



# Southwest Costa Mesa Trunk Sewer Project No. 6-19

State Clearinghouse No. 2013041049





**Southwest Costa Mesa Trunk Sewer Project No. 06-19  
Draft Environmental Impact Report  
SCH No. 2013041049**

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## ACRONYMS AND ABBREVIATIONS

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<b>Acronym/Abbreviation</b>	<b>Definition</b>
AB	Assembly Bill
ACOE	U.S. Army Corps of Engineers
ADT	average daily trips
ALUC	Airport Land Use Commission
amsl	above mean sea level
APE	area of potential effect
AQMP	air quality management plan
ASCE	American Society of Civil Engineers
ASTM	American Society of Testing Materials
BMP	best management practice
CalARP	California Accidental Release Prevention Program
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CCR	California Code of Regulations
CDP	coastal development permit
CEC	California Energy Commission
Cen Gen	Central Power Generation
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	California Fire Code
CFR	Code of Federal Regulations
CLUP	Coastal Land Use Plan
CMP	Congestion Management Program
CMSD	Costa Mesa Sanitary District
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CO <sub>2</sub> E	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CSLC	California State Lands Commission
DAMP	Drainage Area Management Plan
dB	decibel
dBA	A-weighted decibel

DOGGR	Division of Oil, Gas, and Geothermal Resources
DOT	Department of Transportation
DPR	California Department of Parks and Recreation
EDR	Environmental Data Resources
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act
EMHS	Emergency Management and Homeland Security
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	United States Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FR	Federal Register
GHG	greenhouse gas
GWP	global warming potential
HDD	horizontal directional drilling
HFC	hydrofluorocarbon
I-405	Interstate 405
I-5	Interstate 5
IBC	International Building Code
ICC	International Code Council
IERP	integrated emergency response program
IFC	International Fire Code
mgd	million gallons per day
MLD	Most Likely Descendant
MMRP	mitigation monitoring and reporting program
MRZ	mineral resource zone
MS4	municipal separate storm sewer system
MW	megawatt
MWD	Metropolitan Water District
MWDOC	Municipal Water District of Orange County
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCCP/HCP	Natural Community Conservation Planning and Habitat Conservation Plan
NEL	numeric effluent level
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration

NMFS	National Marine Fisheries Service
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OC Flood	Orange County Flood Control District/Orange County Flood
OC Parks	Orange County Parks
OCFA	Orange County Fire Authority
OCHCA	Orange County Health Care Agency
OCSD	Orange County Sanitation District
OCTA	Orange County Transportation Authority
OCWD	Orange County Water District
OSHA	Occupational Safety and Health Administration
PFC	perfluorocarbon
PPV IPS	peak particle velocity inches per second
PRC	California Public Resources Code
RCRA	Resource Conservation and Recovery Act
RFS	Renewable Fuel Standard
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SMARA	Surface Mining and Reclamation Act
SoCalGas	Southern California Gas Co.
SR	State Route
SSMP	sewer system management plan
SSO	sanitary sewer overflow
SWMP	storm water management plan
SWPPP	stormwater pollution prevention plan
SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
TMDL	total maximum daily load
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
UWMP	urban water management plan
VCP	vittrified clay pipe
VOC	volatile organic compound
WQMP	water quality management plan

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# **ABSTRACT**

## **SOUTHWEST COSTA MESA TRUNK SEWER PROJECT NO. 6-19**

### **DRAFT EIR**

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This Draft Environmental Impact Report (Draft EIR) has been prepared to provide the public and responsible agencies information about the potential adverse effects on the local and regional environment associated with the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project). The proposed project includes the construction of a new trunk sewer from the existing Newport Beach Pump Station site at the west end of Walkabout Circle to the Orange County Sanitation District (OCSD) Interplant Line in Brookhurst Street. The proposed project also includes the construction of several Costa Mesa Sanitary District (CMSD) and City of Newport Beach pipelines connecting to the proposed OCSD sewer pipeline, and the abandonment of several CMSD and City of Newport Beach pump stations. OCSD is the lead agency for the proposed project, while CMSD and the City of Newport Beach are responsible agencies for their respective components of the proposed project. Together, the OCSD sewer pipeline and CMSD and City of Newport Beach components constitute the proposed project.

This Draft EIR has been prepared pursuant to the California Environmental Quality Act (CEQA). As Lead Agency, OCSD may use this Draft EIR to approve the proposed project, make findings regarding identified impacts, and if necessary adopt a Statement of Overriding Considerations regarding these impacts.

#### **Summary of Environmental Analysis**

Chapter 4 of this Draft EIR includes the analysis of the proposed project's impact on the following issue areas: aesthetics; air quality; biological resources; cultural resources; geology and soils; greenhouse gas emissions; hazards and hazardous materials; hydrology and water quality; land use and planning; noise; recreation; traffic and circulation; and utilities, service systems, and energy. As described in Chapter 4, the proposed project would result in significant impacts to biological resources, cultural resources, hazards and hazardous materials, and noise. All of these impacts would be reduced to below a level of significance through implementation of proposed mitigation measures with the exception of the impact to ambient noise levels, which would remain significant and unavoidable after mitigation. Impacts to all other issue areas analyzed in Chapter 4 would be less than significant. Issues for which effects were not found to be significant are agriculture and forestry resources, mineral resources, population and housing, public services, and parking (see Chapter 6).

This Draft EIR also includes an analysis of the cumulative effects of the proposed project when combined with past, present, and reasonably foreseeable future projects (Chapter 5), and a comparison of alternatives to the proposed project (Chapter 7).

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# **CHAPTER 1**

## **EXECUTIVE SUMMARY**

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### **1.1 INTRODUCTION**

The Orange County Sanitation District (OCSD) has prepared this Draft Environmental Impact Report (Draft EIR) to provide the public and responsible agencies information about the potential adverse effects on the local and regional environment associated with the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project). The proposed project includes the construction of a new trunk sewer from the existing Newport Beach Pump Station site at the west end of Walkabout Circle to the OCSD Interplant Line in Brookhurst Street (OCSD sewer pipeline). The proposed project also includes the construction of several Costa Mesa Sanitary District (CMSD) and City of Newport Beach pipelines connecting to the proposed OCSD sewer pipeline, and the abandonment of several CMSD and City of Newport Beach pump stations. CMSD and the City of Newport Beach are responsible agencies for these components of the proposed project.

This Draft EIR has been prepared pursuant to the California Environmental Quality Act (CEQA). As Lead Agency, OCSD may use this Draft EIR to approve the proposed project, make findings regarding identified impacts, and if necessary, adopt a Statement of Overriding Considerations regarding these impacts.

This document is being circulated to local, State and federal agencies, and to interested organizations and individuals who wish to review and comment on the Draft EIR. OCSD will hold a public hearing to receive comments on the Draft EIR during the 45 day review period. Comments should be focused on the adequacy and accuracy of the content of the EIR. Publication of the Draft EIR marks the beginning of a 45 day public review period, during which written comments may be submitted to:

Kathy Millea  
Orange County Sanitation District  
Engineering Planning  
10844 Ellis Avenue  
Fountain Valley, CA 92708  
kmillea@ocsd.com

### **1.2 BACKGROUND**

In the late 1980s, CMSD investigated the potential opportunity of eliminating six existing CMSD sewer pump stations located within the vicinity of Canyon Park east of the Santa Ana River and

south of Victoria Street in the City of Costa Mesa. Currently, flow from the Sea Bluff, West Bluff, Aviemore, Canyon, and President Pump Stations is conveyed to the Fairview Trunk Sewer and OCSD Plant No. 1. The City of Newport Beach Pump Station, 19th Street Pump Station, and the private West 18th Street Pump Station convey flow to OCSD Plant No. 2. The study proposed combining flows from six CMSD pump stations together with flow from the City of Newport Beach Pump Station (NBPS) at the west end of Walkabout Circle just south of Canyon Park and with flow from the private pump station in the California Seabreeze neighborhood at the west end of 18th Street in the City of Costa Mesa. The study proposed to convey the combined flows to OCSD through a retrofit of the NBPS and forcemain. The existing NBPS forcemain crosses the Santa Ana River on the Victoria Street bridge overcrossing and discharges to the Plant No. 2 Interplant Line in the intersection of Brookhurst Street and Hamilton Street in the City of Huntington Beach.

In 2007, CMSD formally requested that OCSD consider construction of a regional conveyance system from the vicinity of the NBPS to the OCSD system. In 2012, OCSD began an evaluation and feasibility study of conveyance infrastructure from the NBPS to OCSD Plant No. 2, including quantification of the anticipated reduction of flows that would be diverted away from the Fairview Road Trunk Sewer as a result of such infrastructure.

### **1.3 PROJECT LOCATION**

The project area is located primarily within Talbert Regional Park, Canyon Park, and OCSD Plant No. 2, in the Cities of Costa Mesa, Newport Beach, and Huntington Beach, California. The project area extends into residential neighborhoods adjacent to Canyon Park in the Cities of Costa Mesa and Newport Beach. Figures showing the project location are provided in Chapter 3.0, Project Description.

### **1.4 PURPOSE AND OBJECTIVES**

The purpose of the proposed project is to consolidate facilities and reduce the reliance on pump station infrastructure. This would reduce the overall risks associated with facility failure and the long-term operational, maintenance, and replacement costs associated with pump station infrastructure. In addition, the proposed project would successfully divert flows from the Fairview Road Trunk Sewer, which is currently planned for upsizing to accommodate ultimate system flows. This diversion is expected to eliminate the need for upsizing the Fairview Road Trunk Sewer, saving infrastructure replacement costs and impacts to the public during its construction phase.

The objectives for the proposed project include the following:

- Provide a reliable conveyance system for projected 2030 wastewater flows tributary to each of the existing sewer pump stations proposed to be abandoned.
- Provide infrastructure that may be efficiently maintained and easily accessed in the event of an emergency.
- Reduce the risk of spills in the local agency wastewater collection system due to system failure.
- Avoid operational risks associated with pump stations in the wastewater collection system.
- Avoid substantial disruption in the Talbert Nature Preserve for construction and operation.
- Avoid the need for new easements from private property owners.
- Avoid substantial traffic disruption during the construction phase, particularly on Victoria Street and Hamilton Avenue.
- Provide a solution that reduces the potential for chronic noise and odor complaints.

## 1.5 PROJECT DESCRIPTION

The proposed project consists of two main components:

- **OCSD Sewer Pipeline.** Construction of the OCSD sewer pipeline from the existing NBPS site at the end of Walkabout Circle in the City of Newport Beach, to the existing OCSD Interplant Line in Brookhurst Street in the City of Huntington Beach.
- **CMSD and City of Newport Beach Facilities.** Construction of several CMSD and City of Newport Beach pipelines connecting areas within the cities of Costa Mesa and Newport Beach to the proposed OCSD sewer pipeline, and the abandonment of eight existing pump stations in this area by CMSD and the City of Newport Beach.

### 1.5.1 OCSD Sewer Pipeline

The OCSD sewer pipeline component of the proposed project would consist of approximately 4,800 feet of pipeline that would be constructed in the following three sequential segments:

1. Approximately 3,500 linear feet of 24-inch-diameter gravity sewer from the NBPS at the west end of Walkabout Circle south along the eastern border of Talbert Regional Park and then west from the western terminus of 19th Street toward the Santa Ana River.
2. Approximately 800 linear feet of a dual 14-inch barrel inverted sewer siphon beneath the Santa Ana River. Pipe diameters may be adjusted during final design to optimize cleaning velocity and maintenance criteria.
3. Approximately 500 linear feet of 24-inch-diameter gravity sewer from the west end of the inverted sewer siphon to the existing OCSD Interplant Line in Brookhurst Street.

The proposed OCSD sewer pipeline would require a 30-foot wide permanent easement along its entire length to allow for access to the pipes. Additionally, a 20-foot wide temporary easement would be required along the southern boundary of Talbert Regional Park during construction. The existing access roads within Talbert Regional Park would be improved with all-weather crushed-rock to allow sewer maintenance trucks to access all project manholes and structures. Lateral access roads extending from the existing access road would be necessary to allow access to the manholes along the southern boundary of Talbert Regional Park. Street access to the permanent and temporary easements would be provided from Balboa Boulevard approximately 450 feet north of the intersection at the west end of 19th Street, and a hammerhead-shaped vehicle turnaround would be provided at both ends of the new sewer facilities.

The proposed alignment for the OCSD sewer pipeline was selected following an extensive evaluation of 11 alignments over a 1-year period. Following the selection of the proposed alignment, it was further refined to reduce impacts to sensitive habitat, including wetlands, in the southeast corner of Talbert Regional Park. Instead of following the boundary of the Park to the terminus of 19th Street, the alignment was altered to more closely follow the existing dirt paths and access roads.

### **1.5.2 CMSD and City of Newport Beach Facilities**

Following construction of the proposed OCSD sewer pipeline, CMSD and the City of Newport Beach would construct new pipelines to connect areas within the cities of Costa Mesa and Newport Beach to the upstream end of the proposed OCSD sewer pipeline. CMSD would also facilitate the abandonment of six CMSD pump stations and one private pump station, and the City of Newport Beach would facilitate the abandonment of the NBPS, located at the end of Walkabout Circle.

The proposed pipelines would include the following:

- A new 24-inch gravity sewer from the service areas of the Canyon Pump Station (CMSD No. 7) and West Bluff Pump Station (CMSD No. 20) to the existing sewer in Canyon Park
- A new 12-inch gravity sewer from the service areas of the Avimore Terrace Pump Station (CMSD No. 5) and Sea Bluff Pump Station (CMSD No. 16) to a connection with a new 18-inch sewer carrying flow westerly from an existing gravity sewer in Canyon Park
- A new 18-inch sewer from Canyon Park picking up flows from the service areas of Canyon Pump Station (CMSD No. 7), West Bluff Pump Station (CMSD No. 20), President Pump Station (CMSD No. 14), Avimore Terrace Pump Station (CMSD No. 5), and Sea Bluff Pump Station (CMSD No. 16) to the new OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 in the vicinity of the NBPS at the west end of Walkabout Circle

- A new 12-inch sewer from the service area of the 19th Street Pump Station (CMSD No. 1) and the West 18th Street Private Pump Station (private) to the new OCSD Southwest Costa Mesa Trunk Sewer in the vicinity of the west end of 19th Street.

After the proposed CMSD and City of Newport Beach pipelines are completed and the proposed OCSD sewer pipeline is completed, the following existing pump stations, would be abandoned by CMSD and the City of Newport Beach:

- President Pump Station (CMSD No. 14)
- West Bluff Pump Station (CMSD No. 20)
- Canyon Pump Station (CMSD No. 7)
- Aviemore Terrace Pump Station (CMSD No. 5)
- Sea Bluff Pump Station (CMSD No. 16)
- 19th Street Pump Station (CMSD No. 1)
- West 18th Street Private Pump Station
- City of Newport Beach Pump Station at Walkabout Circle.

### **1.5.3 Project Construction**

#### **1.5.3.1 OCSD Sewer Pipeline**

The beginning and ending segments of the 24-inch gravity sewer would be installed by open trench construction methods. The middle segment of 800 feet of double-barrel, 14-inch-inside diameter, inverted gravity sewer siphon (siphon) would be installed with horizontal directional drilling (HDD) methods. The proposed HDD operation would be started on the west side of the Santa Ana River within the Plant No. 2 property. The bore path would be about 1,000 feet long, crossing under the Santa Ana River. It is anticipated that the top of the pipe crossing the Santa Ana River would be 25 feet below the existing riverbed ground surface and 10 feet below the existing buried riprap levee toes. Once past the Santa Ana River, the pilot bore would curve upward and exit the ground beyond the easterly levee. The bore path would start and finish aboveground without the need for deep pits. The inverted sewer siphon inlet and outlet structures would be installed at both ends of the HDD-installed pipeline and would serve as the transition points between the twin 14-inch inverted siphon segment of the pipeline and the 24-inch-diameter pipelines on either side.



### 1.5.3.2 CMSD and City of Newport Beach Facilities

The CMSD and City of Newport Beach pipelines would be installed by open trench construction methods, with the exception of the 24-inch sewer in Canyon Drive, which would be constructed using HDD or other trenchless methods due to the depth of the sewer. The abandonment of the pump stations would involve removing all the equipment from inside the concrete structure, drilling multiple holes in the bottom of the structure, removing the top 4 to 5 feet of the structure, filling the structure with sand, and then restoring the surface area to match the surrounding area. Abandonment of force mains would involve cutting the ends of the pipe and then filling the ends or the entire pipe with air-blown sand/cement slurry.

### 1.5.3.3 Schedule

The construction start date is dependent on receiving an array of approvals from various agencies. OCSD estimates that construction of the proposed OCSD sewer pipeline would begin in June 2016 and be completed in May 2018, for a total duration of approximately 24 months. The CMSD and City of Newport Beach project components are anticipated to start during the same period of time as the OCSD project components.

## 1.6 SUMMARY OF IMPACTS

As discussed in detail in Chapter 4, Environmental Analysis, of the Draft EIR, the proposed project would result in significant impacts to biological resources, cultural resources, hazards and hazardous materials, and noise. Those issues for which effects were not found to be significant during the preliminary environmental review process are as follows: agricultural and forestry resources, mineral resources, population and housing, and public services. These environmental topics are described in Chapter 6, Other CEQA Considerations, of the Draft EIR and are not discussed in further detail (14 CCR 15128). Table 1-1 presents a summary of the environmental impacts that could result from the proposed project, proposed mitigation measures, and the level of significance of the impact after the implementation of the mitigation measures.

