilities are outdated and no longer meet structural or maintenance standards. The proposed project is needed to ensure continuous service to the community and avoid spills for the next design lifespan. As such, under the "No Project/Future Back Bay Landing Development" Alternative, there is a potential for increased construction activities due to maintenance and repair of aging facilities, as compared to the proposed project. These construction activities would result in short-term impacts related to greenhouse gases, which would otherwise not occur (or occur to a lesser extent) under the proposed project.

As operational GHG emissions would be similar to existing conditions, no increase or decrease in long-term impacts would result in this regard.

The "No Project/Future Back Bay Landing Development" Alternative would be environmentally superior to the proposed project regarding GHG emissions. Long-term operational impacts would be similar to existing conditions. Although short-term, periodic GHG emissions may result from this Alternative as a result of maintenance and repair of aging facilities, none of the emissions related to construction of a new pump station/force mains would occur.

Hazards and Hazardous Materials

Potential accidental conditions involving hazardous materials during construction of a new pump station/force mains would be avoided with the "No Project/Future Back Bay Landing Development" Alternative. Short-term construction-related impacts involving potentially hazardous building materials (i.e., asbestos containing materials [ACMs] and lead-based paints [LBPs]) would be avoided and Mitigation Measures HAZ-1 through HAZ-4 would not be necessary. Further, potential hazardous conditions during construction, as a result of lane closures, would not be necessary. Comparatively, less than significant potential impacts (with mitigation incorporated) involving accidental release of hazardous materials and hazardous traffic conditions from construction activities would occur with the proposed project, while no impacts would occur with this Alternative.

As the existing pump station would continue to operate, day-to-day operational impacts would remain similar to that considered for the proposed project. However, under this Alternative, the existing Bay Bridge Pump Station and associated force mains would not be improved. The existing Bay Bridge facilities are outdated and no longer meet structural or maintenance standards. The proposed project is needed to ensure continuous service to the community and avoid spills for the next design lifespan. As such, under the "No Project/Future Back Bay Landing Development" Alternative, there is an increased potential for accidental releases/spills of wastewater due to failure of the existing, aging facilities.

The "No Project/Future Back Bay Landing Development" Alternative would be neither environmentally superior nor inferior to the proposed project regarding hazardous materials. While short-term construction related impacts from project construction would not occur under this Alternative, it would result in an increased potential for accidental releases/spills of wastewater due to the aging pump station and force mains that do not meet current structural and maintenance standards.

Hydrology and Water Quality

The "No Project/Future Back Bay Landing Development" Alternative would result in no short-term impacts to water quality associated with grading, excavation, or construction activities, as these activities would not occur. Comparatively, less than significant potential impacts (with mitigation incorporated) involving water quality impacts from construction activities would occur with the project, while none would occur with this Alternative.

The "No Project/Future Back Bay Landing Development" Alternative would maintain the existing operational hydrology and water quality conditions experienced at the pump station site. Further, new land uses would still be developed on the project's proposed pump station sites (i.e., northeast and

south pump station sites) as a result of the Back Bay Landing Project. The post-construction Best Management Practices (BMPs) to address pollutants in storm water runoff would still be constructed as a result of the Back Bay Landing Project.

Under this Alternative, the existing Bay Bridge Pump Station and associated force mains would not be improved. The existing Bay Bridge facilities are outdated and no longer meet structural or maintenance standards. The proposed project is needed to ensure continuous service to the community and avoid spills for the next design lifespan. As such, under the "No Project/Future Back Bay Landing Development" Alternative, there is an increased potential for accidental releases/spills of wastewater due to failure of the existing, aging facilities. These accidental releases/spills could potentially impact water quality in the project area. Further, as the existing facility is not designed to accommodate water quality best management practices (BMPs) during wet weather flows, existing water quality runoff conditions would remain.

The "No Project/Future Back Bay Landing Development" Alternative would be neither environmentally superior nor inferior to the proposed project regarding hydrology and water quality impacts, as construction activities and associated impacts would not occur, but the potential risk to water quality as a result of releases/spills from the existing facility as well as existing runoff conditions remain.

Land Use and Relevant Planning

Under the "No Project/Future Back Bay Landing Development" Alternative, the project would not be constructed in the Coastal Zone; therefore, no Coastal Development Permit from the City and/or California Coastal Commission would be required. Like the proposed project, the "No Project/Future Back Bay Landing Development" Alternative would be consistent with the California Coastal Act's planning and management policies; Local Coastal Plan/Coastal Land Use Plan (LCP/CLUP) land use policies; General Plan land use designation, goals, and policies; zoning; the Southern California Association of Governments' (SCAG) regional planning efforts; and the Back Bay Landing PCDP.

Thus, the "No Project/Future Back Bay Landing Development" Alternative would be environmentally superior to the proposed project regarding land use.

Noise

Construction noise associated with the proposed project would result in less than significant impacts, with mitigation incorporated, regarding exposure to surrounding sensitive receptors to noise levels exceeding established standards. Construction activities would cause less than significant increased mobile noise along access routes to and from the site due to movement of equipment and workers. The project's construction-related vibration impacts are also anticipated to be less than significant. Construction-related short-term noise impacts from stationary and mobile sources, and vibration impacts would not occur with the "No Project/Future Back Bay Landing Development" Alternative. Therefore, the short-term construction-related noise and vibration impacts that would occur with the proposed project would be avoided with this Alternative.