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<i>Aesthetics</i>		
No significant impacts.	No mitigation required.	N/A
<i>Air Quality</i>		
No significant impacts.	No mitigation required.	N/A
<i>Biological Resources</i>		
Impact Bio-1: Temporary direct	MM-BIO-1: Mitigation for direct permanent and temporary impacts shall be implemented through on-site restoration and	Less Than Significant

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p>impacts to 1,049 individual southern tarplants are considered <b>significant</b> due to the relative rarity of this species, as indicated by its CRPR of 1B.1.</p>	<p>enhancement/restoration of coastal sage scrub and riparian/wetland communities in accordance with the mitigation ratios presented in Table 4.3-8 in Section 4.3, Biological Resources.</p> <p>OCSO, CMSO, and the City of Newport Beach shall each develop and implement a conceptual restoration plan for direct permanent and temporary impacts within each agency's service area as identified in Table 4.3-8 (see Figures 3-3 and 3-4 for identification of service areas).</p> <p>The conceptual restoration plans shall provide for restoration of permanent and temporary impacts of construction and implementation of required additional enhancement (or other restoration) activities either on site, at an acceptable off-site location, or through acquisition of approved mitigation credits. Mitigation site/credit acceptability will be determined by the ACOE, CDFW, RWQCB, and CCC. The conceptual restoration plans shall, at a minimum, include an implementation plan, planting/seeding plan, invasive species eradication methods, interim and final success criteria/performance standards, estimated costs, and identification of responsible entities. The conceptual restoration plans shall be approved by the ACOE, CDFW, RWQCB, and CCC prior to construction of the proposed project.</p> <p>Temporary impacts that occur during construction, outside the approved limits, will require mitigation at a 5:1 ratio (1:1 in situ and 4:1 additional enhancement). Future temporary impacts within the proposed utility easements due to maintenance and/or repair shall require restoration at a 1:1 ratio (in situ restoration only).</p> <p><b>MM-BIO-2:</b> Project construction shall be completed by each agency (OCSO, CMSO, and the City of Newport Beach) in conformance with the County of Orange Central and Coastal Subregion Natural Community Conservation Planning and Habitat Conservation Plan (NCCP/HCP), which provides for avoidance of impacts during the breeding season of most special-status wildlife species as well as minimization of impacts to biological resources. Implementation of the following measures (text in italics is language directly taken from the Central/Coastal NCCP/HCP) shall be documented in a biological compliance report completed by a designated, qualified project biologist. Whereas the conditions below reference coastal sage scrub (CSS), these measures will also apply to other native habitats within the project study area (i.e., riparian/wetland communities).</p> <p><i>1) To the maximum extent practicable, no grading of CSS habitat that is occupied by nesting gnatcatchers will occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these "construction-related minimization measures," are subject to public health and safety considerations. These considerations include</i></p>	

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>unexpected slope stabilization, erosion control measure and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will provide USFWS/CDFW with the maximum practicable notice (or such notice as is specified in the NCCP/HCP) to allow for capture of gnatcatchers, cactus wrens and any other CSS Identified Species that are not otherwise flushed and will carry out the following measures only to the extent as practicable in the context of the public health and safety considerations.</i></p> <p><i>2) Prior to the commencement of grading operations or other activities involving significant soil disturbance, all areas of CSS habitat to be avoided under the provisions of the NCCP/HCP, shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of CSS, a survey [using USFWS-protocol survey methods] will be conducted to locate gnatcatchers and cactus wrens within 100 feet of the outer extent of projected soil disturbance activities and the locations of any such species shall be clearly marked and identified on the construction/grading plans.</i></p> <p><i>3) A monitoring biologist, acceptable to USFWS/CDFW will be on site during any clearing of CSS. The landowner or relevant public agency/utility will advise USFWS/CDFW at least seven (7) calendar days (and preferably fourteen (14) calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFW to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist will flush Identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they will be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System [mist net capture and relocation is required for this project but may be conducted by the NCCP/HCP reserve owner/manager(s)]. It will be the responsibility of the monitoring biologist to assure that Identified bird species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.</i></p> <p><i>4) Following the completion of initial grading/earth movement activities, all areas of CSS habitat to be avoided by construction equipment and personnel will be marked with temporary fencing and other appropriate markers clearly visible to construction personnel. No construction access, parking or storage of equipment or materials will be</i></p>	

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p><i>permitted within such marked areas.</i></p> <p>5) <i>In areas bordering the NCCP Reserve System or Special Linkage/Special Management areas containing significant CSS identified in the NCCP/HCP for protection, vehicle transportation routes between cut-and-fill locations will be restricted to a minimum number during construction, consistent with project construction requirements. Waste dirt or rubble will not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring biologist, construction supervisors and equipment operators will be conducted and documented to ensure maximum practicable adherence to these measures.</i></p> <p>6) <i>CSS identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.</i></p> <p>In addition, the following measures not listed in the NCCP/HCP shall be implemented by OCSD, CMSD, and the City of Newport Beach under the direction of the project biologist:</p> <ol style="list-style-type: none"> <li>1. At the end of each workday, the project biologist (or contractor under the direction of the project biologist) will check that all potential wildlife pitfalls (trenches, bores, and other excavations) have been backfilled, covered, or sloped to allow wildlife egress. Should wildlife individuals become trapped, a qualified biologist shall remove and relocate them.</li> <li>2. All pipes or other construction materials or supplies will be covered or capped in storage or laydown areas at the end of each workday. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently.</li> <li>3. No equipment maintenance will be performed within 100 feet of coastal sage scrub and/or wetland/riparian communities and jurisdictional waters, where petroleum products or other pollutants from the equipment may enter these areas.</li> <li>4. All applicable measures of the current National Pollutant Discharge Elimination System (NPDES) permit for construction activities are being implemented.</li> </ol>	
<p><b>Impact BIO-2:</b> Potential short- and long-term indirect impacts to southern tarplant could result during construction and future operations and maintenance activities</p>	<p>See MM-BIO-2 above.</p> <p><b>MM-BIO-3:</b> OCSD, CMSD, and the City of Newport Beach shall each develop an operations and maintenance manual for the project components within each agency's service area (see Figures 3-3 and 3-4 for identification of service areas).</p>	<p>Less Than Significant</p>

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
within and adjacent to Talbert Regional Park. Therefore, indirect impacts to special-status species would be <b>significant</b> .	The operations and maintenance manuals, to be developed in coordination with Orange County Parks (OC Parks), shall outline the restrictions and best practices related to conducting operations, maintenance, and potential repair activities within Talbert Regional Park. At a minimum, the manuals shall include: identification of designated access roads and gates; procedures for notification of OC Parks regarding operations and maintenance activities; and measures to minimize dust, runoff, trash/debris, chemical pollutant spills, and introduction of non-native invasive species. Measures shall also be included in the manuals that provide for avoidance and minimization of maintenance activities during the bird breeding season (February 15–July 15) where feasible.	
<b>Impact BIO-3:</b> The permanent direct impact of 0.02 acre of wetlands/riparian habitat due to new manholes and lateral access roads has the potential to adversely affect special-status wildlife species. Therefore, these potential permanent direct impacts are considered <b>significant</b> .	See MM-BIO-1 and MM-BIO-2 above.	Less Than Significant
<b>Impact BIO-4:</b> Temporary direct impacts to 1.56 acres of wetlands/riparian habitat and 0.18 acre of coastal sage scrub associated with construction of the proposed project could adversely affect special-status wildlife species that use these habitats. Specific impacts include the temporary loss of suitable breeding habitat and/or foraging habitat for special-status species, including least Bell's vireo. These potential impacts would be <b>significant</b> .	See MM-BIO-1 and MM-BIO-2 above.	Less Than Significant

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<p><b>Impact BIO-5:</b> Noise generated during construction may significantly affect special-status wildlife during the breeding season due to disruption of reproduction potential, resulting in population declines. Therefore, indirect impacts would be <b>significant</b>.</p>	<p><b>MM-BIO-4:</b> OCSD, CMSD, and the City of Newport Beach shall each be responsible for monitoring noise impacts to sensitive wildlife species. During the bird breeding season (February 15–July 15), construction activities that have the potential to generate greater than 60 A-weighted decibels (dBA) hourly equivalent level (Leq) shall be monitored by a qualified biologist to confirm that construction-generated noise is less than 60 dBA hourly Leq at the location of any coastal California gnatcatcher, least Bell's vireo, and/or raptor nests. Nest locations shall be determined by conducting focused surveys weekly during the bird breeding season within 300 feet of any current or planned construction. If construction occurs within 300 feet of any active nests of these species, noise attenuation (e.g., sound walls, limitations on the duration/frequency of noise-generating activities) shall be implemented as necessary to reduce noise levels below the 60 dBA hourly Leq threshold. This measure shall be incorporated into the operations and maintenance manual to be prepared by each agency (OCSD, CMSD, and City of Newport Beach) and shall apply to each agency's future major operations and maintenance activities, such that routine maintenance near wildlife habitat areas is scheduled outside of the breeding season (to the extent practicable) and noise limitations (as discussed above) are employed when maintenance and operations during the breeding season are unavoidable.</p>	<p>Less Than Significant</p>
<p><b>Impact BIO-5:</b> The proposed project would result in temporary direct impacts to special-status vegetation communities including coastal sage scrub, southern willow scrub, and riparian herb (listed in Table 4.3-5 of this EIR). These impacts would be <b>significant</b>.</p>	<p>See MM-BIO-1 and MM-BIO-2 above.</p>	<p>Less Than Significant</p>
<p><b>Impact BIO-6:</b> Due to the rarity of wetland/riparian communities, and the fact that portions of these area were revegetated as mitigation for other projects and are regulated jurisdictional communities, the proposed project's permanent direct impacts to wetlands/riparian vegetation communities,</p>	<p>See MM-BIO-1 and MM-BIO-2 above.</p>	<p>Less Than Significant</p>

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
as listed in Table 4.3-5, are considered <b>significant</b> .		
<b>Impact-7:</b> The proposed project's temporary direct impacts to special-status vegetation communities (wetlands/riparian and coastal sage scrub), as listed in Table 4.3-5, are considered <b>significant</b> .	See MM-BIO-1 and MM-BIO-2 above.	Less Than Significant
<b>Impact-8:</b> Given the rarity of wetland/riparian and coastal sage scrub vegetation communities and special-status species supported by these communities in this area, these long-term direct temporary impacts are considered <b>significant</b> .	See MM-BIO-1 and MM-BIO-2 above.	Less Than Significant
<b>Impact BIO-9:</b> The proposed project's short- and long-term indirect impacts to special-status vegetation communities due to construction and future operations and maintenance would be <b>significant</b> .	See MM-BIO-2 and MM-BIO-3 above.	Less Than Significant
<b>Impact BIO-10:</b> The proposed project would result in temporary and permanent direct impacts to several jurisdictional waters, including wetlands, as summarized in Table 4.3-6. The identified direct permanent impact of 0.02 acre of new manholes and lateral access roads are considered <b>significant</b> .	See MM-BIO-1 and MM-BIO-2 above.	Less Than Significant



**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<b>Impact BIO-11:</b> Temporary construction activities and long-term maintenance and repairs within jurisdictional waters would require review and approval by wetlands resources agencies and these impacts are considered <b>significant</b> .	See MM-BIO-1 and MM-BIO-2 above.	Less Than Significant
<b>Impact BIO-12:</b> The potential for frac-out (as well as associated cleanup activities) would have temporary direct impacts on an undetermined area of perennial unvegetated waters (the Santa Ana River). Therefore, temporary direct impacts to jurisdictional waters as a result of HDD operations would be <b>potentially significant</b> .	<b>MM-BIO-5:</b> OCSD shall prepare a frac-out plan for distribution and approval by the ACOE, CDFW, RWQCB, CCC, and USFWS. The plan shall, at a minimum, include: <ul style="list-style-type: none"> <li>• Maintenance of a 25-foot minimum depth below the bottom of the Santa Ana River.</li> <li>• Use of lower pressure and nontoxic leak sealants in substrates where frac-outs are more likely to occur.</li> <li>• Procedures for cleanup, including storage of necessary cleanup materials on site (e.g., silt curtains and turbidity barriers, pumps, hoses, and tanks).</li> <li>• Notification procedures, including notification of resource agencies, in the event of a frac-out.</li> </ul>	Less Than Significant
<b>Impact BIO-13:</b> Potential short- and long-term indirect impacts to jurisdictional waters due to construction and future operations and maintenance activities of in the project area are considered <b>significant</b> .	See MM-BIO-2 and MM-BIO-3 above.	Less Than Significant
<b>Impact BIO-14:</b> Temporary direct impacts to 1.56 acres of wetlands/riparian habitat and 0.18 acre of coastal sage scrub habitats associated with the proposed project could adversely affect special-status wildlife species behavior and therefore temporarily impact	See MM-BIO-1 and MM-BIO-2 above.	Less Than Significant

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
wildlife movement/habitat linkage functions. These impacts are considered <b>significant</b> .		
<b>Impact BIO-15:</b> Potential short- and long-term indirect impacts on wildlife movement/habitat linkage functions in the project area due to construction and future operations and maintenance activities of the proposed project within and adjacent to Talbert Regional Park are considered <b>significant</b> .	See MM-BIO-2, MM-BIO-3, and MM-BIO-4 above.	Less Than Significant
<i>Cultural Resources</i>		
<b>Impact CUL-1:</b> Grading and excavation activities during construction of the proposed project could unearth intact archaeological materials. In addition, Native American monitoring has been requested to be present during ground-disturbing activities. Therefore, impacts would be <b>potentially significant</b> .	<b>MM-CUL-1:</b> Prior to the start of any earthmoving activity within the OCSD, CMSD, or City of Newport Beach service areas of the proposed project, an archaeological monitor and Native American representative shall be retained by the agency conducting earthmoving activity to monitor ground-disturbing activities associated with their respective components of the proposed project, including but not limited to grading, excavation, brush clearance, and grubbing. The archaeological monitor and Native American representative shall conduct preconstruction cultural resources worker sensitivity training to bring awareness to personnel of actions to be taken in the event of a cultural resources discovery. The archaeological monitor shall be, or shall work under the supervision of, a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior 2010). The duration and timing of monitoring shall be determined by the qualified archaeologist and Native American representative in consultation with OCSD, CMSD, and the City of Newport Beach. Initially, all ground-disturbing activities associated with the proposed project shall be monitored. However, the qualified archaeologist and Native American representative, based on observations of soil stratigraphy or other factors, and in consultation with OCSD, CMSD, and the City of Newport Beach, may reduce the level of monitoring as warranted. In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor and Native American representative shall have the authority to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated.	Less Than Significant

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>If a cultural resource is encountered during construction, construction activities shall be redirected away from the immediate vicinity of the find until it can be evaluated by a qualified archaeologist and Native American representative. If the find is determined to be potentially significant, the archaeologist, in consultation with OCSD, CMSD, or the City of Newport Beach and appropriate Native American group(s) (if the find is a prehistoric or Native American resource), shall develop a treatment plan. Construction activities shall be redirected to other work areas until the treatment plan has been implemented or the qualified archaeologist and Native American representative determines that work can resume in the vicinity of the find.</p>	
<p><b>Impact CUL-2:</b> Since the exact location and depth of sensitive paleontological resources are unknown, in the event that unexpected, intact paleontological resources are unearthed during construction, impacts would be <b>potentially significant</b>.</p>	<p><b>MM-CUL-2:</b> Prior to the start of any earthmoving activities within the OCSD, CMSD, or City of Newport Beach service areas of the proposed project, an Orange County-certified (OCC) paleontologist shall be retained by the agency conducting earthmoving activity. Based on geotechnical findings and the construction design plans for the proposed OCSD, CMSD, and City of Newport Beach pipelines, the OCC paleontologist shall develop a paleontological resources mitigation and monitoring plan for each agency's respective components of the proposed project, prior to construction. The mitigation and monitoring plans shall address preconstruction salvage and reporting; preconstruction contractor sensitivity training; procedures for paleontological resources monitoring; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils; and the preparation of a final mitigation report.</p> <p>In the event that paleontological resources are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by the qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before construction is allowed to resume at the location of the find. If the lead agencies determine that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the proposed project on the qualities that make the resource important. The plan shall be submitted to the County for review and approval prior to implementation.</p>	Less Than Significant
<p><b>Impact CUL-3:</b> In the unexpected event that human remains are unearthed during construction activities, impacts would be <b>potentially significant</b>.</p>	<p><b>MM-CUL-3:</b> In the event of accidental discovery of any human remains during construction of the OCSD, CMSD, or City of Newport Beach components of the proposed project, the agency responsible for the discovery shall contact the county coroner shall be notified immediately and construction activities shall be halted in accordance with Section 15064.4(e)(1) of the CEQA Guidelines and California Health and Safety Code Section 7050.5. If the remains are found to be Native American, Health and Safety Code Section 7050.5, Subdivision (c),</p>	Less Than Significant

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	and Public Resources Code 5097.98 (as amended by Assembly Bill 2641) shall be followed by the appropriate agency.	
<i>Geology and Soils</i>		
No significant impacts.	No mitigation required.	N/A
<i>Greenhouse Gas Emissions</i>		
No significant impacts.	No mitigation required.	N/A
<i>Hazards and Hazardous Materials</i>		
<b>Impact HAZ-1:</b> Due to the potential to encounter refuse and other hazardous materials during installation of the proposed CMSD 12-inch sewer (19 <sup>th</sup> Street), OCSD 24-inch gravity sewer (eastern boundary of Talbert Regional Park), and City of Newport Beach 18-inch sewer, impacts would be <b>significant</b> .	<p><b>MM-HAZ-1:</b> The contractors for the Orange County Sanitation District (OCSD), Costa Mesa Sanitary District (CMSD), and the City of Newport Beach shall each be responsible for all aspects of mobilization, setup, operation, testing, and management; 24-hour trained personnel for monitoring and operation; pressure testing; spill containment at all points of suction, discharge, and ramp crossing connections; and spill management, including cleanup and replacement of damaged property and fines. In the event of an unauthorized spill associated with the routine transport, use, or disposal of hazardous materials, the contractors shall contact the California Emergency Management Agency and the National Response Center.</p> <p><b>MM-HAZ-2:</b> Prior to performing work within or adjacent of the former landfill, contractors for OCSD, CMSD, and City of Newport Beach shall contact Orange County Health Care Agency (OCHCA), the Lead Enforcement Agency (LEA) for the landfill. A geophysical survey will be performed in the southwestern portion of the landfill to evaluate the subsurface conditions and determine the waste fill extents to ensure that excavation will be not located within the waste fill areas of the landfill.</p> <p>During construction of the proposed pipelines within or adjacent to the former Newport Terrace Landfill, the contractors for OCSD, CMSD, and City of Newport Beach shall monitor construction and excavation activities within their respective service areas, including air monitoring for dust, volatile organic compound (VOC) vapors, methane, and oxygen, and oversight to determine presence of potentially hazardous materials. If impacts are encountered, the contractors will follow the Hazardous Materials Contingency Plan (See MM-HAZ-4).</p> <p><b>MM-HAZ-3:</b> During construction within 100 feet of the identified Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) wells, OCSD shall conduct air monitoring and visual observation. If contamination is encountered, the contractors shall follow the Hazardous Materials Contingency Plan (See MM-HAZ-4).</p> <p><b>MM-HAZ-4:</b> OCSD, CMSD, and the City of Newport Beach shall each prepare a hazardous materials contingency plan for their respective portions of the proposed project (see Figures 3-3 and 3-4) that</p>	Less Than Significant