Under this Alternative, the existing Bay Bridge Pump Station and associated force mains would not be improved. The existing Bay Bridge facilities are outdated and no longer meet structural or

maintenance standards. The proposed project is needed to ensure continuous service to the community and avoid spills for the next design lifespan. As such, under the "No Project/Future Back Bay Landing Development" Alternative, there is a potential for increased construction activities due to maintenance and repair of aging facilities, as compared to the proposed project. These construction activities would result in short-term impacts related to noise, which would otherwise not occur (or occur to a lesser extent) under the proposed project.

The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above existing conditions. As the project would generate a nominal number of vehicular trips for maintenance and/or inspection purposes, these trips already occur under existing conditions and would continue under the proposed project. Stationary noise would be similar to existing conditions as the OCSD pump station currently exists on-site.

Existing conditions would continue with the "No Project/Future Back Bay Landing Development" Alternative. Project implementation would result in less than significant impacts from stationary and mobile noise sources. Therefore, although less than significant, the project's short-term noise impacts from mobile noise sources would be avoided.

The "No Project/Future Back Bay Landing Development" Alternative would be environmentally superior to the proposed project regarding noise, since it would generally result in reduced short-term construction-related stationary and mobile source noise impacts.

Transportation

Construction-related trips would occur for grading, demolition, and construction of the proposed project. Impacts to temporary traffic and circulation patterns, including lane closures, would be reduced to a less than significant level with the implementation of mitigation. The project is not anticipated to result in any long-term traffic impacts as the project would generate negligible vehicle trips for periodic maintenance and inspections (a maximum of 15 trips per week, similar to existing conditions). Under the "No Project/Future Back Bay Landing Development" Alternative, no construction activities would occur with respect to the proposed project, and the pump station and force mains would remain in their current condition. Further, no lane closures would be required, avoiding potential hazardous traffic conditions. Similar to the South Pump Station conceptual site plan, the "No Project/Future Back Bay Landing Development" Alternative would maintain the existing hazardous driveway design along East Coast Highway .

Under this Alternative, the existing Bay Bridge Pump Station and associated force mains would not be improved. The existing Bay Bridge facilities are outdated and no longer meet structural or maintenance standards. The proposed project is needed to ensure continuous service to the community and avoid spills for the next design lifespan. As such, under the "No Project/Future Back Bay Landing Development" Alternative, there is a potential for increased construction activities due to maintenance and repair of aging facilities, as compared to the proposed project. These construction activities would result in short-term impacts related to traffic disruption on local roadways (i.e., East Coast Highway), which would otherwise not occur (or occur to a lesser extent) under the proposed project.

The "No Project/Future Back Bay Landing Development" Alternative would be neither environmentally superior nor inferior to the proposed project regarding traffic and circulation.

Tribal Cultural Resources

There are no tribal cultural resources that have been identified on the project site. However, project implementation could impact unknown tribal cultural resources. Mitigation Measures CUL-1 would likely reduce potential impacts to unknown tribal cultural resources to a less than significant level. With the "No Project/Future Back Bay Landing Development" Alternative, there would be no potential for impacts to tribal cultural resources given no ground-disturbing activities would occur. However, site disturbance would still occur as a result of future development of the Back Bay Landing Project. As this Alternative would avoid excavation for the purposes of dredging, HDD, microtunneling, grading, and trenching, reduced impacts to tribal cultural resources would result.

The "No Project/Future Back Bay Landing Development" Alternative would be environmentally superior to the proposed project regarding tribal cultural resources, given it would avoid site disturbances to the west of Newport Bay Channel and within roadway right-of-way.

ABILITY TO MEET PROJECT OBJECTIVES

The "No Project/Future Back Bay Landing Development" Alternative would not attain any of the project's basic objectives. The pump station, force mains, and gravity sewer improvements would not be constructed. As such, the pump station and conveyance facilities would not be replaced to meet current structural and maintenance standards and new on-site odor control infrastructure would not be installed. Further, the "No Project/Future Back Bay Landing Development" Alternative would not increase safety for OCSD Operations & Maintenance personnel where safe entry and exit can be made and maintenance crews and drivers can easily access the site.

7.2 "PUMP STATION SOUTH RELOCATION" ALTERNATIVE

DESCRIPTION OF ALTERNATIVE

The Pump Station South Relocation Alternative would construct a new pump station south of the East Coast Highway and east of Newport Bay Channel; refer to Exhibit 7-1, *Pump Station South Relocation Alternative – Conceptual Site Plan*. The new pump station facility would require construction of a retaining wall along Newport Bay Channel to increase the buildable-space of the property. Approximately 800 feet of dual 30-inch diameter force mains would be installed via either microtunneling or dredging through Newport Bay Channel (south of Newport Bay Bridge). For the purposes of this analysis, it is assumed that the Newport Bay Channel crossing would be constructed in similar manner to the proposed Original Northeast Pump Station conceptual site plan (i.e., microtunneling). A depiction of proposed work areas associated with microtunneling activities under this Alternative is provided as part of Exhibit 7-2, *Pump Station South Relocation Alternative – Proposed Microtunneling Work Areas*. After crossing Newport Bay Channel, the force mains would connect to the existing OCSD force main system south of West Coast Highway. The new pump station would require the construction of a new connection to the OCSD gravity sewer system. The 42-inch VCP gravity sewer would be microtunneled under East Coast Highway. After the new facilities are completed and commissioned, the existing force mains would be abandoned, the pump station would be demolished, and OCSD would construct a backup generator and odor control facility where the

NOT TO SCALE

Michael Baker INTERNATIONAL

03/19 JN 168975

RECIRCULATED ENVIRONMENTAL IMPACT REPORT
BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Pump Station South Relocation Alternative – Conceptual Site Plan

Exhibit 7-1

Source: Michael Baker International, *Bay Bridge Pump Station and Force Mains Rehabilitation Study Preliminary Alignment Study Report*, May 2016.