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
	<p>includes the following:</p> <ul style="list-style-type: none"> <li>• Specific measures taken to protect worker and public health and safety (e.g. Personal protective equipment and monitoring air for dust, VOC vapors, methane and oxygen)</li> <li>• Specific measures to be taken to manage refuse (if encountered) (e.g. Contact LEA; stop work)</li> <li>• Procedures for limiting access to the contaminated area to properly trained personnel (e.g. Set-up traffic cones and caution tape)</li> <li>• Procedures for notification and reporting, including internal management and local agencies (as needed) (e.g. Reference threshold quantities and contact LEA and National Response Center)</li> <li>• A worker health and safety plan for excavation of potentially contaminated soil and/or refuse</li> <li>• Procedures for characterization and management of excavated soils (e.g. Soil sampling and stockpile soil management)</li> <li>• Procedures for certification and completion of remediation. (e.g. Collection of confirmation samples)</li> </ul>	
<p><b>Impact HAZ-2:</b> Due to the potential impacts discussed in Impact HAZ-1 and the proximity of the project area to several schools, impacts to schools would be <b>potentially significant</b>.</p>	<p>See MM-HAZ-1 through MM-HAZ-4 above.</p>	<p>Less Than Significant</p>
<p><b>Impact HAZ-3:</b> Due to the proximity of the proposed CMSD 12-inch sewer (19th Street), OCSD 24-inch gravity sewer (eastern border of Talbert Regional Park), and City of Newport Beach 18-inch sewer, to the former Newport Terrace Landfill and inactive oil wells, excavation in these areas would result in <b>potentially significant impacts</b>.</p>	<p>See MM-HAZ-1 through MM-HAZ-4 above.</p>	<p>Less Than Significant</p>

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
<i>Hydrology and Water Quality</i>		
No significant impacts.	No mitigation required.	N/A
<i>Land Use Compatibility</i>		
No significant impacts.	No mitigation required.	N/A
<i>Noise</i>		
<b>Impact NOI-1:</b> Construction of the proposed project would temporarily increase ambient noise levels by more than 5 dB, construction noise impacts with respect to a temporary or periodic increase in ambient noise levels in the project area. Therefore, construction noise impacts would be <b>potentially significant</b> .	<b>NOI-1:</b> The Orange County Sanitation District (OCSD), Costa Mesa Sanitary District (CMSD), and City of Newport Beach shall each require their respective contractors to implement the following measures during construction of the proposed project, to the extent feasible: <ul style="list-style-type: none"> <li>• Construction shall not occur between the hours of 6:30 p.m. and 7:00 a.m. Monday through Friday, between 6:00 p.m. and 9:00 a.m. on Saturday, or at any time on Sundays or federal holidays. The hours of construction, including noisy maintenance activities and all material transport, shall be restricted to the periods and days permitted by the local noise or other applicable ordinance.</li> <li>• All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications. Mobile or fixed "package" equipment (e.g., arc welders, air compressors) shall be equipped with shrouds and noise-control features that are readily available for that type of equipment.</li> <li>• All mobile or fixed noise-producing equipment used on the project that are regulated for noise output by a local, state, or federal agency shall comply with such regulations while in the course of project activity.</li> <li>• Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.</li> <li>• Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.</li> <li>• Construction site and access road speed limits shall be established and enforced during the construction period.</li> <li>• The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.</li> <li>• No project-related public address or music system shall be audible at any adjacent receptor.</li> </ul>	Significant and Unavoidable
<b>Impact NOI-2:</b> Noise impacts to special-status species during periodic	See Mitigation Measure MM-BIO-4 above.	Less than Significant

**Table 1-1**  
**Summary of Environmental Impacts**

Impact	Mitigation Measures	Level of Significance After Mitigation
maintenance associated with operation would be significant.		
<i>Recreation</i>		
No significant impacts.	No mitigation required.	N/A
<i>Traffic and Circulation</i>		
No significant impacts.	No mitigation required.	N/A
<i>Utilities and Service Systems</i>		
No significant impacts.	No mitigation required.	N/A

## 1.7 ANALYSIS OF ALTERNATIVES

Four alternatives to the proposed project, including the No Project Alternative, were considered in Chapter 7 of the Draft EIR, Alternatives. The No Project Alternative is a required element of an EIR pursuant to Section 15126.6(e) of the CEQA Guidelines that examines the environmental effects that would occur if the project were not to proceed. The other alternatives are discussed as part of the “range of reasonable alternatives” selected by OCSD. The alternatives addressed in Chapter 7 are listed below, followed by a description of each:

1. No Project Alternative
2. Plant No. 2 Pump Station Alternative
3. Victoria Street Force Main Alternative
4. Victoria Street Gravity Alternative

### **No Project Alternative**

Under the No Project Alternative, a new OCSD Southwest Costa Mesa Trunk Sewer (OCSD sewer pipeline) connecting the City of Newport Beach Pump Station at Walkabout Circle (Newport Beach Pump Station) to OCSD Wastewater Treatment Plant No. 2 (Plant No. 2) would not be constructed, nor would it include the construction of the Costa Mesa Sanitary District (CMSD) and City of Newport Beach pipelines, or abandonment of associated pump stations. The project area would not be impacted by construction of the pipelines, or abandonment of the pump stations (all eight pump stations would remain in service). However, without a new OCSD sewer pipeline, there would continue to be risks associated with facility failure of the eight existing pump stations that would be taken out of service under the other alternatives. As such, the

existing 9,800-foot Fairview Road Trunk Sewer, which extends along Fairview Avenue between Newport Boulevard and West Baker Street northeast of the project site, would require upsizing with a parallel or replacement sewer to accommodate higher future projected wet-weather flows. Construction of the Fairview Road Trunk Sewer improvements would last approximately 12 months. The Fairview Road Trunk Sewer improvements were analyzed in the 2007 Program EIR for the Collection System Improvement Plan (OCSD 2007). The description of the Fairview Road Trunk Sewer improvements, described above, is based on the description provided in the Program EIR.

### **Plant No. 2 Pump Station Alternative**

Under the Plant No. 2 Pump Station Alternative, the OCSD sewer pipeline would have a similar alignment to the proposed project, and would include the construction of approximately 3,400 linear feet of 24-inch-diameter gravity sewer from the existing Newport Beach Pump Station site. The OCSD sewer pipeline would extend south along the eastern border of Talbert Regional Park and then west from the terminus of 19th Street toward the Santa Ana River. Construction of the CMSD and City of Newport Beach pipelines and abandonment of associated pump stations would occur under this alternative. Similar to the proposed project, this portion of the pipeline would be installed by open trench construction methods. The crossing of the Santa Ana River would be constructed with microtunneling methods. Vertical jacking and receiving shafts would be constructed on both sides of the Santa Ana River and a casing pipe of up to 52 inches inside diameter would be jacked under the Santa Ana River levees and channel. An earth pressure balance microtunneling machine would be used, and care and attention would be required of the contractor to avoid subsidence of the ground above due to the potential for over-excavation during the tunneling operation. The vertical shaft on the east side of the Santa Ana River would be converted to a drop manhole to transition the flow from the 24-inch upstream gravity sewer to the 24-inch downstream gravity sewer installed within the jacked casing. The vertical shaft on the west side of the Santa Ana River would be within the OCSD Plant No. 2 and would be converted to a wet well for a submersible pump station or a conventional wet-pit/dry-pit pump station. The new pump station located in OCSD Plant No. 2 would convey flows with approximately 350 linear feet of 14-inch-diameter force main to the existing Interplant Line in Brookhurst Street. This segment of pipeline would also be installed with open trench construction methods.

### **Victoria Street Force Main Alternative**

Under the Victoria Street Force Main Alternative, the OCSD sewer pipeline would be constructed as approximately 3,200 linear feet of 14-inch-diameter trunk sewer force main from a new pump station adjacent to the existing Newport Beach Pump Station site. The trunk sewer force main would extend northwest along the northern border of Talbert



Regional Park in the existing dirt trail. From there the trunk sewer force main would continue west on Victoria Street, which turns into Hamilton Avenue on the west side of the Santa Ana River. The pipeline would be installed within the existing bridge deck crossing the Santa Ana River. From the bridge, the pipeline would remain on Hamilton Avenue until the intersection at Brookhurst Street, where it would connect to the existing OCSD Interplant Line through a new drop manhole. Construction of the CMSD and City of Newport Beach pipelines and abandonment of associated pump stations would occur under this alternative. All pipelines would be installed by open trench construction methods, except for the portion installed within the existing bridge deck. This bridge deck section would be installed by sliding and supporting pipe segments into an existing empty bridge cell by use of spacers/rollers.

### **Victoria Street Gravity Alternative**

Under the Victoria Street Gravity Alternative, the OCSD sewer pipeline would be constructed as approximately 1,500 linear feet of 24-inch-diameter gravity sewer from the existing Newport Beach Pump Station site. Construction of the CMSD and City of Newport Beach pipelines and abandonment of associated pump stations would occur under this alternative. The OCSD sewer pipeline would extend northwest along the northern border of Talbert Regional Park within the wide dirt trail (Trail A) toward Victoria Street. A 1,235-linear-foot-long inverted sewer siphon segment under the Santa Ana River would be installed by the HDD method. Once past the Santa Ana River, the pilot bore would curve upward and exit the ground beyond the easterly levee in Hamilton Avenue. Inverted sewer siphon inlet and outlet structures (manholes) would be installed at both ends of the HDD-installed pipeline and would serve as the transition points between the twin 14-inch inverted siphon segment of the pipeline and the 24-inch-diameter pipelines on either side. After the siphon, the flows would be conveyed by approximately 300 linear feet of 24-inch-diameter gravity sewer in Hamilton Avenue to the existing OCSD Interplant Line in Brookhurst Street. This segment of pipeline would be installed by open trench construction methods.

## **1.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

The No Project Alternative would result in the least environmental impacts and would be the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The Plant No. 2 Pump Station Alternative would not result in a reduction in impacts. The Victoria Street Force Main Alternative would reduce biological resource and geology and soils impacts but would also result in increased impacts to air quality and utilities and service systems. As such, the environmentally superior alternative is the Victoria Street Gravity Alternative because this alternative alignment would result in reduced impacts to biological resources.

However, the Victoria Street Gravity Alternative would result in greater impacts to geology and soils when compared to the proposed project. All other impacts would be similar to the proposed project.

With the exception of permanent impact to biological resources, it is noted that all of the impacts incurred under the proposed project would be temporary (during construction only), and most of these impacts are less than significant, or can be mitigated to less than significant. Overall, the proposed project and the Victoria Street Gravity Alternative would be approximately equal in their ability to reduce impacts.

## **1.9 AREAS OF CONTROVERSY**

Section 15123 (b)(2) of the CEQA Guidelines requires the Executive Summary of an EIR to disclose areas of controversy known to the lead agency that have been raised by the agencies and the public. OCSD circulated a Notice of Preparation (NOP) to solicit agency and public comments on the scope and environmental analysis to be included in the EIR. A total of 12 comment letters were received during the NOP public review period. Copies of the NOP and the NOP comment letters received by OCSD are included in Appendix A to this EIR. The following issues were raised in the written responses to the NOP:

- Concerns regarding potential impacts to preserved habitats in Talbert Regional Park.
- Potential impacts to jurisdictional waters.
- Potential for hazardous materials release due to proximity to former landfill.
- Concerns regarding potential impacts to water quality.
- Concerns regarding the potential for hazardous materials release near sensitive receptors.
- Potential effects on public access and recreational trails within Talbert Regional Park.
- Potential for discovery of unknown archaeological resources during construction.
- Concerns regarding potential floodplain impacts and easements over the floodplain.
- Concerns regarding potential impacts to special-status wildlife near Banning Ranch.
- Potential temporary impacts to air quality; recommendation to perform localized significance thresholds (LST) analysis.

## **1.10 ISSUES TO BE RESOLVED BY LEAD AGENCY**

Section 15123(b)(3) of the CEQA Guidelines requires that an EIR contain a discussion of issues to be resolved. With respect to the proposed project, the key issues to be resolved include decisions by OCSD, as Lead Agency, as to:

- Whether this environmental document adequately describes the environmental impacts of the proposed project;
- Whether the recommended mitigation measures should be modified and/or adopted; and
- Whether there are other mitigation measures or alternatives that should be considered for the proposed project besides those identified in the Draft EIR.

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## **CHAPTER 2 INTRODUCTION**

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### **2.1 PURPOSE OF THE DRAFT ENVIRONMENTAL IMPACT REPORT**

The Orange County Sanitation District (OCSD), as CEQA Lead Agency, has prepared this Draft Environmental Impact Report (EIR) to provide the public and responsible agencies information about the potential adverse effects on the local and regional environment associated with the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project). The Costa Mesa Sanitary District (CMSD) and City of Newport Beach are responsible agencies as they will implement their respective components of the proposed project. This Draft EIR has been prepared pursuant to the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code, Section 21000 et seq., and the CEQA Guidelines in the California Code of Regulations, Title 14, Section 15000 et seq.

This Draft EIR describes the environmental impacts of the proposed project and suggests mitigation measures, as necessary, to reduce impacts to a less than significant level. The impact analyses are based on a variety of sources, including agency consultation, technical studies, and field surveys. OCSD will use this EIR to consider implementation of the proposed project. CMSD and the City of Newport Beach will also use this EIR to consider implementation of their respective components of the proposed project. As CEQA Lead Agency, OCSD may use this Draft EIR to approve the proposed project, make Findings regarding identified impacts, and if necessary, adopt a statement of overriding considerations regarding these impacts.

### **2.2 CEQA EIR PROCESS**

#### **2.2.1 Notice of Preparation**

In accordance with Sections 15063 and 15082 of the CEQA Guidelines, OCSD, as lead agency, prepared a Notice of Preparation (NOP) (provided in Appendix A). Beginning on April 17, 2013, the NOP was circulated for 30 days and mailed to interested parties, including local, state, and federal agencies. The NOP was also submitted to the State Clearinghouse, along with a Notice of Completion (NOC). Copies of the NOP were made available for public review in the newspaper and at the OCSD Administrative Office Building, Newport Beach Mariners Branch Library, Costa Mesa/Donald Dungan Library, Huntington Beach Banning Library, and OCSD's web site: [www.ocsd.com](http://www.ocsd.com).

The NOP provided a general description of the facilities associated with the proposed project, a summary of the probable environmental effects of the proposed project to be addressed in the Draft EIR, and figures of the proposed project location and proposed project components. The NOP provided the public agencies and interested parties with the opportunity to review the

proposed project and provide comments or concerns on the scope and content of the environmental review document. The NOP comment period ended on May 17, 2013. A total of 10 comment letters were received. The NOP comment letters received are presented in Appendix A of this Draft EIR. This Draft EIR addresses all of the issues raised in the comments.

### 2.2.2 Public Scoping Meeting

CEQA recommends conducting early coordination with the public, appropriate public agencies, and local jurisdictions to assist in developing the scope of the environmental document. Pursuant to the CEQA Guidelines, Section 15083, a public scoping meeting was held at 6:30 p.m. on May 2, 2013, at the OCSD Administrative Office Building in the Board Room. A public notice was placed in the *Orange County Register* on April 17, 2013, informing the public of the availability of the NOP and the scoping meeting. The scoping meeting was held to provide the public an opportunity to voice comments or concerns regarding potential effects of the proposed project and the issues to be included in the Draft EIR. With the exception of OCSD, no agency staff, private citizens, or community groups attended the meeting.

The comments received during the NOP review period were considered during preparation of this Draft EIR. Issues not related to the scope of the proposed project or environmental effects (e.g., financing or economic factors) are not addressed in the Draft EIR but may be considered by OCSD before making a final decision on the proposed project. Please refer to Appendix A for comments received during the scoping period and information related to the circulation of the NOP.

### 2.2.3 Significance Determination

This Draft EIR addresses the potential significant environmental effects of the proposed project. Significance criteria indicating what constitutes a significant impact have been developed for each environmental resource analyzed in this Draft EIR, and are defined in each impact analysis section. Impacts are categorized as follows:

- **Significant and unavoidable:** mitigation might be recommended but impacts would still be significant.
- **Less than significant with mitigation:** impact would be potentially significant but mitigated to a less than significant level.
- **Less than significant:** mitigation is not required under CEQA but may be recommended.
- **No impact.**

CEQA requires that a lead agency neither approve nor carry out a project as proposed, unless it finds that significant environmental effects have been eliminated, avoided or substantially lessened (14 CCR 15091 and 15092). If such a reduction is not possible, a lead agency must

adopt findings and a statement of overriding considerations. The CEQA Guidelines, Section 15093, provide that any lead agency may allow significant environmental impacts to occur if it finds that the “benefits” of a project outweigh project impacts. To make this finding, the lead agency will adopt a statement of overriding considerations. This statement of overriding considerations must be included in the record of the proposed project approval.

## **2.2.4 Public Review of the Draft EIR**

This document is being circulated to local, state, and federal agencies, and to interested organizations and individuals who wish to review and comment on the Draft EIR. Publication of the Draft EIR marks the beginning of a 45-day public review period, during which written comments may be submitted to:

Kathy Millea  
Orange County Sanitation District  
Engineering Planning  
10844 Ellis Avenue  
Fountain Valley, California 92708

OCSD will hold a public hearing to receive comments on the Draft EIR during the 45-day review period. Comments should be focused on the adequacy and accuracy of the content of the Draft EIR. The meeting will be held at the following:

**Date:** December 3, 2013

**Time:** 6:30pm

**Location:** Orange County Sanitation District  
Plant No. 2 Operations Center, Training Room  
22212 Brookhurst Street  
Huntington Beach, California 92646

## **2.2.5 Final EIR**

Written and public hearing comments received in response to the Draft EIR will be addressed in a Response to Comments chapter, which will be contained in the Final EIR. The Response to Comments chapter addresses comments raised during the public review comment period. The Final EIR will also contain any revisions that may be required to the Draft EIR based on the comments received or any other information that may be added by OCSD. Prior to approving the proposed project, OCSD must make written findings with respect to each significant environmental effect identified in the Draft EIR. OCSD will then consider a resolution certifying the Final EIR certification (14 CCR 15090). Following certification, OCSD may proceed with consideration of project approval and the adoption of a mitigation monitoring and reporting program (MMRP).

## 2.2.6 Mitigation Monitoring and Reporting Program

CEQA requires lead agencies to adopt an MMRP for those changes to the proposed project that have been adopted or made a condition of project approval to mitigate or avoid significant effects on the environment. The CEQA Guidelines (14 CCR 15000 et seq.) do not require that the specific reporting or monitoring program be included in the Draft EIR. Nonetheless, proposed mitigation measures have been clearly identified in the Draft EIR that will facilitate creating a monitoring program. All adopted mitigation measures will be included in an MMRP to verify compliance. The MMRP will be included as an attachment to the Final EIR.

## 2.3 ORGANIZATION OF THE EIR

The chapter organization of the EIR is as follows:

1. ***Executive Summary.*** This chapter summarizes the contents of the EIR and presents a summary of the impacts and mitigation measures identified in the EIR.
2. ***Introduction.*** This chapter discusses the CEQA process and the purpose of the EIR.
3. ***Project Description.*** This chapter provides an overview of the proposed project, describes the need for and objectives of the proposed project, and provides detail on the characteristics of the proposed project.
4. ***Environmental Analysis.*** This chapter describes the environmental setting and identifies impacts of the proposed project for each of the following environmental resource areas: aesthetics, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, noise, public services, recreation, transportation and traffic, and utilities, service systems and energy. Mitigation measures to lessen potential significant impacts of the proposed project are presented for each resource area, as necessary.
5. ***Cumulative Effects.*** This chapter describes the potential impacts of the proposed project when considered together with other related projects in the project area.
6. ***Other CEQA Considerations.*** This chapter includes a discussion of the areas in which effects of the proposed project were determined not to be significant, describes significant and unavoidable impacts and significant and irreversible impacts, and evaluates the potential for the proposed project to induce population growth and result in secondary environmental effects due to such growth.
7. ***Alternatives.*** This chapter summarizes the findings of Chapter 4, Environmental Analysis, and compares the proposed project to several project alternatives. The environmentally superior alternative is identified in this chapter.
8. ***References.*** This chapter lists the references cited throughout the EIR.
9. ***List of Preparers.*** This chapter identifies those involved in preparing the EIR.



## **CHAPTER 3 PROJECT DESCRIPTION**

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### **3.1 INTRODUCTION**

The Orange County Sanitation District (OCSD), as CEQA Lead Agency, proposes to implement the Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project), which includes the construction of a new trunk sewer from the existing Newport Beach Pump Station site at the west end of Walkabout Circle to the OCSD Interplant Line in Brookhurst Street (OCSD sewer pipeline). The proposed project also includes the construction of several Costa Mesa Sanitary District (CMSD) and City of Newport Beach pipelines connecting to proposed OCSD sewer pipeline, and the abandonment of several CMSD and City of Newport Beach pump stations. CMSD and the City of Newport Beach are responsible agencies for these components of the proposed project. Together the OCSD sewer pipeline and CMSD and City of Newport Beach components constitute the proposed project.

### **3.2 PROJECT BACKGROUND**

#### **3.2.1 Overview of Agencies**

OCSD is the CEQA Lead Agency for the proposed project. Created in 1954, OCSD is the third-largest wastewater agency west of the Mississippi River and serves a population of more than 2.5 million people. OCSD is responsible for collection, treatment, recycling, and disposal of treated wastewater generated within a 479-square-mile service area located in central and northwestern Orange County. OCSD's service area includes 21 cities, 3 special districts, and the County of Orange governed by a 25-member board of directors consisting of elected officials from each city and sewer agency located in the OCSD service area. OCSD facilities include over 570 miles of sewer lines, 15 off-site pumping stations, and 2 treatment plants. Currently, OCSD treats approximately 210 million gallons per day (mgd) of wastewater through two connected treatment plants located adjacent to the Santa Ana River, Reclamation Plant No. 1 in Fountain Valley and Treatment Plant No. 2 (Plant No. 2) in Huntington Beach.

CMSD is a responsible agency for the proposed project for the components within the CMSD service area. Formed in 1944, CMSD serves a population of approximately 116,700 within the City of Costa Mesa and portions of Newport Beach and unincorporated Orange County. CMSD provides liquid waste collection and transmission to OCSD facilities for treatment and disposal. CMSD is also responsible for operations, maintenance, and repairs of CMSD facilities.

The City of Newport Beach Wastewater Division is also a responsible agency for the proposed project for the components proposed within the City of Newport Beach. The Wastewater Division is responsible for the collection of residential and commercial wastewater. Wastewater collected by the City of Newport Beach is transmitted to OCSD facilities for treatment and disposal. The division is also responsible for operations, maintenance, and repairs of pump stations, sewer mains, and laterals.

### **3.2.2 Facilities Background**

In the late 1980s, one of the OCSD member agencies, CMSD, investigated the potential opportunity of eliminating six existing CMSD sewer pump stations located within the vicinity of Canyon Park east of the Santa Ana River and south of Victoria Street in the City of Costa Mesa. Currently, flow from the Sea Bluff, West Bluff, Aviemore, Canyon, and President Pump Stations is conveyed to the Fairview Trunk Sewer and OCSD Plant No. 1. The City of Newport Beach Pump Station, 19th Street Pump Station, and the private West 18th Street Pump Station convey flow to OCSD Plant No. 2. The study proposed the combining of flows from these six CMSD pump stations with flow from the City of Newport Beach Pump Station (NBPS), at the west end of Walkabout Circle just south of Canyon Park, and with flow from the private pump station in the California Seabreeze neighborhood at the west end of 18th Street in the City of Costa Mesa. The study proposed to convey the combined flows to OCSD through a retrofit of the NBPS and its force main. The existing NBPS force main crosses the Santa Ana River on the Victoria Street/Hamilton Avenue Bridge overcrossing and discharges to the OCSD Plant No. 2 Interplant Line in the intersection of Brookhurst Street and Hamilton Avenue in the City of Huntington Beach.

In 2007, CMSD formally requested that OCSD consider construction of a regional conveyance system from the vicinity of the NBPS to the OCSD system. Five of the six CMSD pump stations are tributary to the regional OCSD Fairview Road Trunk Sewer. By eliminating the combined flows of the five pump stations tributary to the Fairview Road Trunk Sewer, OCSD would benefit from the reduction in ultimate flow and avoid the need for Fairview Road Trunk Sewer upsizing, as identified within OCSD 2006 Strategic Plan Update. Therefore, there are mutual benefits for both OCSD and CMSD to redirect the existing sewer pump station discharges to a new regional conveyance system directly to the OCSD Interplant Line in Brookhurst Street.

In 2012, OCSD began an evaluation and feasibility study of conveyance infrastructure from the NBPS to OCSD Plant No. 2, including quantification of the anticipated reduction of flows that would be diverted away from the Fairview Road Trunk Sewer as a result of such infrastructure.

### 3.3 PROJECT LOCATION

The project area is located primarily within Talbert Regional Park, Canyon Park, and OCSD Plant No. 2, in the Cities of Costa Mesa, Newport Beach, and Huntington Beach, California (Figures 3-1 and 3-2). The project area extends into residential neighborhoods adjacent to Canyon Park in the Cities of Costa Mesa and Newport Beach.

### 3.4 PURPOSE AND OBJECTIVES

The purpose of the proposed project is to consolidate facilities and reduce the reliance on pump station infrastructure. This would reduce the overall risks associated with facility failure and the long-term operational, maintenance, and replacement costs associated with pump station infrastructure.

In addition, the proposed project would successfully divert flows from the Fairview Road Trunk Sewer, currently planned for upsizing to accommodate ultimate system flows. This diversion is expected to eliminate the need for upsizing of the Fairview Road Trunk Sewer, saving infrastructure replacement costs and impacts to the public during its construction phase.

The objectives for the proposed project include the following:

- Provide a reliable conveyance system for projected 2030 wastewater flows tributary to each of the existing sewer pump stations proposed to be abandoned.
- Provide infrastructure that may be efficiently maintained and easily accessed in the event of an emergency.
- Reduce the risk of spills in the local agency wastewater collection system due to system failure.
- Avoid operational risks associated with pump stations in the wastewater collection system.
- Avoid substantial disruption in the Talbert Nature Preserve for construction and operation.
- Avoid the need for new easements from private property owners.
- Avoid substantial traffic disruption during the construction phase, particularly on Victoria Street and Hamilton Avenue.
- Provide a solution that reduces the potential for chronic noise and odor complaints.

### 3.5 DESCRIPTION OF PROJECT COMPONENTS

The proposed project, shown in Figures 3-3 and 3-4, consists of two main components:

- **OCSD Sewer Pipeline.** Construction of the OCSD sewer pipeline from the existing NBPS site at the end of Walkabout Circle in the City of Newport Beach, to the existing OCSD Interplant Line in Brookhurst Street in the City of Huntington Beach.

- **CMSD and City of Newport Beach Facilities.** Construction of several CMSD and City of Newport Beach pipelines connecting areas within the cities of Costa Mesa and Newport Beach to the proposed OCSD sewer pipeline, and the abandonment of eight existing pump stations in this area by CMSD and the City of Newport Beach.

### 3.5.1 OCSD Sewer Pipeline

The OCSD sewer pipeline component of the proposed project would consist of approximately 4,800 feet of pipeline that would be constructed in the following three sequential segments, shown in Figure 3-3:

1. Approximately 3,500 linear feet of 24-inch-diameter gravity sewer from the NBPS at the west end of Walkabout Circle south along the eastern border of Talbert Regional Park and then west from the western terminus of 19th Street toward the Santa Ana River
2. Approximately 800 linear feet of a dual 14-inch barrel inverted sewer siphon beneath the Santa Ana River. Pipe diameters may be adjusted during final design to optimize cleaning velocity and maintenance criteria.
3. Approximately 500 linear feet of 24-inch-diameter gravity sewer from the west end of the inverted sewer siphon to the existing OCSD Interplant Line in Brookhurst Street.

The OCSD components of the proposed project are referred to as the “proposed OCSD sewer pipeline”, when described collectively; and separately as the “proposed OCSD 24-inch gravity sewer” and “proposed 14-inch inverted sewer siphon.”

The proposed OCSD sewer pipeline would require a 30-foot wide permanent easement along its entire length to allow for access to the pipes. Additionally, a 20-foot wide temporary easement would be required along the southern boundary of Talbert Regional Park during construction. The existing access roads within Talbert Regional Park would be improved with all-weather crushed-rock to allow sewer maintenance trucks to access all project manholes and structures. Lateral access roads extending from the existing access road would be necessary to allow access to the manholes along the southern boundary of Talbert Regional Park. Street access to the permanent and temporary easements would be provided from Balboa Boulevard approximately 450 feet north of the intersection at the west end of 19th Street, and a hammerhead-shaped vehicle turnaround would be provided at both ends of the new sewer facilities.

The proposed alignment for the OCSD sewer pipeline was selected following an extensive evaluation of 11 alignments over a 1-year period. The identified alignments were processed through a preliminary screening of 20 initial weighted criteria, and a secondary screening of eight criteria. The process was intended to eliminate outlying alignments based on “fatal flaws” or poor ranking among other considered alignments. The results of the preliminary evaluation,

along with detailed hydraulic analysis of the alignments, resulted in the continuation of seven alignments for more in-depth analysis. These remaining seven alignments were further discussed and evaluated, resulting in the elimination of three alignments and leaving four remaining alignments to be further evaluated in detail in the EIR, including the proposed alignment. The horizontal alignment of two of these four alignments followed the southern boundary of Talbert Regional Park, and the alignment of the other two followed the northern boundary.

The proposed alignment was selected from the four remaining alignments for the following reasons:

- The use of a gravity sewer requires no pump station; therefore, there is a lesser chance for system failure, and operation and maintenance costs are lower.
- The use of the shortest possible inverted sewer siphon under the Santa Ana River also results in the least elevation drop needed to provide adequate hydraulic capacity at minimum required wastewater velocity. Higher wastewater velocities reduce the risk of plugging of the sewer with use. The shorter length of inverted siphon is also favored for its ease of cleaning and maintenance.
- The use of a two-barrel inverted sewer siphon maximizes wastewater velocity during typical dry weather diurnal flow patterns with one barrel and with two barrels during typical peak wet weather flow patterns.
- The use of a two-barrel inverted sewer siphon also provides dry weather redundancy to allow periodic cleaning up to four times per year, or more often as needed based on future operating experience with the facility.
- An alignment parallel to existing Southern California Edison and other utilities along the south edge of Talbert Nature Preserve maximizes the use of existing dirt access roads and existing utility easements and minimizes disturbance of the Talbert Marsh.
- The construction will be conducted with 99% of the work outside the public right-of-way, providing the least impact to traffic and pedestrians, minimizing risk, and maximizing public safety.
- The specialized trenchless construction of the inverted siphon under the Santa Ana River does not require a horizontal curve, and there is substantial open working space within Plant No. 2 for mobilizing a safe work environment and layout area for the specialized construction. Providing ample workspace and a simplified alignment reduces the potential risk associated with the construction.
- There is ample layout area along the 19th Street extension for assembly of the inverted siphon pipelines prior to installation by trenchless methods.

- Access to the pipeline off Balboa Boulevard, a minor collector roadway, provides a safer means of maintaining the infrastructure compared to accessing the pipeline from Hamilton Avenue, a major arterial.
- The depth of cover is maximized due to improved hydraulics associated with a shorter alignment length and lower downstream connection elevation. Increased depth of cover provides improved protection of the pipeline and less risk of failure.

In addition, following the selection of the proposed alignment, it was further refined to reduce impacts to sensitive habitat, including wetlands, in the southeast corner of Talbert Regional Park. Instead of following the boundary of the Park to the terminus of 19th Street, the alignment was altered to more closely follow the existing dirt paths and access roads.

The entire proposed OCSD sewer pipeline would require annual cleaning with a vacuum truck that would take approximately one week to complete. The inverted sewer siphon is anticipated to require monthly cleanings with a vacuum truck that would take approximately 4 to 5 hours each. During the breeding season for sensitive wildlife, these monthly cleanings would be operated out of Plant 2 to minimize activity within Talbert Regional Park.

### **3.5.2 CMSD and City of Newport Beach Facilities**

The proposed OCSD sewer pipeline would allow for the consolidation of both CMSD and City of Newport Beach sewer pipelines in the area surrounding the existing NBPS. Following construction of the proposed OCSD sewer pipeline, CMSD and the City of Newport Beach would construct new pipelines to connect areas within the cities of Costa Mesa and Newport Beach to the upstream end of the proposed OCSD sewer pipeline. CMSD would also facilitate the abandonment of six CMSD pump stations and one private pump station, and the City of Newport Beach would facilitate the abandonment of the NBPS, located at the end of Walkabout Circle.

As shown in Figure 3-4, the proposed pipelines would include the following:

- A new 24-inch gravity sewer from the service areas of the Canyon Pump Station (CMSD No. 7) and West Bluff Pump Station (CMSD No. 20) to the existing sewer in Canyon Park
- A new 12-inch gravity sewer from the service areas of the Avimore Terrace Pump Station (CMSD No. 5) and Sea Bluff Pump Station (CMSD No. 16) to a connection with a new 18-inch sewer carrying flow westerly from an existing gravity sewer in Canyon Park
- A new 18-inch sewer from Canyon Park picking up flows from the service areas of Canyon Pump Station (CMSD No. 7), West Bluff Pump Station (CMSD No. 20), President Pump Station (CMSD No. 14), Avimore Terrace Pump Station (CMSD No. 5), and Sea Bluff

Pump Station (CMSD No. 16) to the new OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 in the vicinity of the NBPS at the west end of Walkabout Circle

- A new 12-inch sewer from the service area of the 19th Street Pump Station (CMSD No. 1) and the West 18th Street Private Pump Station (private) to the new OCSD Southwest Costa Mesa Trunk Sewer in the vicinity of the west end of 19th Street.

A large portion of the gravity pipeline that will convey the President Pump Station wastewater to the upstream end of the proposed OCSD sewer pipeline components was constructed in the City of Costa Mesa's Canyon Park in 1991 when the park was improved. The sewer constructed within the park is 12 inches and becomes 15 inches where the two 12-inch legs join. The new sewer connecting to the existing 15-inch sewer will be 18 inches in diameter as it exits Canyon Park and enters Talbert Regional Park while traveling westerly along the north side of the City of Newport Beach boundary, then southerly along the east side of Talbert Regional Park to the upstream end of the OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19.

After the proposed CMSD and City of Newport Beach pipelines are completed and the proposed OCSD sewer pipeline is completed, the following existing pump stations, shown in Figure 3-4, would be abandoned by CMSD and the City of Newport Beach:

- President Pump Station (CMSD No. 14)
- West Bluff Pump Station (CMSD No. 20)
- Canyon Pump Station (CMSD No. 7)
- Aviemore Terrace Pump Station (CMSD No. 5)
- Sea Bluff Pump Station (CMSD No. 16)
- 19th Street Pump Station (CMSD No. 1)
- West 18th Street Private Pump Station
- City of Newport Beach Pump Station at Walkabout Circle.

### **3.5.3 Project Construction**

#### **3.5.3.1 OCSD Sewer Pipeline**

##### **Construction Methods**

The two segments of the 24-inch gravity sewer, at the beginning and end of the OCSD sewer alignment, would be installed by open trench construction methods. The middle segment of 800 feet of double-barrel inverted gravity sewer siphon (siphon) would be installed with horizontal

directional drilling (HDD) methods. The inverted sewer siphon would consist of two parallel 14-inch pipelines with a combined capacity to pass the project peak wet weather flow. Pipe diameters may be adjusted during final design to optimize cleaning velocity and maintenance criteria. The proposed HDD operation would be started on the west side of the Santa Ana River within the Plant No. 2 property. The bore path would be about 1,000 feet long, crossing under the Santa Ana River. It is anticipated that the top of the pipe crossing the Santa Ana River would be 25 feet below the existing riverbed ground surface and 10 feet below the existing buried riprap levee toes. Once past the Santa Ana River, the pilot bore would curve upward and exit the ground beyond the easterly levee. The bore path would start and finish aboveground without the need for deep pits. Open trench methods would be used to remove between 100 and 150 feet of HDD-installed pipe on both ends to intercept and match the required gravity sewer elevations on both ends. The inverted sewer siphon inlet and outlet structures would be installed at both ends of the HDD-installed pipeline and would serve as the transition points between the twin 14-inch inverted siphon segment of the pipeline and the 24-inch-diameter pipelines on either side. The siphon inlet structure invert elevation would be approximately 4 to 5 feet higher than the downstream outlet structure invert elevation to provide the needed hydraulic capacity. Installation of the inverted siphon would require a temporary wire line survey during construction. This would involve laying two wires on top of the ground parallel to the bore path with one wire on each side approximately 50 feet from the center. The wire would also be laid across the levees and the Santa Ana River channel bottom.

### **Construction Staging and Site Access**

Construction staging areas for open trench work would be located along the proposed alignments, primarily along existing dirt roads and trails and the Southern California Edison easement along the southern boundary of Talbert Regional Park. An easement to be issued by Orange County is required for the proposed project. Construction staging for the HDD work would be within OCSD Plant No. 2 and along the proposed open trench/gravity sewer alignment within the Southern California Edison easement and adjacent area. Construction vehicles would access the project site east of the Santa Ana River via Balboa Boulevard. Construction would primarily occur within the 30-foot wide permanent easement, and along the southern boundary of Talbert Regional Park, within the 20-foot wide temporary easement.

Construction equipment will consist of several heavy vehicles and support trucks for open trenching and movement of excavated material. The majority of large equipment necessary for the HDD construction is expected to be located within OCSD Plant No. 2. In addition, the bulk of excavated material will come from the HDD within OCSD Plant No. 2.