RECIRCULATED ENVIRONMENTAL IMPACT REPORT
BAY BRIDGE PUMP STATION AND FORCE MAINS REPLACEMENT PROJECT

Pump Station South Relocation Alternative – Proposed Microtunneling Work Areas

NOT TO SCALE

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Exhibit 7-2

existing pump station is currently located. The backup generator and odor control facility would be constructed at the existing pump station site due to space constraints at the new pump station site south of East Coast Highway.

IMPACT COMPARISON TO THE PROPOSED PROJECT

Aesthetics/Light and Glare

The short-term visual impacts associated with grading, staging, and construction activities that would occur with the proposed project's three conceptual site plans would also occur with the Pump Station South Relocation Alternative. However, this Alternative would result in slightly less impact as pipe staging can occur on private properties, rather than within roadway right-of-way. Similar mitigation measures for construction activities, including nighttime lighting, would be necessary with implementation of this alternative.

Long-term operational impacts under this Alternative would increase compared to the proposed project. This Alternative would include building improvements at both the existing Bay Bridge Pump Station site and the proposed pump station site south of East Coast Highway, which is also adjacent to the Newport Bay Channel.

The Pump Station South Relocation Alternative would be environmentally inferior to the proposed project regarding aesthetics/light and glare, given that the addition of the southerly pump station site would increase construction activities and alter visual characteristics over the long-term.

Air Quality

Table 5.2-5, *Maximum Daily Construction Emissions*, presents the project's maximum anticipated daily short-term construction emissions and indicates that less than significant impacts with mitigation incorporated would occur in this regard. Short-term air quality impacts from demolition, grading, and construction activities would occur with the Pump Station South Relocation Alternative. Comparatively, the construction-related air quality impacts would be similar as compared to the proposed project, since site preparation and construction methodology would generally be similar.

The proposed project would not exceed the SCAQMD's regional emissions thresholds or LST, as indicated in Table 5.2-6, *Localized Significance of Emissions*. Long-term air quality impacts from mobile and area source pollutant emissions would also occur with implementation of the Pump Station South Relocation Alternative. As with the proposed project, this Alternative would result in similar long-term air quality impacts as the existing condition.

The Pump Station South Relocation Alternative would be neither environmentally superior nor inferior to the proposed project in regard to air quality.

Biological Resources

Project implementation would result in a less than significant impact with regards to terrestrial and marine wildlife species in the project area with implementation of Mitigation Measures BIO-1 through BIO-3. If project construction involves dredging (proposed under the conceptual site plans for the Modified Northeast Pump Station and South Pump Station), the project would require a Section 404

and Section 10 Permit authorization from the Corps and Section 401 Water Quality Certification from the RWQCB. The site preparation and construction activities for this Alternative would generally be similar to the proposed project; however, the siting of the pump station south of East Coast Highway could also result in increased biological effects, since site preparation activities (including a potential retaining wall) may encroach in jurisdictional waters of the U.S., and could result in construction-related effects to biological resources within the channel (e.g., construction runoff affecting eelgrass).

The Pump Station South Relocation Alternative would neither be environmentally superior nor inferior to the proposed project, as both developments have the potential to impact marine and terrestrial biological resources and jurisdictional waters during construction activities.

Cultural Resources

No cultural resources have been identified on the project site. Project implementation would require demolition of the pump station structure, grading, trenching, and excavation for the purposes of dredging or HDD/microtunneling, which are concluded to result in a less than significant impact. Mitigation Measure CUL-1 would reduce potential impacts regarding unknown archaeological resources to less than significant levels. Under the Pump Station South Relocation Alternative, potential for impacts to archaeological resources would also be less than significant, given that this Alternative would result in similar site preparation and construction activities.

The Pump Station South Relocation Alternative would be neither environmentally superior nor inferior to the proposed project regarding potential impacts to cultural resources.

Geology and Soils

The project site is susceptible to strong seismic ground shaking, seismic hazards (i.e., seismically induced liquefaction, lateral spreading, and settlement), soil erosion, and hazardous (expansive and corrosive) soils. However, compliance with the Seismic Hazards Mapping Program, OCSD sewer pipeline design standards, CGS guidelines, CBC, and State regulations, would reduce potentially significant impacts regarding geology and soil to a less than significant level. Additionally, implementation of Mitigation Measure GEO-1 would ensure potential project impacts to paleontological resources are reduced to less than significant levels. Implementation of the Pump Station South Relocation Alternative would expose structures to potential adverse effects similar to the proposed project, including seismic, geologic, and soil hazards, and could impact previously undiscovered paleontological resources. The less than significant (with mitigation incorporated) impacts to geology and soils that would occur with the proposed project would also occur with this Alternative.

The Pump Station South Relocation Alternative would be neither environmentally superior nor inferior to the proposed project regarding geology and soils.

Greenhouse Gas Emissions

As indicated in Table 5.6-1, *Project Related Greenhouse Gas Emissions*, project implementation would result in 546.74 $MTCO_2eq/yr$, which is below the 3,000 $MTCO_2eq/yr$ threshold. Thus, less than significant short-term and operational GHG emission impacts would occur with the proposed project. GHG emissions from construction and operational activities would also occur with the Pump Station South

Relocation Alternative. Since site preparation and construction activities would generally be similar the proposed project, it is anticipated that impacts related to GHG would be similar to the proposed project

The Pump Station South Relocation Alternative would likely be neither environmentally superior nor inferior to the proposed project in regard to GHG impacts.