### **3.5.3.2 CMSD and City of Newport Beach Facilities**

The CMSD and City of Newport Beach pipelines would be installed by open trench construction methods, with the exception of the 24-inch sewer in Canyon Drive, which would be constructed using HDD or other trenchless methods due to the depth of the sewer. The abandonment of the pump stations is described below.

#### **President Pump Station (CMSD No. 14)**

The method for abandoning the President Pump Station and the President Force Main is similar to the methods that would be used for all pump stations and force mains being abandoned. Abandoning a pump station involves removing all the equipment from inside the concrete structure, drilling multiple holes in the bottom of the structure, removing the top 4 to 5 feet of the structure, filling the structure with sand, and then restoring the surface area to match the surrounding area. Abandoning a force main involves cutting the ends of the pipe and then filling the ends or the entire pipe with air-blown sand/cement slurry. Collection of any remaining sewage is expected to be by suction pump, with disposal into any neighboring sewer collection manhole, in coordination with OCSD.

#### **West Bluff Pump Station (CMSD No. 20)**

The West Bluff Pump Station is relatively small and serves only one tract of homes. The pump station and force main will be abandoned by the methods described above and the wastewater will be conveyed in a new 12-inch sewer that will tie into the existing 12-inch sewer in Canyon Park where the park adjoins Sea Bluff Circle.

#### **Canyon Pump Station (CMSD No. 7)**

The Canyon Pump Station will be replaced by a 15- to 35-foot-deep, 24-inch sewer that will likely be partially constructed using HDD due to the extreme depth of the sewer. The length and depth of this sewer will make this the most expensive pump station to abandon.

#### **Aviemoire Terrace Pump Station (CMSD No. 5)**

Aviemoire Terrace Pump Station will be replaced by a new 12-inch sewer. Installation of the new sewer in an easement in a residential side yard on the south side of Aviemoire Terrace is required to facilitate conveying the wastewater southwesterly into Talbert Regional Park. Once in the park, the proposed 12-inch sewer will travel southeasterly toward the northwest corner of the City of Newport Beach boundary, where it will join the new network.

**Sea Bluff Pump Station (CMSD No. 16)**

The Sea Bluff Pump Station will be replaced by a new 12-inch sewer that will flow southwesterly to join the new network.

**19th Street Pump Station (CMSD No. 1)**

The 19th Street Pump Station will be replaced with a 12-inch sewer flowing westerly that will likely join the OCSD sewer just inside Talbert Regional Park.

**West 18th Street Private Pump Station**

When this tract and private pump station were constructed, the force main outlet was installed on 18th Street so the wastewater would flow easterly along 18th Street per the OCSD Sewer Master Plan. However, as a precautionary measure against pump station breakdowns, construction of a built-in overflow line into a gravity sewer flowing northerly from the pump station that eventually leads to the 19th Street Pump Station was allowed. Abandoning the private station and force main would use the standard method, but slightly modified to make the overflow bypass the permanent gravity sewer.

**City of Newport Beach Pump Station at Walkabout Circle**

The abandonment of this station would likely use the standard method, with the additional installation of a short gravity sewer since the upstream end of the OCSD facility will likely be due west of this pump station, just inside Talbert Regional Park.

**3.5.3.3 Schedule**

The construction start date is dependent on receiving an array of approvals from various agencies. OCSD estimates that construction of the proposed OCSD sewer pipeline would begin in June 2016 and be completed in May 2018, for a total duration of approximately 24 months. The CMSD and City of Newport Beach project components are anticipated to start during the same period of time as the OCSD project components.

**3.5.4 Project Design Features and Construction Measures**

OCSD has incorporated project design features and construction measures into the proposed project. Construction would be performed by qualified contractors, and contract documents, plans, and specifications will incorporate stipulations regarding standard legal requirements and acceptable construction practices, including, but not limited to, traffic control during construction activities, noise, geologic conditions, drainage and water quality improvements, water quality protection and erosion and sedimentation control, construction-related solid

waste, and water supply. These measures are included in Table 3-1, Summary of Project Design Features and Construction Measures, and are referenced throughout the impact discussions in Chapter 4, Environmental Analysis, of this EIR.

**Table 3-1**  
**Summary of Project Design Features and Construction Measures**

Subject Area	Design Feature or Construction Measure
Geologic Conditions	<p>Subsurface evaluations will be performed prior to the commencement of construction of the proposed project. The subsurface evaluations shall evaluate the soil and geologic conditions, address excavation and dewatering characteristics, and develop detailed design criteria for the pipelines and associated improvements. All geotechnical recommendations shall be adhered to for construction of the proposed project (examples may include measures to prevent erosion).</p> <p>Subsurface exploration will include exploratory borings and/or other exploration techniques to adequately evaluate the soil, geologic and groundwater conditions along the alignment and at the pump station site. Borings will be performed at intervals of approximately 500–1,000 feet along the pipeline alignment and further designed by the project geotechnical consultant. Exploratory borings will extend approximately 10 feet or more below the invert elevations of the pipeline, excavation or structure. One boring will be performed at each tunnel entry/exit shaft location.</p> <p>Excavations that appear unstable or are deeper than 4 feet will be shored or the sides of the excavation will be laid back to slope inclinations of approximately 1.5:1 (horizontal to vertical). Friable sand zones which are subject to caving may warrant continuous shoring. For planning purposes, it is recommended that the on-site soil be considered as Type C soil in accordance with the OSHA soil classification.</p>
Air Quality	<p>OCSD, CMSD, and the City of Newport Beach will each post signage in their respective construction areas that provides contact information and a phone number for persons to file complaints related to unacceptable levels of fugitive dust generation, nuisance odors, or other potential concerns related to air quality conditions.</p>
Biological Resources	<p>OCSD, CMSD, and the City of Newport Beach will avoid and/or minimize construction and maintenance activities during the bird breeding season (February 15 through July 15).</p>
Water Quality Protection and Erosion and Sedimentation Control	<p>In compliance with the required Construction General Permit, OCSD, CMSD, and the City of Newport Beach shall require construction contractors to prepare and implement stormwater pollution prevention plans (SWPPPs) that specify BMPs to be implemented during project construction to prevent pollutants from contacting stormwater and control erosion and sedimentation. The SWPPPs will be prepared and submitted to the Regional Water Quality Control Board (RWQCB) for review and approval prior to the start of construction.</p> <p>Construction BMPs may include the following:</p> <ul style="list-style-type: none"> <li>• <i>Erosion Control Practices</i> – including physical stabilization BMPs (hydraulic mulch, soil binders, straw mulch, geotextiles, plastic covers, mats), vegetation stabilization BMPs (hydroseeding) and wind erosion control (application of water).</li> <li>• <i>Sediment Control Practices</i> – including perimeter protection (silt fence, fiber rolls, sand bag barrier, straw bale barrier), storm drain inlet protection, resource protection (gravel bag berm, silt fence, fiber rolls), sediment capture (sediment trap, desilting basin), velocity reduction (silt fence, check dam, velocity dissipation devices, sediment basin), and off-site sediment tracking (stabilized construction entrance/exit, construction road stabilization, entrance/outlet tire wash).</li> <li>• <i>Waste Management &amp; Materials Pollution Control Practices</i> – including spill prevention and control, solid waste management, hazardous waste management, contaminated soil</li> </ul>

**Table 3-1**  
**Summary of Project Design Features and Construction Measures**

Subject Area	Design Feature or Construction Measure
	<p>management, concrete waste management, sanitary/septic waste management, liquid waste management, vehicle and equipment cleaning, vehicle and equipment fueling, and vehicle and equipment maintenance.</p> <ul style="list-style-type: none"> <li>• <i>Materials Management Practices</i> – including material delivery and storage, material use and stockpile management</li> <li>• <i>Non-Stormwater Management Practices</i> – including water conservation, dewatering operations, paving and grinding operations, temporary stream crossing, clear water diversion, illicit connection reporting, potable water/irrigation, vehicle and equipment cleaning, vehicle and equipment fueling, vehicle and equipment maintenance, pile driving operations, concrete curing, concrete finishing, materials and equipment use over water, structure demolition, temporary batch plants and stream bank stabilization.</li> </ul> <p>Operational BMPs may include the following:</p> <p><i>Pollution Prevention:</i></p> <ul style="list-style-type: none"> <li>• Inspect potential non-stormwater discharge flow paths and clear/clean up any debris or pollutants found (i.e., remove trash, leaves, sediment, and wipe up liquids, including oil spills).</li> </ul> <p><i>Sewer System Cleaning:</i></p> <ul style="list-style-type: none"> <li>• Sewer lines should be cleaned on a regular basis to remove grease, grit, and other debris that may lead to sewer backups.</li> <li>• Establish routine maintenance program. Cleaning should be conducted at an established minimum frequency and more frequently for problem areas that are identified.</li> <li>• Cleaning activities may require removal of tree roots and other identified obstructions.</li> </ul> <p><i>Preventive and Corrective Maintenance:</i></p> <ul style="list-style-type: none"> <li>• During routine maintenance and inspection note the condition of sanitary sewer structures and identify areas that need repair or maintenance.</li> <li>• Document suggestions and requests for repair and report the information to the appropriate manager or supervisor.</li> <li>• Prioritize repairs based on the nature and severity of the problem. Immediate clearing of blockage or repairs is required where an overflow is currently occurring or for urgent problems that may cause an imminent overflow. These repairs may be temporary until scheduled or capital improvements can be completed.</li> </ul> <p><i>Response and Containment:</i></p> <ul style="list-style-type: none"> <li>• Establish lead department/agency responsible for spill response and containment. Provide coordination within departments.</li> <li>• When a spill, leak, and/or overflow occurs, keep sewage from entering the storm drain system to the maximum extent practicable by covering or blocking storm drain inlets or by containing and diverting the sewage away from open channels and other storm drain facilities.</li> <li>• Remove the sewage using vacuum equipment or use other measures to divert it back to the sanitary sewer system.</li> <li>• Record required information at the spill site.</li> <li>• Perform field tests as necessary to determine the source of the spill.</li> <li>• Develop additional notification procedures regarding spill reporting as needed.</li> </ul>

**Table 3-1**  
**Summary of Project Design Features and Construction Measures**

Subject Area	Design Feature or Construction Measure
	If groundwater dewatering is necessary, OCSD shall require the preparation and implementation of a dewatering plan prior to the commencement of dewatering activities. The contents of the dewatering plan shall be consistent with the requirements for new discharges to surface waters established as established by the Santa Ana RWQCB in Order No. R8-2009-0003.
Recreation	<p>OCSD and CMSD will provide advance notice, between 2 and 4 weeks prior to construction, of impending closure of trails within Talbert Regional Park. The announcement will state specifically where and when construction will occur in the park and will be posted on the park's informational kiosk as well as on the OC Parks parks and trails website.</p> <p>The City of Newport Beach will provide advance notice, between 2 and 4 weeks prior to construction, of impending closure of trails within Canyon Park. The announcement will state specifically where and when construction will occur in the park and will be posted on the Talbert Regional Park informational kiosk and at the Canyon Park parking area. In addition, the City of Newport Beach will also publish a notice of impending construction in local newspapers, stating when and where construction will occur and will coordinate the posting of trail closure information on the City of Costa Mesa's Recreation website.</p>
Traffic Control during Construction Activities	OCSD, CMSD, and the City of Newport Beach shall require construction contractors to prepare and implement traffic control plans that specifically address construction traffic and road closures within the public rights-of-way of the cities of Costa Mesa, Huntington Beach, and Newport Beach. The traffic control plans will specify provisions for construction times and for allowance of bicyclists, pedestrians, and bus access throughout construction. The traffic control plans will also specify provisions to ensure emergency vehicle passage at all times, will include signage and flagmen when necessary, and will be approved by each affected city in advance of construction.
Solid Waste	Efforts will be made to recycle all reusable materials in cooperation with local agencies and businesses.

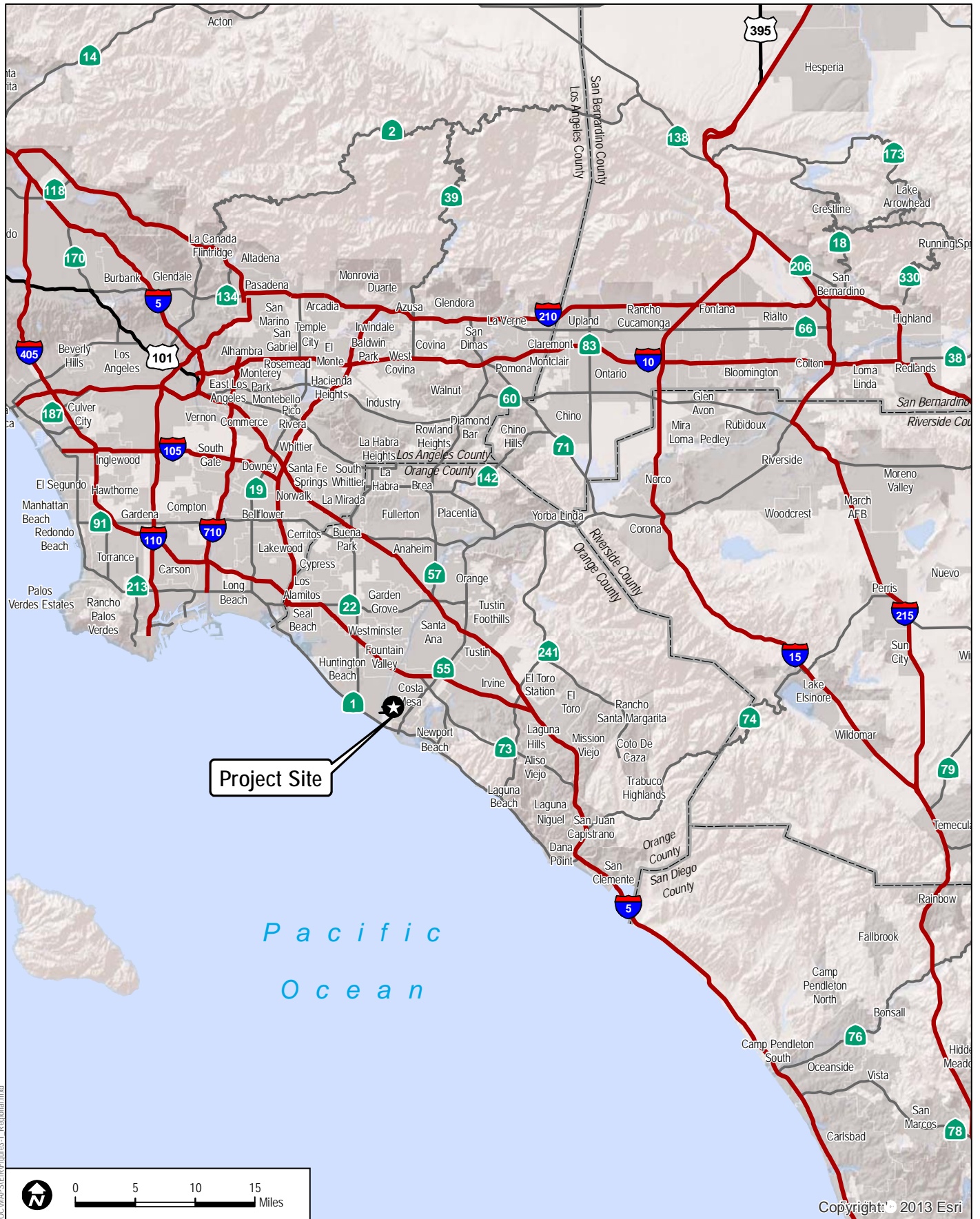
### 3.6 PROJECT APPROVALS

OCSD intends to use this Draft EIR to consider implementation of the proposed project. As lead agency, OCSD may use this Draft EIR to approve the proposed project, making findings of fact regarding identified impacts, and if necessary, adopt a statement of overriding considerations regarding these impacts. Among others, the County of Orange; Cities of Costa Mesa, Huntington Beach, and Newport Beach; and CMSD are responsible agencies that have discretionary approval over components of the proposed project.

The agencies and entities with discretionary approval over the proposed project are listed in Table 3-2.

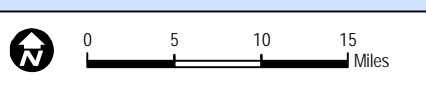
**Table 3-2**  
**Discretionary Permits Potentially Required**

Agency	Permits and Authorizations Required
California Coastal Commission	Consolidated Coastal Development Permit
City of Newport Beach	Encroachment Permit
City of Costa Mesa	Encroachment Permit
City of Huntington Beach	Encroachment Permit
County of Orange: Harbors, Beaches, and Parks	Encroachment Permit
County of Orange: Flood	Encroachment Permit
United States Fish and Wildlife Service	Section 7 or Section 10 Permit Authorization
United States Army Corps of Engineers	Section 404 Discharge Permit and Section 408 Permit
California State Water Resources Control Board	General Permit for Discharges of Storm Water Associated with Construction Activity
Regional Water Quality Control Board – Santa Ana Region	General Permit for Discharges of Storm Water Associated with Construction Activity and Section 401 Water Quality Certification
California Department of Fish and Wildlife	Streambed Alteration Agreement and Incidental Take Permit
California State Department of Industrial Relations – Occupational Safety and Health Administration	Construction Activity Permit and Underground Classification Contract
California State Lands Commission	Lease
California Department of Conservation, Division of Oil, Gas, and Geothermal Resources	Construction Site Plan Review
South Coast Air Quality Management District	Permit to Construct and Permit to Operate
Orange County Public Works – County Property Permits Division	Construction Site Plan Review
Southern California Edison	Encroachment Permit (to be determined)



Project Site

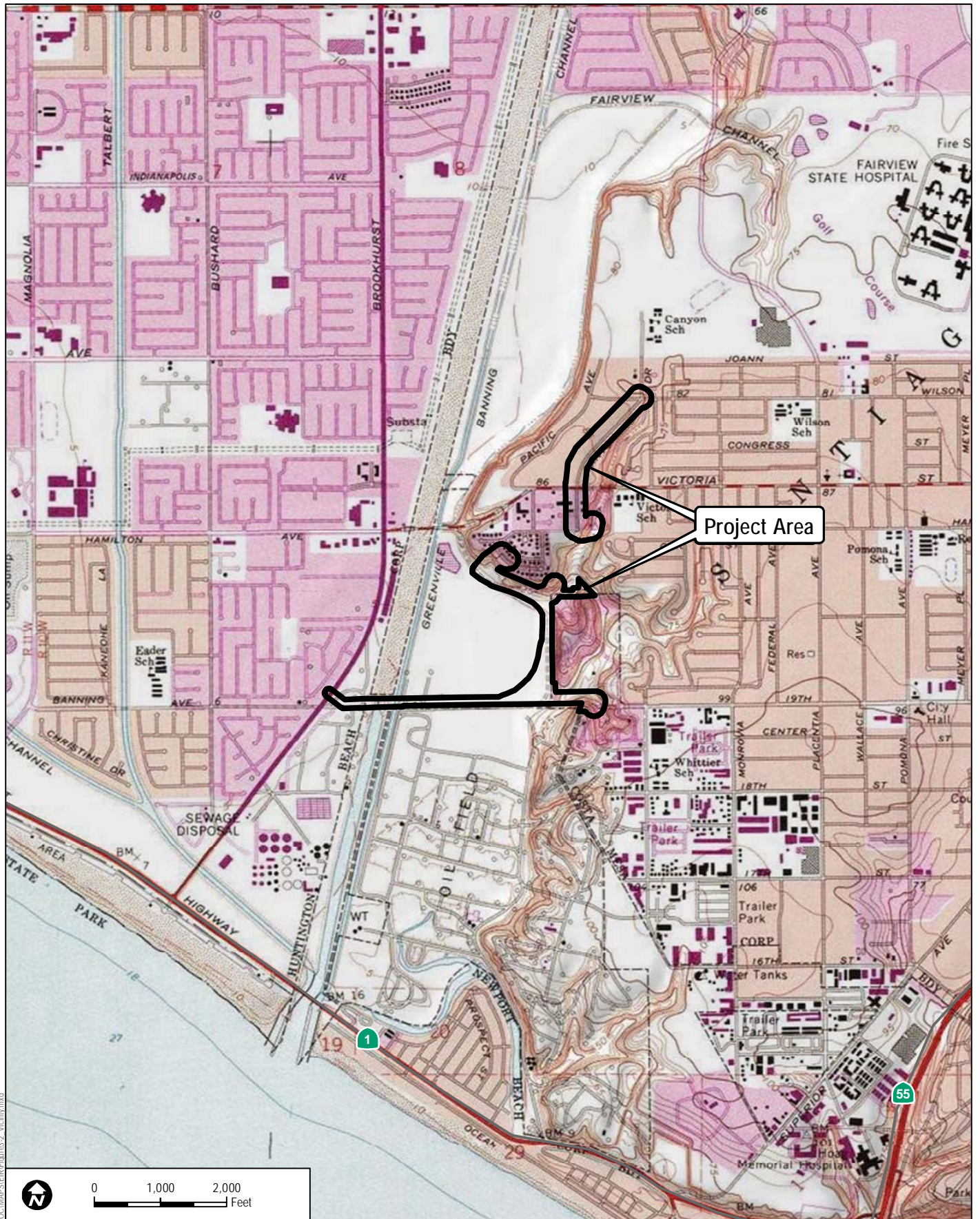
Pacific Ocean



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Project Area

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7193-02

SOURCE: USGS 7.5-Minute Series Newport Beach Quadrangle.

Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

**FIGURE 3-2  
Vicinity Map**

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**FIGURE 3-3**  
**Proposed OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 Alignment**

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**FIGURE 3-4**  
**Proposed CMSD and City of Newport Beach Facilities**

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## **CHAPTER 4**

### **ENVIRONMENTAL ANALYSIS**

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The following environmental analyses provide information relative to 13 environmental topics as they pertain to the proposed project. Each section of this chapter describes existing environmental and regulatory conditions, presents the criteria used to determine whether an impact would be significant, analyzes significant impacts, identifies mitigation measures for each significant impact, and discusses the significance of impacts after mitigation has been applied.

This chapter includes a separate section for each of the following issue areas:

- Section 4.1, Aesthetics
- Section 4.2, Air Quality
- Section 4.3, Biological Resources
- Section 4.4, Cultural Resources
- Section 4.5, Geology and Soils
- Section 4.6, Greenhouse Gas Emissions
- Section 4.7, Hazards and Hazardous Materials
- Section 4.8, Hydrology and Water Quality
- Section 4.9, Land Use and Planning
- Section 4.10, Noise
- Section 4.11, Recreation
- Section 4.12, Traffic and Circulation
- Section 4.13, Utilities, Service Systems, and Energy.

Issues for which effects were found not to be significant are agricultural and forestry resources, mineral resources, population and housing, public services, and parking. These environmental topics are discussed in Section 6.1, Effects Not Found to Be Significant, of Chapter 6, Other CEQA Considerations, of this EIR, and are not discussed in further detail pursuant to the CEQA Guidelines, Section 15128 (14 CCR 15000 et seq.).

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## 4.1 AESTHETICS

This section addresses the aesthetic and visual quality impacts associated with the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project) and recommends mitigation measures where necessary to avoid or reduce significant impacts. This section includes a description of existing visual conditions in the project area and an evaluation of potential effects on visual resources and public view corridors.

This impact analysis considers scenic vistas, scenic resources, visual character, and light and glare effects of the proposed project. The analysis is based on field observations made during a site visit conducted on May 2, 2013, by Dudek. During the site visit, photos were taken of the project site and surrounding areas. Aerial photos, topographic maps, project drawings, and technical data supplied by the Orange County Sanitation District (OCSD), Costa Mesa Sanitary District (CMSD), and City of Newport Beach were also reviewed as part of this analysis.

### 4.1.1 Regulatory Setting

#### State

##### *California Scenic Highway Program*

The California Department of Transportation (Caltrans) administers the state Scenic Highway Program to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways (California Streets and Highways Code, Section 260 et seq.). The state Scenic Highway Program includes a list of highways that are either eligible for designation as scenic highways or have been so designated. These highways are identified in the California Streets and Highways Code, Section 263. The program entails the regulation of land use and density of development; attention to the design of sites and structures; attention to and control of signage, landscaping, and grading; and other restrictions. The local jurisdiction is responsible for adopting and implementing such regulations. If a highway is listed as eligible for official designation, it is also part of the Scenic Highway Program, and care must be taken to preserve its eligibility status. In Orange County, Pacific Coast Highway is listed as an eligible scenic highway but it has not been officially designated by the state (Caltrans 2013). Distant, partially obstructed views of Talbert Regional Park are available to southbound motorists along a short segment (less than 1,000 feet) of the highway located approximately 0.90 mile south of the park's southern boundary.

##### *California Coastal Act*

The California Coastal Act of 1976 (PRC, Section 30200 et seq.) is administered by the California Coastal Commission (CCC) and implemented locally by Local Coastal Programs

(LCPs). Section 30251 of the California Coastal Act specifically discusses the protection of the visual quality of coastal areas:

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 (PRC, Section 30251).

The CCC has jurisdiction throughout California, and uses the LCPs of other jurisdictions to meet and enforce its mission. In addition to development guidelines and requirements included in the local agency's LCP, the CCC can require additional provisions from applicants through their Coastal Development Permit approval process. The CCC Coastal Zone boundary as it relates to the project area is depicted on Figure 4.9-1.

## **Local**

### ***County of Orange General Plan***

The County of Orange General Plan Transportation Element (County of Orange 2011, Chapter 4) includes a Scenic Highways Plan that attempts to incorporate safety, utility, economy, and aesthetics into the planning, design, and construction of scenic highways. The Transportation Element identifies viewscape corridors and routes that traverse a corridor within which unique or unusual scenic resources and aesthetic values are found. This designation is intended to minimize the impact of the highway and land development upon the significant scenic resources along the route. The Transportation Element designates the entire length of Pacific Coast Highway through Orange County as a viewscape corridor.

### ***City of Costa Mesa General Plan***

The City of Costa Mesa does not have a separate LCP but it does provide policies to protect coastal resources in the Conservation Element of the city's General Plan (City of Costa Mesa 2002, Chapter 6). The General Plan does not contain any officially designated scenic vistas or scenic highways. However, the coastal bluffs, Talbert Nature Preserve, and Fairview Regional Park are identified as important viewsheds or visual strengths within the City of Costa Mesa.

### ***City of Huntington Beach General Plan***

The Coastal Element in the City of Huntington Beach General Plan (City of Huntington Beach 2011) was adopted by the city council in 1999 and certified by the CCC in 2001. It has since been amended through October 2011. The purpose of the Coastal Element is to meet the

requirements of the California Coastal Act and guide civic decisions regarding growth, development, enhancement, and preservation of the city's Coastal Zone and its resources. The city's Coastal Zone includes visual resources, facilities, and assets that contribute to both the positive and negative aesthetic character of the Coastal Zone. Assets that define the coastal visual resources within the proposed project vicinity include Huntington State Beach, the Pacific Ocean, the Santa Ana River, and Talbert Marsh. The Coastal Element describes Talbert Marsh as providing open space and visual relief along the adjacent portion of Pacific Coast Highway.

The Coastal Element also identifies the stretch of Pacific Coast Highway located within the City of Huntington Beach and south of the project site as a major urban scenic corridor. A scenic vista looking north towards Talbert Marsh from this portion of Pacific Coast Highway is also identified in the Coastal Element. In addition to identifying scenic vistas and scenic corridors, the Coastal Element contains goals, objectives, and policies relating to the preservation of the scenic resources in the project area. Several goals, objectives, and policies would be relevant to the proposed project and are listed below:

- **Goal C 4.** Preserve and, where feasible, enhance and restore the aesthetic resources of the City's coastal zone, including natural areas, beaches, harbors, bluffs and significant public views.
  - **Objective C 4.1.** Provide opportunities within the Coastal Zone for open space as a visual and aesthetic resource.
  - **Objective C 4.1.1.** 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 public views to and along the ocean and scenic coastal areas.
    - **Policy C 4.1.4.** Preserve skyward, night time views through minimization of lighting levels along the shoreline.
  - **Objective C 4.3.** Promote designated coastal roadways as scenic corridors.
  - **Objective C 4.7.** Improve the appearance of visually degraded areas within the Coastal Zone.
    - **Policy C 4.7.2.** Continue to locate new and relocated utilities underground when possible. All others shall be placed and screened to minimize public viewing.
    - **Policy C 4.7.8.** Require landscape and architectural buffers and screens around oil production facilities and other utilities visible from public rights-of-way (City of Huntington Beach 2011, Chapter 4).

### ***City of Newport Beach General Plan***

The Natural Resources Element of the city's General Plan (City of Newport Beach 2006) briefly discusses visual resources and identifies specific areas that contribute to the visual resources of the city. More specifically, the city's habitat areas, coastal canyons, and gullies in the eastern portion of the city are distinguished as locations offering significant views of the city. The Natural Resources Element contains several policies related to visual resources and those that would be applicable to the proposed project are listed below:

- **Policy NR 21.1 Signs and Utility Siting and Design:** Design and site signs, utilities, and antennas to minimize visual impacts.
- **Policy 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 (City of Newport Beach 2006, Chapter 10).

### ***City of Newport Beach Municipal Code***

Chapter 20.30, Property Development Standards, of the city's municipal code contains regulations pertaining to buffering and screening; fences, hedges, and retaining walls; height limits; outdoor lighting; and public view protection. The purpose of the chapter is in part to produce an environment that is harmonious with existing and future development and protect the use and enjoyment of neighboring properties. Section 20.30.100, Public View Protection, contains provisions applicable to discretionary applications where a project has the potential to obstruct public views from public viewpoints and corridors identified in the General Plan (City of Newport Beach 2006). The nearest public viewpoint to the project site is located to the south at the Newport Shores Community Association Clubhouse at the intersection of Canal Street and 62nd Street looking north.

### ***City of Newport Beach Coastal Land Use Plan***

The City of Newport Beach does not have the jurisdiction to issue a Coastal Development Permit because it does not have a certified LCP. However, the city does have a Coastal Land Use Plan (CLUP; City of Newport Beach 2009) that has been certified by the CCC. Since the City of Newport Beach does not have permit jurisdiction, the city reviews pending development projects for consistency with the city's General Plan, CLUP, and zoning regulations before an applicant can file for a Coastal Development Permit with the CCC. The City of Newport Beach is currently in the process of preparing an implementation plan for the city's CLUP. In the CLUP, Policy 4.4.1-6 states that public coastal views from Pacific Coast Highway at the Santa Ana River Bridge should be protected and the city has designated this segment as a coastal view road (City of Newport Beach 2009). The plan does not discuss the scenic qualities of northerly inland

views from the Santa Ana River Bridge. Both the CLUP and the Natural Resources Element of the General Plan (City of Newport Beach 2009, 2006) identify a public viewpoint south of the project site from the Newport Shores Community Association Clubhouse at the intersection of Canal Street and 62nd Street.

### **4.1.2 Existing Conditions**

The following section describes several key terms used to examine the existing scenic resources of the region and the project site.

#### **Visual Character**

The visual character of a site is defined by its physical characteristics, such as landform, vertical relief, type of vegetation, textures, and patterns; the presence of clear or cascading water; range of color in the soil, rock, vegetation, or water; variety in landscape; man-made structures visually different from the natural environment; and other visually distinguishing elements.

#### **Visual Quality**

The visual quality of a site results from the interpretation of physical character features determined by the viewer's perception. Perceptual quality factors include vividness, intactness, unity, visual organization, scarcity, adjacent scenery, and cultural modifications. A high visual quality would include a balanced composition of line, form, color, and texture; striking visual patterns or the presence of distinct focal points; enhancement by the adjacent scenery; and overall compatibility with the character of the landscape setting. A low visual quality usually has a chaotic appearance, elements that appear random with no perceivable patterns, adjacent scenery that detracts or has little influence on the scenic quality, and cultural modifications that detract from the setting.

#### **Views**

Views are composed of three distinct parts: the viewing scene itself, the viewing location from which an individual sees the viewing scene, and the view corridor, which is the volume of space between the viewing scene and the viewing location. The area that can be seen from a given vantage point and viewing direction is also referred to as the viewshed.

#### **Viewing Distance**

The viewing distance, or distance between the site and the location from which it is viewed, includes a foreground, middleground, and background. Foreground views encompass views within less than one-quarter mile; middleground views encompass views from one-quarter to

three-quarters of a mile; and background views encompass views at a distance of three-quarters of a mile and beyond.

### **Viewer Sensitivity**

Viewer sensitivity is usually ranked as high, medium, or low, and is generally determined based on the following criteria: types of use, amount of use, public interest, adjacent land uses, and special areas. Sensitive viewpoints generally include surrounding residences, recreational areas, and designated scenic roads.

### **Light and Glare**

Light and glare are visual aspects that can affect the visual quality of a site, especially the availability and quality of nighttime views. Light is the level of brightness in an area that can be produced by artificial (outdoor) and natural (atmospheric and celestial) sources. Glare is unwanted or nuisance light, including exceptionally bright light sources that are in sharp contrast to surrounding light levels and may cause annoyance, discomfort, or visual impairment. Glare is the result of sharply reflected light caused by sunlight or artificial light reflecting from highly finished surfaces such as window glass or brightly colored surfaces, and the direct view of a bright, unshielded light source. Glare decreases visibility; however, the level of a receptor's sensitivity to glare can vary widely.

### **Regional Setting**

Natural elements, including landforms, vegetation, and water, as well as unique elements of the built environment, compose the visual resources of a region. The proposed project is located in Orange County, which encompasses approximately 800 square miles of land and is home to approximately 3 million people in 34 incorporated cities and numerous unincorporated areas. Terrain and vegetation in the county ranges from the over 5,000-foot elevation, chaparral-covered Santa Ana Mountains to the east to relatively flat and heavily populated inland areas, a sequential composition of mesas, coastal bluffs, marshes and sloughs, and finally, broad coastal beaches. More specifically, the proposed sewer pipelines would be located within the Cities of Costa Mesa, Huntington Beach, and Newport Beach in the vicinity of the Santa Ana River and Talbert Regional Park. Valued visual resources within the coastal cities are varied, yet the aesthetic and visual character is strongly tied to the Pacific Ocean; sandy beaches and rocky shores; local waterways, including bays and rivers; wetlands and sloughs; canyons; and coastal bluffs. Talbert Regional Park and associated vegetation communities are located in contrast to surrounding residential, commercial, and industrial development in the Cities of Costa Mesa, Newport Beach, and Huntington Beach and oil-producing County of Orange facilities on the Banning Ranch property located south of the park.

The most prominent roadway corridor in the proposed project vicinity, Pacific Coast Highway, is located south of the project area along the coast. Pacific Coast Highway offers views of the Pacific Ocean and lower-lying inland areas, and the entire length of the highway through Orange County is designated as a viewscape corridor by the County of Orange Scenic Highways Plan (County of Orange 2011). Further, where the highway passes through the City of Huntington Beach it is designated as a major urban scenic corridor by the Coastal Element of the city's General Plan (City of Huntington Beach 2011).

### **Project Site**

The proposed OCSD sewer pipelines would be located in Talbert Regional Park, beneath the Santa Ana River, within the boundaries of OCSD Treatment Plant No. 2 (Plant No. 2), and beneath Brookhurst Street. CMSD and City of Newport Beach facilities would be located in residential streets, including Aviemore Terrace, Canyon Drive, and 19th Street; in Talbert Regional Park; and in Canyon Park. Together these locations compose the project area, and the topography within the project area varies from approximately 5 feet above mean sea level (amsl) at the southern portion of the Santa Ana River to approximately 81 feet amsl in the northern portion of Canyon Park. The Santa Ana River traverses the northwestern to southwestern portion of the project area and is characterized by intermittent flows and elevated concrete- and riprap-lined banks, which act as a levee system to protect adjacent properties and lands from flooding. In addition, as stated in Section 4.8, Hydrology and Water Quality, Reach 1 of the Santa Ana River (the section immediately adjacent to Talbert Regional Park) is normally a dry flood-control channel and waters primarily consist of urban drainage flowing to the river. The project area is immediately bounded to the west by the Santa Ana River, by residential development and Canyon Park to the east, by residential development to the north, and by vacant land with some oil production facilities (i.e., the Banning Ranch property) to the south.

The locations of photos taken during a May 2013 site visit are depicted on Figure 4.1-1. The photos characterize the existing visual landscape of Talbert Regional Park and Canyon Park and are thus included (see Figure 4.1-1a through Figure 4.1-1d) to support the Existing Conditions discussion. The scenic resources in the project area are composed of the natural and built features surrounding the various proposed sewer pipeline alignments and the pump stations to be abandoned. For example, for the OCSD proposed sewer pipeline alignments, scenic resources are mostly composed of the various planting groups/zones found in Talbert Regional Park, including native grasslands, alluvial woodlands, and wetlands (and more specifically, riparian woodland and mulefat scrub communities), and relatively steep slopes surrounding the park to the north and the east that eventually transition to residential development and public roadways. Native and non-native vegetation in the park's interior is relatively tall and dense (pockets of land displaying low grasses and interspersed among more heavily vegetated areas), which somewhat limits the availability of off-site views from the park's perimeter trails (see Figure

4.1-1a, Photo 1). In contrast, vegetation on the northern slope (see Figure 4.1-1a, Photo 2) and eastern slope displays a low form and is relatively sparse, which provides for largely unobstructed views into the park for Balboa Boulevard motorists and select Newport Terrace and Avimore Terrace residents. As shown on Figure 4.1-1b, Photo 3, a linked system of dirt pedestrian trails traverses the perimeter and interior of the park and low, thin plastic orange fencing denoting the presence of in-progress habitat restoration projects dot the park landscape (ongoing habitat restoration is depicted in Figure 4.1-1b, Photos 3 and 4). Similarly, the Canyon Park landscape consists of sloping terrain, winding pedestrian trails and vehicle access roads, and ornamental and sycamore woodland vegetation with short grass or denuded understories. Characteristic vegetation found in Canyon Park is depicted on Figure 4.1-1c, Photos 5 and 6. Trails within Canyon Park feature varying levels of canopy coverage; trails near drainages tend to be canopied rather densely while trails in the park interior are relatively open and partially exposed to the elements. Canyon Park is surrounded by residential development on all sides.