Hazards and Hazardous Materials

The existing OCSD Bay Bridge Pump Station, constructed in 1965, would be demolished, similar to the proposed project. Thus, the project's short-term construction-related impacts involving hazardous building materials (i.e., ACMs and LBPs) would also result with development of this Alternative. Further, potentially contaminated spoils during microtunneling could similarly result, as a result of the Newport Bay Channel force main crossing. Potential impacts to an emergency response or evacuation plan would be reduced with implementation of this Alternative, as pipe staging can occur on private properties, rather than within roadway right-of-way (causing a lane closure). Operational impacts would remain similar to those described for the proposed project.

The Pump Station South Relocation Alternative would be environmentally superior to the proposed project regarding hazards and hazardous materials, given it would avoid impacts from lane closures (to a slightly lesser degree).

Hydrology and Water Quality

Similar to the proposed project, the Pump Station South Relocation Alternative would result in short-term impacts to water quality during construction given the site's adjacency to the Newport Bay Channel. However, implementation of Mitigation Measures HWQ-1 through HWQ-4 would ensure hydrology and water quality impacts are reduced to less than significant levels for the proposed project and would also be applicable to this Alternative. Further, both the Pump Station South Relocation Alternative and proposed project would implement Best Management Practices (BMPs) adopted to reduce pollutants in stormwater runoff.

As such, the Pump Station South Relocation Alternative would neither be environmentally superior nor inferior to the proposed project regarding hydrology and water quality impacts.

Land Use and Relevant Planning

Under the Pump Station South Relocation Alternative, a new development would occur within the Coastal Zone similar to the proposed project. Both the project and this Alternative would require a Coastal Development Permit from the California Coastal Commission. Similar to the proposed project, the Pump Station South Relocation Alternative would be consistent with the California Coastal Act's planning and management policies; LCP/CLUP land use policies; General Plan land use designation, goals, and policies; zoning; SCAG's regional planning efforts; and the Back Bay Landing PCDP.

The Pump Station South Relocation Alternative would be neither environmentally superior nor inferior to the proposed project regarding land use and relevant planning.

Noise

Construction noise associated with the proposed project would result in less than significant impacts, with mitigation incorporated, regarding exposure to surrounding sensitive receptors to noise levels exceeding established standards. Construction activities would cause less than significant increased mobile noise along access routes to and from the site due to movement of equipment and workers. The project's construction-related vibration impacts are also anticipated to be less than significant with mitigation incorporated. Short-term noise impacts from demolition, grading, and construction activities would occur with the Pump Station South Relocation Alternative, although to a slightly lesser degree than the proposed project, as these facilities would be constructed further away from sensitive receptors. Additionally, as stated above, the force main improvements associated with this Alternative would be installed via microtunneling, which would avoid dredging and the need for sonic pile driving activities that require mitigation under the proposed project. Therefore, this Alternative would result in reduced short-term noise impacts compared to the proposed project.

The proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above existing conditions. The existing pump station facilities generate a nominal number of vehicular trips for maintenance and/or inspection purposes, and these trips would continue under the proposed project and this Alternative. Stationary noise under the proposed project and this Alternative would also be similar to existing conditions since mechanical equipment would remain underground. Project implementation would result in less than significant impacts from stationary and mobile noise sources.

Overall, the Pump Station South Relocation Alternative would be environmentally superior to the proposed project regarding noise.

Transportation

Construction-related trips would occur for grading, demolition, and construction of the proposed project. Impacts to temporary traffic and circulation impacts, including lane closures, would be reduced to a less than significant level with the implementation of mitigation. The project is not anticipated to result in any long-term traffic impacts as the project would generate negligible vehicle trips for periodic maintenance and inspections (a maximum of 15 trips per week, similar to existing conditions). Primary access to the relocated pump station under this Alternative would be provided via a shared driveway in the southern portion of the Bayside Village Marina property and OCSD would access the site from Bayside Drive through the future Back Bay Landing Project. The Original Northeast Pump Station and Modified Northeast Pump Station would also be accessed via a shared driveway but in the northern portion of the Bayside Village Marina property. Under the Pump Station South Relocation Alternative, construction-related trips and long-term traffic impacts would be similar to the proposed project, and potential impacts to the circulation system and hazardous design conditions would be less than significant.

The Pump Station South Relocation Alternative would be neither environmentally superior nor inferior to the proposed project regarding traffic and circulation impacts.

Tribal Cultural Resources

No tribal cultural resources have been identified on the project site. However, project implementation could impact unknown tribal cultural resources. Mitigation Measures CUL-1 would reduce potential impacts to unknown tribal cultural resources to a less than significant level. Under the Pump Station South Relocation Alternative, potential impacts would also be less than significant, given the similar site preparation and construction activities that would be required.

The Pump Station South Relocation Alternative would likely be neither environmentally superior nor inferior to the proposed project regarding potential impacts to tribal cultural resources.

ABILITY TO MEET PROJECT OBJECTIVES

The Pump Station South Relocation Alternative would attain all of the project's objectives, including the ability to meet current structural and maintenance standards, increase safety with regard to project access, and construct new on-site odor control infrastructure.

7.3 "ENVIRONMENTALLY SUPERIOR" ALTERNATIVE

Table 7-1 summarizes the comparative analysis presented above (i.e., the alternatives compared to the proposed project). Review of Table 7-1 indicates the "No Project/Future Back Bay Landing Development" Alternative is the environmentally superior alternative, because it would avoid or lessen the majority of impacts associated with development of the proposed project. According to *CEQA Guidelines* Section 15126.6(e)(2), "if the environmentally superior alternative is the 'no project' alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives."

Therefore, although no significant and unavoidable impacts have been identified for the proposed project, the "Pump Station South Relocation" Alternative is identified as the Environmentally Superior Alternative. This Alternative would result in reduced impacts related to hazards and hazardous materials and noise as compared to the proposed project, but greater impacts in regard to aesthetics/light and glare.