Lastly, the visual landscape associated with residential streets in which proposed sewer pipelines would be located consist of the rectangular boxy forms of single- and multiple-family residential development; ornamental landscaping; the coarse texture and dark color of paved asphalt roads; the tall, arching forms and metallic color of street lights and signage; the slightly concave forms of electrical and communication utility lines; and the tall, vertical forms of wooden support poles.

A number of visual features or characteristics in the park and vicinity detract from the quality of the views and a consistent visual character. Some of these features include development immediately adjacent to the park boundary; infrastructure, such as utility lines, sewer facilities, and pump stations; and sources of light and glare.

Residential development immediately adjacent to the boundary of Talbert Regional Park and Canyon Park could be considered visually intrusive from viewpoints within Talbert Regional Park. Views from within Talbert Regional Park and Canyon Park are generally from an inferior viewing angle from low-lying trails toward park vegetation and nearby residential development located atop higher-elevation slopes (see Figure 4.1-1a, Photo 2). Due to this topographic difference, unobstructed to partially obstructed views of nearby homes are available from trails, and homes tend to be silhouetted against the sky, which alters surrounding views and the perception of the park areas as natural areas.

In several locations throughout the parks, built features or human interventions are visible and detract from the overall visual quality. These features include unauthorized trails, utility corridors, concrete channels, pump stations, and other infrastructure-related alterations to the landscape. As shown in Figure 4.1-1d, Photo 7, overhead utility lines supported by tall, wooden poles and the exposed soil surface of the existing Southern California Edison easement and park trail interrupt the otherwise natural-appearing landscape along the southern border of Talbert



Regional Park and reduce the quality of available views. The wooden poles, conductors, and multiple overhead lines are significant foreground features when viewed from several trails within Talbert Regional Park. Also, a narrow, concrete-lined channel and pump stations are located along the eastern boundary of the park and detract from the visual character of the area (see Figure 4.1-1d, Photo 8). Canyon Park is traversed by wide access roads and narrow pedestrian paths, as well as overhead utility lines in the eastern portion of the park. Areas of disturbance resulting from erosion, as well as the creation of informal trails and engagement of unpermitted activities, are generally located on and atop slopes and are visible to trail users.

At night, light can be an aesthetically diminishing feature, especially in areas supporting recreational usage and wildlife habitat such as Talbert Regional Park and Canyon Park. While nighttime recreational usage of county and city parks is not assumed, night lighting can be detrimental to wildlife and therefore a general discussion of nighttime lighting sources is warranted. Night lighting in the vicinity of Talbert Regional Park is dominated by industrial and residential development to the east and residential development to the west, as well as nearby street lighting and more distant sources, such as development and lighting along Pacific Coast Highway. No nighttime light sources are located in either Talbert Regional Park or Canyon Park. Glare near the project site is primarily due to reflections from glass surfaces and other reflective materials associated with residential development during the afternoon when beams of sunlight reflect back to the ground level. Glare from vehicles along Balboa Boulevard may also be present; however, the elevated location of Balboa Boulevard in relation to Talbert Regional Park trails as well as the presence of moderately tall vegetation in the park would reduce the occurrence of glare within the park.

### ***Views of the Proposed Project***

#### **Designated Scenic Vistas**

As stated in Section 4.1.1, Talbert Regional Park is near scenic vistas designated by local jurisdictions; therefore, views of construction activities associated with the proposed project may be available from designated stationary and mobile scenic vistas. Scenic vistas in the vicinity of Talbert Regional Park, as well as the general visibility of the park from the designated vistas, are listed and described below.

#### **Public Access Path and Bench**

Located approximately 0.80 mile south of the southern boundary of Talbert Regional Park, the public access path south of the Newport Shores Community Association Clubhouse is designated by the City of Newport Beach General Plan and CLUP (City of Newport Beach 2006, 2009) as a scenic public viewpoint/vista. While the clubhouse and common area facilities are accessible to the 440-home Newport Shores community, the facilities are not publicly accessible and are

therefore not considered a public viewpoint/vista. Views to Talbert Regional Park from the public access path and bench are unavailable because views are oriented to the east-northeast to an approximately 100-foot-wide water channel, vegetation lining the eastern banks of the channel, and the elevated and vegetated terrain of the Banning Ranch property. Northerly views from the path and bench are also limited due to the presence of tall vegetation lining the trail and tall fencing surrounding the Newport Shores Community Association Clubhouse tennis courts.

#### Pacific Coast Highway near Santa Ana River

Located approximately 0.90 mile south of Talbert Regional Park, the section of the Pacific Coast Highway where it spans the east side of the Santa Ana River is designated as a scenic vista in the Coastal Element of the City of Huntington Beach General Plan (City of Huntington Beach 2011). Views to Talbert Regional Park from the southbound lanes of Pacific Coast Highway are distant, brief, and partially obstructed by the presence of other vehicles, vegetation, and overhead utility lines in the foreground and intervening topography and vegetation in the middleground. Motorists on the northbound lanes of the highway are not afforded views of the park, as the park is located outside their normal field of vision (i.e., 60 degrees).

#### Public Viewpoints

Off-site views to Talbert Regional Park are somewhat limited due to the presence of existing built and natural features in the landscape. For example, as stated above, distant and partially obstructed views to the project area are available from designated scenic vistas in the surrounding area. Further, views of the proposed sewer pipeline areas of disturbance from the Hamilton Avenue Bridge spanning the Santa Ana River are limited due to distance and would be partially to entirely obstructed by the sloping concrete- and riprap-lined channel of the river, by tall trees and shrubs adjacent to the Banning Greenville Channel, and by the triangular pond in the northwest corner of the South Talbert area. Tall vegetation located to the east adjacent to the Santa Ana River Trail & Parkway further limits and obstructs views of the South Talbert area of Talbert Regional Park from eastbound motorists on the Hamilton Avenue Bridge. In addition, views of the South Talbert area from Brookhurst Street are entirely screened due to the presence of a near-continuous, 8-foot-tall concrete-masonry-unit wall enhanced with landscape borders lining the western boundary of OCSD Plant No. 2; tall, screening eucalyptus trees immediately east of the wall; and OCSD Plant No. 2 facilities. North of OCSD Plant No. 2, views of Talbert Regional Park are screened by the presence of existing two-story residential development and ornamental vegetation.

While existing built and natural elements in the landscape limit the availability of distant, mobile views to the proposed project area, unobstructed foreground views of the proposed sewer pipeline areas of disturbance would be available from sidewalks adjacent to Canyon Drive,

Aviemoire Terrace, and 19th Street and from Talbert Regional Park and Canyon Park trails. In addition, partially obstructed to unobstructed elevated foreground views of proposed areas of disturbance would be available from surrounding residences. These residences include those lining the northern and eastern boundary of the South Talbert area of Talbert Regional Park, those surrounding Canyon Park, and those north of OCSD Plant No. 2 and east of Brookhurst Street in the City of Huntington Beach. These residences are located approximately 1,100 to 1,300 feet west of the proposed sewer pipeline alignments. Views of the South Talbert area of the park are also available from the Santa Ana River Trail & Parkway; however, an approximately 30-foot-wide swath of vegetation installed between the trail and parkway and the South Talbert area reduces the availability of unobstructed views to Talbert Regional Park and proposed areas of disturbance.

### 4.1.3 Thresholds of Significance

The following significance criteria are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential aesthetic impacts. Impacts to aesthetics and visual resources would be significant if the proposed project would:

- AES-1:** Have a substantial adverse effect on a scenic vista.
- AES-2:** Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- AES-3:** Substantially degrade the existing visual character or quality of the site and its surroundings.
- AES-4:** Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

### 4.1.4 Impact Discussion

**AES-1:** *Would the project have a substantial adverse effect on a scenic vista?*

Construction and operation of the proposed sewer pipelines and abandonment of the sewer pump stations would have minimal effects on scenic vistas in the area. As discussed in Section 4.1.2, Existing Conditions, designated scenic vistas in the areas surrounding the proposed project include the public access path and bench located south of the Newport Shores Community Association Clubhouse along 62nd Street and a short length of the Pacific Coast Highway where it crosses over the east side of the Santa Ana River in the City of Huntington Beach. As stated previously, views of the proposed project area and more specifically, views of areas of

disturbance associated with the proposed sewer pipelines from the 62nd Street public access path and bench, would be entirely screened by foreground elements. These elements include existing vegetation lining the adjacent 100-foot-wide water channel, fencing surrounding an adjacent tennis court to the north, and the vegetated and sloping terrain of the Banning Ranch property to the east and northeast. Brief views of construction activities occurring in Talbert Regional Park from the short segment of Pacific Coast Highway designated as a scenic vista by the City of Huntington Beach may be available to southbound motorists; however, views would be obscured by distance and would be partially screened by intervening built and natural elements. In addition to the elevated concrete- and riprap-lined channel of the Santa Ana River, tall vegetation located adjacent to the Santa Ana River Trail & Parkway, elevated terrain on the Banning Ranch property, and tall vegetation/trees along the southern boundary of Talbert Regional Park would effectively screen views of construction activities. Also, because aboveground facilities are not proposed (pipelines would be installed underground), the project would not affect views from the roadway during operations. Therefore, the proposed project would have a **less than significant** impact on designated scenic vistas in the vicinity.

**AES-2:**        *Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

There are no officially designated state scenic highways located within the project area. As stated in Section 4.1.1, distant views of Talbert Regional Park and OCSD construction activities in the park may be visible to southbound motorists on a short segment of Pacific Coast Highway (an eligible but not officially designated state scenic highway). However, views would be intermittent, brief, and screened by intervening topography and vegetation. In addition, coastal views are visible from the same segment of Pacific Coast Highway to southbound motorists and therefore the natural landscape and visible coastal resources may compete for the viewer's attention. Therefore, because views to Talbert Regional Park would be distant, brief, and partially obstructed, construction activities would not impact the highway or its scenic eligibility status (proposed pipelines would be installed underground would therefore not be visible). Construction and operation would not impact scenic resources within a designated state scenic highway corridor and overall, impacts would be **less than significant**.

**AES-3:**        *Would the project substantially degrade the existing visual character or quality of the site and its surroundings?*

### **Construction Impacts**

As stated in Chapter 3, Project Description, OCSD estimates that construction of the proposed OCSD sewer pipeline would begin in June 2016 and be completed in May 2018, for

a total duration of approximately 24 months. The CMSD and City of Newport Beach project components are anticipated to start during the same period. Within Talbert Regional Park, the proposed OCSD 24-inch gravity sewer would be installed by open cut construction methods and the OCSD 14-inch gravity sewer siphon would be installed under the Santa Ana River with horizontal directional drilling (HDD) methods. Construction activities would require the presence of construction workers, equipment, and vehicles in Talbert Regional Park; however, activities would be concentrated along linear areas of existing disturbance (i.e., trails) and as stated in Section 4.3, Biological Resources, the majority of temporary and permanent impacts would occur to developed land and disturbed habitat. Similarly, within Canyon Park, proposed sewer pipeline construction would occur along existing trails at the northern and western boundary of the park. Because construction activities would be concentrated within areas of existing disturbance located along the boundaries of parks, and because the majority of project impacts would be to developed land and disturbed habitat (within Talbert Regional Park) and ornamental vegetation (within Canyon Park), the established visual character and quality of Talbert Regional Park and Canyon Park would be largely maintained during construction. With regard to Canyon Park, proposed sewer pipelines and construction activities would primarily occur within the extent of the existing trail and are not anticipated to require the removal of sycamore trees lining the trail. Therefore, impacts would be **less than significant**.

Pump station abandonment would entail removal of all the equipment from inside the concrete structure, drilling multiple holes in the bottom of the structure, removing the top 4 to 5 feet of the structure, filling the structure with sand, and then restoring the surface area to match the surrounding area. Construction personnel and equipment would visit each pump station site and perform the necessary work within the footprint of the existing pump station. Therefore, construction would not be anticipated to impact surrounding vegetation, and because construction activities would not be stationary at any of the pump stations for a prolonged period of time, they would not substantially degrade the existing visual character of the area. As such, impacts would be **less than significant**.

Construction activities associated with the installation of sewer pipelines in existing roads (i.e., Brookhurst Street, Canyon Drive, and 19th Street) would not substantially degrade the existing character of neighborhoods. Residential neighborhoods along Brookhurst Street, Canyon Drive, and 19th Street are supported by overhead electrical and communication utility lines; tall, narrow streetlights; storm drains; and pump stations; and the introduction of new sewerage would not degrade the existing visual character of the area. Further, construction activities and the presence of workers, equipment, and vehicles within residential streets is relatively common in incorporated cities and as stated in Chapter 3, Project Description, at least one lane of travel would be maintained along Brookhurst Street, Canyon Drive, and 19th Street during construction. Therefore, the temporary influx of construction workers, vehicles, and equipment on residential streets would

not create strong visual contrast and would not degrade the existing visual character of the landscape. Therefore, impacts would be **less than significant**.

### **Operational Impacts**

Once the proposed pipelines are installed, trenches would be backfilled and HDD points of entry would be restored to their preconstruction conditions. As such, the proposed sewer pipelines would not be visible and would therefore not degrade the visual character of the proposed project area. All disturbed areas would be restored to preconstruction conditions; however, the proposed OCSD sewer pipeline along the western and southern boundary of the South Talbert area of Talbert Regional Park would require a 30-foot-wide permanent easement along its entire length to allow for access to the pipes. Additionally, a 20-foot wide temporary easement would be required along the southern boundary of Talbert Regional Park during construction to allow sewer maintenance trucks to access all project manholes and structures. The visual effects associated with the introduction of the all-weather crushed-rock access road would primarily be experienced by park users, motorists on Balboa Boulevard and residences with an elevated view of Talbert Regional Park, such as those on Aviemore Terrace. While the crushed-rock surface of the access road would be visually distinguishable from the exposed tan soils of the easement and trail surfaces (the road would appear as a darker-colored, textured band of consistent width), crushed rock would not substantially degrade or contrast with the existing visual character or quality of the site and its surroundings. Existing trails and easements within the park, including illegal trails and roads and the BMX park, create visible lines and bands of distinguishable color throughout the park. The legal trails and roads are accessible to OCSD vehicles and personnel. In addition, access roads would be installed immediately adjacent to existing trails and easements, which would avoid the installation of a new road through previously undisturbed areas of the park and the creation of additional lines through established park planting zones. Therefore, while the crushed-rock access road would be visible to park users, passing motorists on Balboa Boulevard, residences on Aviemore Terrace, and the Newport Terrace development, the low-profile road would not substantially degrade the existing visual character of the site and surroundings. Impacts would be **less than significant**.

**AES-4:**        *Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

### **Construction Impacts**

Construction activities associated with the proposed project would comply with the permitted hours of construction established by the Cities of Costa Mesa, Huntington Beach, and Newport Beach. Therefore, because nighttime construction would not occur in association with the installation of the proposed sewer pipelines and abandonment of existing pump stations,

nighttime lighting would not be required. With regard to glare, the introduction of construction vehicles and equipment to Talbert Regional Park, to Canyon Park, and at staging areas associated with the proposed sewer pipeline would not generate substantial new sources of glare that would affect park users, nearby residents, or motorists. Therefore, impacts associated with new sources of lighting or glare during construction would be **less than significant**.

### **Operational Impacts**

Once the proposed sewer pipelines are installed, open trenches would be backfilled and HDD entry and exit points would be restored (all areas disturbed during construction would be restored to their preconstruction conditions). Because the proposed sewer pipelines would be installed underground and no new aboveground facilities or sources of lighting are proposed, the proposed project would not introduce new sources of light or glare. Therefore, **no impacts** would occur.

#### **4.1.5 Mitigation Measures**

No mitigation measures are required.

#### **4.1.6 Level of Significance After Mitigation**

Since no mitigation measures are required, impacts would remain less than significant.

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**FIGURE 4.1-1**  
**Existing Conditions Key Map**

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Photo 1: Looking northwest from Balboa Boulevard to Talbert Regional Park



Photo 2: Looking north from convergence of Trail D and Trail A (Talbert Regional Park) to slope and Aviemore Terrace homes

**FIGURE 4.1-1a**  
Existing Conditions (1 of 4)

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Photo 3: Looking southwest from Trail A toward information kiosk (Talbert Regional Park)



Photo 4: Looking northwest from Trail A to ongoing habitat restoration and northern slope (Talbert Regional Park)

**FIGURE 4.1-1b**  
Existing Conditions (2 of 4)

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Photo 5: Looking east from western entrance to Canyon Park



Photo 6: Looking west from Canyon Park trail

**FIGURE 4.1-1c**  
Existing Conditions (3 of 4)

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Photo 7: Looking west along Trail D and southern boundary of Talbert Regional Park.



Photo 8: Looking north along concrete-lined channel at east boundary of Talbert Regional Park

**FIGURE 4.1-1d**  
Existing Conditions (4 of 4)

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## 4.2 AIR QUALITY

This section provides an overview of the existing air quality at the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project) site and surrounding region, and the applicable regulatory framework. This analysis quantitatively evaluates potential short-term (construction) air quality impacts and qualitatively addresses potential long-term (operational) air quality impacts associated with implementation of the proposed project. Impacts are evaluated for their significance based on the thresholds of significance in Appendix G of the California Environmental Quality Act (CEQA) Guidelines and the South Coast Air Quality Management District's (SCAQMD's) enumerated air quality thresholds.