Table 7-1
Comparison of Alternatives

Sections	No Project/Future Back Bay Landing Development	Pump Station South Relocation
Aesthetics/Light and Glare	↓	↑
Air Quality	↓	=
Biological Resources	↓	=
Cultural Resources	↓	=
Geology and Soils	=	=
Greenhouse Gas Emissions	↓	=
Hazards and Hazardous Materials	=	↓
Hydrology and Water Quality	=	=

Table 7-1 [continued]
Comparison of Alternatives

Sections	No Project/Future Back Bay Landing Development	Pump Station South Relocation
Land Use and Relevant Planning	➘	=
Noise	➘	➘
Transportation/Traffic	=	=
Tribal Cultural Resources	➘	=

➚ Indicates an impact that is greater than the proposed project (environmentally inferior).
➘ Indicates an impact that is less than the proposed project (environmentally superior).
= Indicates an impact that is equal to the proposed project (neither environmentally superior nor inferior).

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8.0 EFFECTS FOUND NOT TO BE SIGNIFICANT

CEQA provides that an EIR shall focus on the significant effects on the environment and discuss potential environmental effects with emphasis in proportion to their severity and probability of occurrence. During preparation of the *Bay Bridge Pump Station and Force Mains Replacement Project Draft Environmental Impact Report* (2017 Bay Bridge EIR), OCSD conducted an *Initial Study/Notice of Preparation* in November 2016 to determine potentially significant effects of the proposed project; refer to Appendix 11.1, *Initial Study/Notice of Preparation and Comment Letters*. Through the course of this evaluation and preparation of this Recirculated Draft EIR, certain impacts were identified as "less than significant" or "no impact" due to the inability of a project of this scope and nature to yield such impacts or the absence of project characteristics producing effects of this type. These effects are not required to be included in the EIR's primary environmental analysis sections (Section 5.1 through 5.12).

In accordance with CEQA Guidelines Section 15128, the following discussion includes a brief description of potential impacts found to be less than significant or that would have no impact. The lettered analyses under each topical area directly correspond to their order in CEQA Guidelines Appendix G.

AGRICULTURE AND FORESTRY RESOURCES.

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:

(a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

Per the California Department of Conservation, the project area is situated within urban and built-up land.[1] No agricultural resources exist within or adjacent to the project site. Therefore, construction

1 California Department of Conservation, Division of Land Resource Protection, *Orange County Important Farmland 2016*, September 2018.

activities would not result in any impacts to agricultural operations and would not convert any farmland to non-agricultural use. Thus, no impacts would result in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

The proposed project site is zoned Back Bay Landing Planned Community (PC-9), Commercial Recreational and Marine (CM), and Multi-Unit Residential (RM). Thus, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract, and no impacts would occur in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

In Agriculture and Forestry Resources (b), the project site is zoned as PC-9, CM, and RM. Project implementation would not affect any existing lands zoned for forest land, timberland, or timberland production nor cause rezoning. No impacts would result in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. Refer to Agriculture and Forestry Resources (c).

(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No Impact. Refer to Agriculture and Forestry Resources (a) and (c).

BIOLOGICAL RESOURCES.

Would the project:

(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

The project site is located within the *Coastal Subarea of the Orange County Central-Coastal Natural Communities Conservation Plan* (NCCP). However, the site is designated as "Developed" in the NCCP, and is not within an area designated as Reserve, Conservation Easement, Non-Reserve Open Space, or Special Linkage. The project site is not located within the plan areas of any habitat conservation plans other than the NCCP.

The Upper Newport Bay (i.e., areas north of the existing Bay Bridge) is designated as a State Marine Conservation Area (SMCA) by the California Department of Fish and Wildlife (CDFW). This area is intended to set aside marine or estuarine waters primarily to protect or conserve marine life and associated habitats. The SMCA aims to protect resources by allowing for only specific types of recreational and/or commercial take to occur. The Upper Newport Bay SMCA is 1.24 square miles in size, with 5.68 miles of tidal flats, 8.09 miles of coastal marsh, 0.73 square miles of marsh, and 1.21 square miles of estuary.[2] The SMCA limits recreational takes to hook-and-line fishing from shore for finfish only. Swimming is only allowed in certain areas, boats are limited to less than five miles per hour, and shoreline access is limited to established trails, paths and other designated areas. The proposed force main crossing for the Original Northeast Pump Station site plan occurs north of the Bay Bridge, and thus, is within the boundaries of the SMCA. Though the crossing alignment would

2 California Department of Fish and Wildlife, *Upper Newport Bay State Marine Conservation Area*, March 2016.

traverse through the SMCA, construction activities would occur entirely subsurface, and no permanent or temporary disturbance to the Newport Bay Channel or Upper Newport Bay would occur. There would be no potential for sensitive natural communities protected under the SMCA to be affected. As such, the proposed project would not impact resources protected by the SMCA, and no impact would result in this regard.

MODIFIED NORTHEAST PUMP STATION

The Modified Northeast Pump Station site is designated as "Developed" in the NCCP, and is not within an area designated as Reserve, Conservation Easement, Non-Reserve Open Space, or Special Linkage; therefore, development of this conceptual site plan would not conflict with the NCCP. Additionally, the force main improvements associated with the Modified Northeast Pump Station would cross the Newport Bay Channel south of the Bay Bridge, and thus, is outside the boundaries of the SMCA. As such, the Modified Northeast Pump Station would not impact resources protected by the SMCA, and no impact would result in this regard.

SOUTH PUMP STATION

The analysis for the Modified Northeast Pump Station is also applicable to the South Pump Station.

CULTURAL RESOURCES.

Would the project:

(c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

No conditions exist that suggest human remains are likely to be found on the project site. Due to the level of past disturbance on-site, it is not anticipated that human remains, including those interred outside of dedicated cemeteries, would be encountered during earth removal or disturbance activities. If human remains are found, those remains would require proper treatment, in accordance with applicable laws. State of California Public Resources Health and Safety Code Section 7050.5-7055 describe the general provisions for human remains. Specifically, Health and Safety Code Section 7050.5 describes the actions that must be taken if any human remains are accidentally discovered during excavation of a site. As required by State law, the requirements and procedures set forth in Section 5097.98 of the California Public Resources Code would be implemented, including notification of the County Coroner, notification of the Native American Heritage Commission and consultation with the individual identified by the Native American Heritage Commission to be the "most likely descendant (MLD)." The MLD would have 48 hours, from when site access is granted, to make recommendations to landowners for the disposition of any Native American human remains and grave goods found.

If human remains are found during excavation, excavation must stop in the vicinity of the find, as well as any area that is reasonably suspected to overlay adjacent remains, until the County coroner has been

called out, the remains have been investigated, and appropriate recommendations have been made for the treatment and disposition of the remains. Following compliance with existing State regulations, which detail the appropriate actions in the event human remains are encountered, impacts in this regard would be considered less than significant.

MODIFIED NORTHEAST PUMP STATION

The Modified Northeast Pump Station would have a similar development footprint as the Original Northeast Pump Station with the exception of the force main alignment that would be installed south of Bay Bridge (rather than north of the bridge). The Modified Northeast Pump Station also includes a dredging construction option for the force main improvements across Newport Bay Channel. The expanded development footprint and alternative construction option would not result in any new potential impact related to the disturbance of human remains. Development of the Modified Northeast Pump Station would be required to comply with similar State relations, which detail the appropriate action in the event human remains are encountered. As such, the analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The South Pump Station would have a similar development footprint as the Original Northeast Pump Station with the exception of the force main alignment that would be installed south of Bay Bridge (rather than north of the bridge). The South Pump Station also includes a dredging construction option for the force main improvements across Newport Bay Channel. The expanded development footprint and alternative construction option would not result in any new potential impact related to the disturbance of human remains. Development of the South Pump Station would be required to comply with similar State relations, which detail the appropriate action in the event human remains are encountered. As such, the analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

GEOLOGY AND SOILS.

Would the project:

(a)(1) Directly or indirectly cause 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? Refer to Division of Mines and Geology Special Publication 42?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

The project site is located in southern California, a known seismically active region. Active and potentially active faults within southern California are capable of producing seismic shaking at the project site, and it is likely that the proposed project would periodically experience ground acceleration as a result of exposure to moderate to large magnitude earthquakes. Seismic ground shaking on one of the nearby regional faults may cause damage to development. For the purposes of the Alquist-

Priolo Earthquake Fault Zoning Map Act, the State of California defines active faults as those that have historically produced earthquakes or shown evidence of movement within the past 11,000 years (during the Holocene Epoch). Figure 4.5-1, *Regional Faults*, of the *City of Newport Beach Final Environmental Impact Report General Plan 2006 Update* (General Plan EIR) illustrates the major regional faults in the City's vicinity. According to General Plan EIR Figure 4.5-1 and the California Department of Conservation Fault Activity Map of California (2010), the project site is not within an identified Alquist-Priolo Earthquake Fault Zone.[3] Thus, no impact would result in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(a)(4) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

Seismically induced landslides can overrun structures, people or property, sever utility lines, and block roads. However, the project site and surrounding areas are generally flat, and void of topographical features capable of producing a landslide. According to the General Plan EIR, the project site is not located within an identified "Area of Landslide Potential." Therefore, less than significant impact would result in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact.

3 California Department of Conservation, *Fault Activity Map of California (2010)*, http://maps.conservation.ca.gov/cgs/fam/, accessed November 13, 2018.

ORIGINAL NORTHEAST PUMP STATION

The proposed project includes the expansion of the existing Bay Bridge Pump Station and construction of new force mains across Newport Bay Channel. The project would not involve the use of septic tanks or alternative wastewater systems, and no impacts would occur in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

HAZARDS AND HAZARDOUS MATERIALS.

Would the project:

(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

There are no existing or proposed schools located within 0.25-mile of the project site. The nearest schools are Ensign Intermediate School, approximately 0.40-mile to the west, and Newport Harbor High School, approximately 0.35-mile to the northwest. No impacts would occur in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

The project site is not reported on a list maintained pursuant to Government Code Section 65962.5. No impacts would occur in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

The nearest airport, John Wayne Airport, is located approximately 3.5 miles to the northeast of the project. OCSD staff would only provide periodic maintenance/inspection of the proposed wastewater facilities and would not be employed full time at the project site. Additionally, no people would reside on-site. As such, given the distance, the project would not result in a safety hazard or excessive noise for OCSD staff working on-site. A less than significant impact would occur in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

The project site consists of, and is surrounded by, urban/developed land and the Newport Bay Channel. Castaways Park is the nearest undeveloped area of land capable of producing a wildland fire.

However, the majority of the project would be underground, and the new pump station building would be located across the Newport Bay Channel from the park. Further, according to the *Newport Beach Very High Fire Hazard Severity Zones Map*, the project site is not within a Very High Fire Hazard Severity Zone.[4] Therefore, project implementation would not expose people or structures to a significant risk involving wildland fires, and no impacts would occur in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

HYDROLOGY AND WATER QUALITY.

Would the project:

(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

The construction and operations of the pump station and associated force mains would not require groundwater supplies. Additionally, the existing and proposed pump station sites are developed and paved with no potential for groundwater recharge. All force main and gravity sewer improvements would be located underground and would not affect groundwater supplies or recharge. Therefore, the project would substantially decrease groundwater supplies or interfere with groundwater recharge. Impacts in this regard would be less than significant.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(c)(2) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would

[4] California Department of Forestry and Fire Protection, *Newport Beach Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE*, October 2011, http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/orange/c30_NewportBeach_vhfhsz.pdf, accessed November 13, 2018.

substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-site or off-site?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

The proposed project would not substantially alter drainage conditions in the project area. Generally, topography within the project area is relatively flat and the pump station and force main improvements would not result in substantial alterations to site conditions. The proposed pump station improvements would occur on existing paved areas, and alterations to the site's existing flat grade would not be required. Force main improvements would be entirely underground and would not have the capacity to change existing drainage conditions. In addition, the proposed pump station improvements would not result in an increase in impervious area because the proposed pump station building and associated facilities would primarily utilize existing developed and paved areas. Impacts in this regard would be less than significant.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(c)(4) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

Refer to Hydrology and Water Quality (c)(2). Additionally, the project site is not located within a 100-year flood hazard area designated by the Federal Emergency Management Agency (FEMA).[5] Thus, impacts in this regard would be less than significant.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

5 Federal Emergency Management Agency, *Flood Insurance Rate Map, Map # 06059C0382J*, Revised December 3, 2009.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

Based on FEMA flood maps, the project site is not located within any 100-year or 500-year flood hazard zones.[6] However, the site is located within an area that could be subject to inundation as a result of a tsunami or seiche within Newport Bay. Similar to the existing pump station, the proposed pump station would not result in the release of pollutants due to project inundation. The wastewater equipment is housed within the pump station building and all force main and gravity sewer improvements would be underground. Therefore, impacts in this regard would be less than significant.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

The *Santa Ana River Basin Water Quality Control Plan* (Basin Plan) establishes water quality standards for ground and surface waters within the Santa Ana River Basin, which includes the project site, and is the basis for the Santa Ana Regional Water Quality Control Board regulatory programs. Construction and operations of the proposed pump station and associated force mains would be required to control direct storm water discharges and is subject to the National Pollutant Discharge Elimination System program requirements. Additionally, project construction and operations would not require the direct extraction or use of groundwater. All force main and gravity sewer improvements would be located underground and would not impact groundwater supplies. Impacts in this regard would be less than significant.

6 Ibid.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

LAND USE AND PLANNING.

Would the project:

(a) Physically divide an established community?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

The project involves construction of a new pump station and associated force mains, and replacement of portions of existing gravity sewers. The proposed pump station building would be located within the northern portion of the Bayside Village Marina property, and is surrounded by an existing RV storage facility. The pump station expansion involves an increase of 5,200 square feet beyond existing conditions and all force main improvements would be located underground. The nearest residential uses to the project site include a mobile home park north of East Coast Highway at Bayside Drive, and residences to the west of the Newport Bay Channel. Given the existing features that currently act as linear features separating various uses in the community (e.g., East Coast Highway and the Newport Bay Channel), the project would not have the capacity to physically divide an established community, and impacts would be less than significant in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

Development of the South Pump Station would involve shifting and expanding the existing pump station facility site approximately 200 feet to the west and installing force main and gravity sewer improvements. The nearest residential uses to the South Pump Station site include a mobile home park north of East Coast Highway at Bayside Drive and residences to the west of the Newport Bay Channel. Given the existing physical features that act as linear separations within the project area (e.g., East Coast Highway, Bay Bridge, and Newport Bay Channel), development of the South Pump Station would not have the capacity to physically divide an established community, and impacts would be less than significant in this regard.

(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. Refer to Biological Resources (f).

MINERAL RESOURCES.

Would the project:

(a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

According to General Plan EIR Figure 4.5-4, *Mineral Resource Areas*, the project site is not known to contain mines, mineral deposits, or other mineral resources. The project area is within State Mineral Resource Zone 1, which includes "[a]reas where adequate information indicates that no significant mineral deposits are present, or where it is judged that there is little likelihood for their presence."[7] No mineral resource recovery activities occur at the project site or in the surrounding vicinity. Thus, no impacts would result in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No Impact. Refer to Mineral Resources (a).

NOISE.

(c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less Than Significant Impact.

[7] California Department of Conservation, *Guidelines for Classification and Designation of Mineral Lands*, https://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf, accessed November 13, 2018.

ORIGINAL NORTHEAST PUMP STATION

The nearest airport, John Wayne Airport, is located approximately 3.5 miles to the northwest of the project. The project area is located within the boundary of the John Wayne Airport Influence Area.[8] However, OCSD staff would be providing periodic maintenance/inspection of the proposed wastewater facilities, would not be employed full time at the site, and no people would be residing at the site. Further, the land use would remain unchanged. Additionally, the proposed project would not be located within the vicinity of a private airstrip. Therefore, the project would not be introducing a use that is new to the existing conditions in the surrounding area, including noise levels. As such, less than significant impacts would occur in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

POPULATION AND HOUSING.

Would the project:

(a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

The proposed project involves improvements to a pump station facility and does not include housing that could directly induce population growth within the project area. Further, the proposed pump station facility would replace the existing facility; therefore, no additional employees would be generated by the project. As such, project implementation would not result in a substantial number of people relocating to the City and the project would not directly or indirectly result in population growth within the City.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

8 County of Orange Airport Land Use Commission, *Airport Environs Land Use Plan for John Wayne Airport*, amended April 17, 2008.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

There is no existing housing associated with the project site. No impact would result in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

PUBLIC SERVICES.

Would the project:

(a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

- *Fire protection?*
- *Police protection?*
- *Schools?*
- *Parks?*
- *Other public facilities?*

No Impact.

ORIGINAL NORTHEAST PUMP STATION

As a wastewater infrastructure facility, the proposed pump station and associated force main improvements would not introduce new population growth generating a need for additional public services, and no habitable structures would be included as part of the project. All force main facilities would be located below ground, and the proposed pump station building would not include any uses

that would generate an increased need for fire protection and/or police protection. Therefore, impacts related to fire protection, police protection, schools, parks, or other public facilities would not occur.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

RECREATION.

Would the project:

(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

Project implementation would not increase population on-site or in the area such that demand for recreational facilities would increase. Although the project may include construction, storage, and staging activities within a graded and disturbed area of Castaways Park, the project would not interfere with park recreational activities and no impacts would occur in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. Refer to Recreation (a).

TRANSPORTATION.

Would the project:

(b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?[9]

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

Based on the Orange County Transportation Authority's (OCTA) Congestion Management Program (CMP), the nearest CMP intersection is located at the intersection of East Coast Highway and Newport Boulevard to the west, approximately 1.3 miles from the project site, and East Coast Highway and MacArthur Boulevard to the southeast, approximately 1.8 miles from the project site. The proposed project would not result in any increase in long-term operational vehicle trips as compared to what is required for maintenance and inspection of the existing facility. Thus, impacts in this regard would be less than significant.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

UTILITIES AND SERVICE SYSTEMS.

Would the project:

(a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

No Impact.

9 While this Appendix G Checklist Question has been modified by the Natural Resources Agency to address consistency with *CEQA Guidelines* section 15064.3, subdivision (b), which relates to use of the vehicle miles traveled (VMT) as the methodology for evaluating traffic impact, OCSD has not yet adopted a VMT methodology to address this updated Appendix G Checklist Question. Thus, the analysis is based on OCSD's adopted traffic analysis methodology, which requires use of level of service to evaluate traffic impacts of a project.

ORIGINAL NORTHEAST PUMP STATION

Water

Similar to the existing pump station, the proposed pump station facility would not result in the use of substantial amounts of water during long-term operations. The only water use anticipated by the project is associated with one restroom within the pump station facility. The restroom would be utilized by OCSD maintenance staff during periodic project maintenance operations, resulting in a minimal use of water. Thus, the proposed project would not require the new or expanded water facilities. No impacts would occur in this regard.

Wastewater

The proposed project would not result in the generation of any wastewater. Rather, the project consists of a wastewater pump station and force main improvements that would assist in conveying wastewater flows from the site vicinity to OCSD's Plant No. 2 in Huntington Beach for treatment and disposal. The effects of the proposed wastewater infrastructure improvements are analyzed within this EIR. No impacts beyond those identified within this document would occur.

Stormwater Drainage

The proposed project involves the construction of a new pump station facility and force main improvements. No new storm water drainage facilities or expansion of existing facilities would be required as a result of the proposed project. No impact would result in this regard.

Dry Utilities

Natural gas, electricity, and telecommunication facilities serving the existing pump station facility would continue to serve the proposed pump station. No new facilities would be required as a result of the wastewater infrastructure improvement.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Less Than Significant Impact. Refer to Utilities and Service Systems (a).

(c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. Refer to Utilities and Service Systems (a).

(d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Less Than Significant Impact.

ORIGINAL NORTHEAST PUMP STATION

The proposed project would involve pump station and force main improvements. The project would not include any habitable structures and would not have the capability to produce solid waste during long-term operations. Although the project may require the disposal of construction/demolition debris during the construction process (e.g., soil, asphalt, and demolished materials), the generation of these materials would be short-term in nature and would not have the capability to substantially affect the capacity of regional landfills. The City disposes solid waste at the Frank R. Bowerman Landfill in Irvine, a 725-acre facility that is operating at a maximum daily permitting capacity of 11,500 tons per day. The landfill has a remaining capacity of 205,000,000 cubic yards and is expected to remain open until 2053.[10] The increase in solid waste from the project's construction activities would not have a significant impact upon the existing and projected landfill capacity of the Frank R. Bowerman Landfill. Thus, impacts in this regard would be less than significant.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

The proposed project would be required to comply with all Federal, State, and local statutes and regulations related to solid waste management and reduction, including the California Integrated Waste Management Act requirements for solid waste generated during the construction process. No impacts would occur in this regard.

[10] California Department of Resources Recycling and Recovery, *SWIS Facility Detail, Frank R. Bowerman Sanitary LF (30-AB-0360)*, https://www2.calrecycle.ca.gov/swfacilities/Directory/30-AB-0360/, accessed November 13, 2018.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

WILDFIRE.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

(a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact.

ORIGINAL NORTHEAST PUMP STATION

According to the *Newport Beach Very High Fire Hazard Severity Zones Map*, the project site is not within a Very High Fire Hazard Severity Zone.[11] Therefore, no impacts would occur in this regard.

MODIFIED NORTHEAST PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the Modified Northeast Pump Station.

SOUTH PUMP STATION

The analysis for the Original Northeast Pump Station is also applicable to the South Pump Station.

(b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. Refer to Wildfire (a).

(c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary ongoing impacts to the environment?

No Impact. Refer to Wildfire (a).

[11] California Department of Forestry and Fire Protection, *Newport Beach Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE*, October 2011, http://www.fire.ca.gov/fire_prevention/fhsz_maps/FHSZ/orange/c30_NewportBeach_vhfhsz.pdf, accessed November 13, 2018.

(d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. Refer to Wildfire (a).

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