### 4.2.1 Regulatory Setting

#### Federal

The federal Clean Air Act, passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The U.S. Environmental Protection Agency (EPA) is responsible for implementing most aspects of the Clean Air Act, including the setting of National Ambient Air Quality Standards (NAAQS) for major air pollutants, hazardous air pollutant standards, approval of state attainment plans, motor vehicle emission standards, stationary source emission standards and permits, acid rain control measures, stratospheric ozone (O<sub>3</sub>) protection, and enforcement provisions. Under the Clean Air Act, NAAQS are established for “criteria pollutants,” which are O<sub>3</sub>, nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), particulate matter less than or equal to 10 microns in size (PM<sub>10</sub>), particulate matter less than or equal to 2.5 microns in size (PM<sub>2.5</sub>), and lead (Pb). A discussion of pollutants and effects is provided in Subsection 4.2.2.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of the citizens of the nation. The NAAQS (other than for O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are based on statistical calculations over 1–3-year periods, depending on the pollutant. The Clean Air Act requires the EPA to reassess the NAAQS at least every 5 years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a State Implementation Plan that demonstrates how those areas will attain the standards within mandated time frames.

The federal Clean Air Act delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to the California Air Resources Board (CARB), with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels.

## State

CARB, which became part of the California EPA in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the federal Clean Air Act, and regulating emissions from motor vehicles and consumer products.

CARB has established California Ambient Air Quality Standards (CAAQS), which are more generally restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. The CAAQS for O<sub>3</sub>, CO, SO<sub>2</sub> (1-hour and 24-hour), NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub>, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. The NAAQS and CAAQS are presented in Table 4.2-1, Ambient Air Quality Standards.

**Table 4.2-1**  
**Ambient Air Quality Standards**

Pollutant	Average Time	California Standards <sup>a</sup>	National Standards <sup>b</sup>	
		Concentration <sup>c</sup>	Primary <sup>c,d</sup>	Secondary <sup>c,e</sup>
O <sub>3</sub>	1 hour	0.09 ppm (180 µg/m <sup>3</sup> )	—	Same as primary standard
	8 hours	0.070 ppm (137 µg/m <sup>3</sup> )	0.075 ppm (147 µg/m <sup>3</sup> )	
NO <sub>2</sub>	1 hour	0.18 ppm (339 µg/m <sup>3</sup> )	0.100 ppm (188 µg/m <sup>3</sup> )	Same as primary standard
	Annual arithmetic mean	0.030 ppm (57 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	
CO	1 hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	None
	8 hours	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	
SO <sub>2</sub>	1 hour	0.25 ppm (655 µg/m <sup>3</sup> )	0.75 ppm (196 µg/m <sup>3</sup> )	—
	3 hours	—	—	0.5 ppm (1,300 µg/m <sup>3</sup> )
	24 hours	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (for certain areas)	—
	Annual arithmetic mean	—	0.030 ppm (for certain areas)	—
PM <sub>10</sub>	24 hours	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as primary standard
	Annual arithmetic mean	20 µg/m <sup>3</sup>	—	
PM <sub>2.5</sub>	24 hours	No separate state standard	35 µg/m <sup>3</sup>	Same as primary standard
	Annual arithmetic mean	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>	15.0 µg/m <sup>3</sup>
Lead <sup>f</sup>	30-day average	1.5 µg/m <sup>3</sup>	—	—
	Calendar quarter	—	1.5 µg/m <sup>3</sup> (for certain areas)	Same as primary standard
	Rolling 3-month average	—	0.15 µg/m <sup>3</sup>	
Hydrogen sulfide (H <sub>2</sub> S)	1 hour	0.03 ppm	—	—
Vinyl chloride <sup>f</sup>	24 hours	0.01 ppm	—	—
Sulfates (SO <sub>4</sub> )	24 hours	25 µg/m <sup>3</sup>	—	—

**Table 4.2-1**  
**Ambient Air Quality Standards**

Pollutant	Average Time	California Standards <sup>a</sup>	National Standards <sup>b</sup>	
		Concentration <sup>c</sup>	Primary <sup>c,d</sup>	Secondary <sup>c,e</sup>
Visibility-reducing particles	8 hours (10:00 a.m. to 6:00 p.m. PST)	Insufficient amount to produce an extinction coefficient of 0.23 per kilometer due to particles when the relative humidity is less than 70%	—	—

Source: CARB 2013a.

ppm = parts per million by volume;  $\mu\text{g}/\text{m}^3$  = micrograms per cubic meter;  $\text{mg}/\text{m}^3$  = milligrams per cubic meter

<sup>a</sup> California standards for O<sub>3</sub>, CO, SO<sub>2</sub> (1 hour and 24 hours), NO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. CAAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations (CCR).

<sup>b</sup> National standards (other than O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub>, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> standard is attained when the fourth-highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For NO<sub>2</sub> and SO<sub>2</sub>, the standard is attained when the 3-year average of the 98th and 99th percentile, respectively, of the daily maximum 1-hour average at each monitor within an area does not exceed the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150  $\mu\text{g}/\text{m}^3$  is equal to or less than 1. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

<sup>c</sup> 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.

<sup>d</sup> National Primary Standards = the levels of air quality necessary with an adequate margin of safety to protect the public health.

<sup>e</sup> National Secondary Standards = the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

<sup>f</sup> CARB has identified lead and vinyl chloride as toxic air contaminants (TACs) 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.

## Local

### *South Coast Air Quality Management District*

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The SCAQMD is the regional agency responsible for the regulation and enforcement of federal, state, and local air pollution control regulations in the South Coast Air Basin (SCAB), where the proposed project is located. Specifically, SCAQMD is responsible for monitoring air quality as well as planning, implementing, and enforcing programs designed to attain and maintain CAAQS and NAAQS in the district. Programs that were developed include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-county SCAB (Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties), and the Riverside County portions of the Salton Sea Air Basin and Mojave Desert Air Basin. The SCAB, which is a subregion of the SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east.

All projects are subject to SCAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction anticipated under the proposed project may include the following.

#### Rule 401 – Visible Emissions

This rule establishes the limit for visible emissions from stationary sources. This rule prohibits visible emissions as dark as or darker than Ringlemann No. 1 for periods greater than 3 minutes in any hour.

#### Rule 402 – Nuisance

This rule prohibits the discharge of air pollutants from a facility that cause injury, detriment, nuisance, or annoyance to the public or damage to business or property.

#### Rule 403 – Fugitive Dust

This rule requires fugitive dust sources to implement best available control measures for all sources to ensure that all forms of visible particulate matter are prohibited from crossing any property line. SCAQMD Rule 403 is intended to reduce PM<sub>10</sub> emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust.

#### Rule 431.2 – Sulfur Content of Liquid Fuels

The purpose of this rule is to limit the sulfur content in diesel and other liquid fuels for the purpose of both reducing the formation of SO<sub>x</sub> and particulates during combustion and to enable the use of add-on control devices for diesel-fueled internal combustion engines. The rule applies to all refiners, importers, and other fuel suppliers, such as distributors, marketers, and retailers, as well as to users of diesel, low-sulfur diesel, and other liquid fuels for stationary-source applications in the district. The rule also affects diesel fuel supplied for mobile-source applications.

### *Air Quality Management Plan*

SCAQMD and the Southern California Association of Governments are responsible for preparing the air quality management plan (AQMP), which addresses federal and state Clean Air Act requirements. The AQMP details goals, policies, and programs for improving air quality in the SCAB. Each AQMP also addresses state and federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools.

The 2003 AQMP (SCAQMD 2003) relied on a multilevel partnership of governmental agencies at the federal, state, regional, and local levels. The 2003 AQMP proposed policies and measures to achieve federal and state standards for improved air quality in the SCAB and those portions of the Salton Sea Air Basin that are under SCAQMD jurisdiction. The 2003 AQMP is consistent with and builds upon the approaches taken in the 1997 Air Quality Management Plan and the 1999 Amendments to the Ozone State Implementation Plan for the SCAB for the attainment of the federal O<sub>3</sub> air quality standard. However, the 2003 AQMP points to the urgent need for additional emissions reductions (beyond those incorporated in the 1997 and 1999 plans) to offset increased emissions estimates from mobile sources and meet all federal criteria pollutant standards within the time frames allowed under the Clean Air Act (SCAQMD 2003).

As part of the 2007 AQMP, SCAQMD requested that the EPA “bump up” the O<sub>3</sub> nonattainment status from severe to extreme to allow additional time for the SCAB to achieve attainment of the federal standard. The additional time would provide for implementation of state and federal measures that apply to sources over which SCAQMD does not have control. The 2007 AQMP for attainment of the 1997 8-hour O<sub>3</sub> and PM<sub>2.5</sub> NAAQS has been approved by CARB and the EPA. In addition, the EPA approved the redesignation of the SCAB to an extreme ozone nonattainment area, effective June 4, 2010.

In December 2012, the SCAQMD adopted a 2012 Final AQMP (SCAQMD 2013), which is designed to meet applicable federal and state requirements for O<sub>3</sub> and particulate matter. The 2012 AQMP demonstrates attainment of the federal 24-hour PM<sub>2.5</sub> standard by 2014 in the SCAB through adoption of all feasible measures. The 2012 AQMP also updates the EPA approved 8-hour O<sub>3</sub> control plan with new measures designed to reduce reliance on the Clean Air Act Section 182 (e)(5) long-term measures for NO<sub>x</sub> and volatile organic compound (VOC) reductions. Based on general plans for cities and counties in the SCAB, demographic growth forecasts for various socioeconomic categories (e.g., population, housing, employment by industry) developed by the Southern California Association of Governments for their 2012 Regional Transportation Plan were used in the 2012 AQMP. The 2012 AQMP reduction and control measures, which are outlined to mitigate emissions, are based on existing and projected land use and development. The 2012 AQMP was approved by CARB on January 25, 2013, and

is being reviewed by the EPA. Emissions that would result from stationary and area sources during operation under the proposed project may be subject to SCAQMD rules and regulations.

## **4.2.2 Existing Conditions**

### **Regional Climate and Topography**

As stated previously, the proposed project is located within the SCAB, which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, and is within the jurisdictional boundaries of the SCAQMD. Air quality in the project area is not only affected by various emissions sources (e.g., mobile, industry), but it is also affected by atmospheric conditions such as wind speed, wind direction, temperature, and rainfall. The SCAB's combination of topography, low mean mixing height, abundant sunshine, and emissions from one of the largest urban areas in the United States has historically resulted in some of the worst air pollution in the nation.

Although the SCAB has a semi-arid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore 8–12 mile per hour (mph) daytime breeze and an offshore 3–5 mph nighttime breeze. The typical wind-flow pattern fluctuates only with occasional winter storms or strong northeasterly Santa Ana winds from the mountains and deserts northeast of the SCAB. Summer wind-flow patterns represent worst-case conditions, as this is the period of higher temperatures and more sunlight, which results in O<sub>3</sub> formation.

The project is located within Orange County, which is characterized by relatively low rainfall, with warm summers and mild winters. The City of Costa Mesa experiences average temperatures ranging from a high of 70°F in August to a low of 55°F in December and January. Annual precipitation averages about 11–12 inches, falling mostly from December through March (City-Data.com 2013).

During spring and early summer, air pollution produced during any one day is typically blown out of the SCAB through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. The vertical dispersion of air pollutants in the SCAB is limited by temperature inversions in the atmosphere close to the earth's surface. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO, particulate matter, and NO<sub>2</sub> because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO<sub>x</sub> to form photochemical smog.



## Pollutants and Effects

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and state standards have been set, with an adequate margin of safety, at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive people from illness or discomfort. Pollutants of concern include O<sub>3</sub>, NO<sub>2</sub>, CO, SO<sub>2</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and lead. These pollutants are discussed below.<sup>1</sup> In California, sulfates (SO<sub>4</sub>), vinyl chloride, hydrogen sulfide (H<sub>2</sub>S), and visibility-reducing particles are also regulated as criteria air pollutants.

**Ozone.** O<sub>3</sub> is a colorless gas that is formed in the atmosphere when VOCs, sometimes referred to as reactive organic gases, and NO<sub>x</sub> react in the presence of ultraviolet sunlight. O<sub>3</sub> is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of VOCs and NO<sub>x</sub>, the precursors of O<sub>3</sub>, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O<sub>3</sub> formation and ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. Short-term exposures (lasting for a few hours) to O<sub>3</sub> at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

**Nitrogen Dioxide.** Most NO<sub>2</sub>, like O<sub>3</sub>, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO<sub>2</sub> are collectively referred to as NO<sub>x</sub> and are major contributors to O<sub>3</sub> formation. High concentrations of NO<sub>2</sub> can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO<sub>2</sub> and chronic pulmonary fibrosis, and some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million by volume (ppm).

**Carbon Monoxide.** CO is a colorless, odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a nonreactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO

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<sup>1</sup> The following descriptions of health effects for each of the criteria air pollutants associated with project construction and operations are based on the EPA's Six Common Air Pollutants (EPA 2012) and the CARB Glossary of Air Pollutant Terms (CARB 2013b).

from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

***Sulfur Dioxide.*** SO<sub>2</sub> is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. The main sources of SO<sub>2</sub> are coal and oil used in power plants and industries; as such, the highest levels of SO<sub>2</sub> are generally found near large industrial complexes. In recent years, SO<sub>2</sub> concentrations have been reduced by the increasingly stringent controls placed on stationary-source emissions of SO<sub>2</sub> and limits on the sulfur content of fuels. SO<sub>2</sub> is an irritant gas that attacks the throat and lungs and can cause acute respiratory symptoms and diminished ventilator function in children. SO<sub>2</sub> can also yellow plant leaves and erode iron and steel.

***Particulate Matter.*** Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. PM<sub>2.5</sub> and PM<sub>10</sub> represent fractions of particulate matter. Fine particulate matter, PM<sub>2.5</sub>, is roughly 1/28 the diameter of a human hair. PM<sub>2.5</sub> results from fuel combustion (e.g., motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM<sub>2.5</sub> can be formed in the atmosphere from gases such as sulfur oxides (SO<sub>x</sub>), NO<sub>x</sub>, and VOCs. Inhalable or coarse particulate matter, PM<sub>10</sub>, is about 1/7 the thickness of a human hair. Major sources of PM<sub>10</sub> include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood-burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions.

PM<sub>2.5</sub> and PM<sub>10</sub> pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM<sub>2.5</sub> and PM<sub>10</sub> can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances such as lead, SO<sub>4</sub>, and nitrates can cause lung damage directly or be absorbed into the bloodstream, causing damage elsewhere in the body. Additionally, these substances can transport absorbed gases, such as chlorides or ammonium, into the lungs, also causing injury. Whereas PM<sub>10</sub> tends to collect in the upper portion of the respiratory system, PM<sub>2.5</sub> is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended

particulates also damage and discolor surfaces on which they settle, as well as producing haze and reducing regional visibility.

**Lead.** Lead in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline; the manufacturing of batteries, paint, ink, ceramics, and ammunition; and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95%. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead emissions sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth.

**Toxic Air Contaminants.** A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). California state law defines TACs as air pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. The state Air Toxics Program was established in 1983 under Assembly Bill 1807. A total of 243 substances have been designated TACs under California law. Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced either on short-term (acute) or long-term (chronic) exposure to a given TAC.

## **Local Ambient Air Quality**

### ***SCAB Attainment Designation***

An area is designated in attainment when it is in compliance with the NAAQS and/or CAAQS. These standards are set by the EPA or CARB for the maximum level of a given air pollutant that can exist in the outdoor air without unacceptable effects on human health or the public welfare.

The criteria pollutants of primary concern that are considered in this air quality assessment include O<sub>3</sub>, NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>. Although there are no ambient standards for VOCs or NO<sub>x</sub>, they are important as precursors to O<sub>3</sub>. The attainment classifications in the SCAB for these criteria pollutants are outlined in Table 4.2-2, South Coast Air Basin Attainment Classification.

**Table 4.2-2**  
**South Coast Air Basin Attainment Classification**

Pollutant	Averaging Time	State Designation/Classification	National Designation/Classification
O <sub>3</sub>	1 hour 8 hour	Nonattainment Nonattainment	— Nonattainment (extreme)
NO <sub>2</sub>	1 hour Annual arithmetic mean	Nonattainment	Unclassifiable/attainment
CO	1 hour 8 hour	Attainment	Attainment (maintenance)
SO <sub>2</sub>	1 hour 24 hour Annual arithmetic mean	Attainment	Unclassifiable
PM <sub>10</sub>	24 hour Annual arithmetic mean	Attainment	Attainment (maintenance)
PM <sub>2.5</sub>	24 hour Annual arithmetic mean	Nonattainment	Nonattainment
Lead <sup>a</sup>	Quarter	—	Unclassifiable/attainment (Los Angeles County)
	3-month average	—	Nonattainment (Los Angeles County)
	30-day average	Nonattainment (Los Angeles County)	—
SO <sub>4</sub>	24 hour	Attainment	—
H <sub>2</sub> S	1 hour	Unclassified	—
Vinyl chloride <sup>a</sup>	24 hour	Unclassified	—
Visibility-reducing particles	8 hour (10:00 a.m.–6:00 p.m.)	Unclassified	—

Sources: CARB 2013c; EPA 2013a.

<sup>a</sup> CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined.

### ***Air Quality Monitoring Data***

The SCAQMD maintains ambient air quality monitoring stations throughout the SCAB. The closest ambient air quality monitoring station to the project site is the Costa Mesa monitoring station, located at 2850 Mesa Verde Drive East in Costa Mesa, which measures O<sub>3</sub>, NO<sub>2</sub>, CO, and SO<sub>2</sub>. For PM<sub>10</sub> and PM<sub>2.5</sub>, values from the Mission Viejo station, located at 26081 Via Pera in Mission Viejo, were used in this analysis. The most recent background ambient air quality data from 2010 to 2012 are presented in Table 4.2-3, Ambient Air Quality Data. The number of days exceeding the AAQS is shown in Table 4.2-4, Frequency of Air Quality Standard Violations.

**Table 4.2-3**  
**Ambient Air Quality Data**  
**(parts per million (ppm) unless otherwise indicated)**

Pollutant	Averaging Time	2010	2011	2012	Most Stringent Ambient Air Quality Standard	Monitoring Station
O <sub>3</sub>	8 hour	0.076	0.077	0.076	0.070	Costa Mesa
	1 hour	0.097	0.093	0.090	0.09	
NO <sub>2</sub>	Annual	0.011	N/A	N/A	0.030	Costa Mesa
	1 hour	0.070	0.061	0.075	0.18	
CO	8 hour	2.09	2.22	1.71	9.0	Costa Mesa
	1 hour <sup>a</sup>	2.4	2.9	2.1	20	
SO <sub>2</sub>	Annual	0.000	N/A	N/A	0.030	Costa Mesa
	24 hour	0.002	N/A	N/A	0.040	
PM <sub>10</sub>	Annual	N/A	18.8 µg/m <sup>3</sup>	17.0 µg/m <sup>3</sup>	20 µg/m <sup>3</sup>	Mission Viejo
	24 hour	34 µg/m <sup>3</sup>	47 µg/m <sup>3</sup>	36 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>	
PM <sub>2.5</sub>	Annual	7.9 µg/m <sup>3</sup>	8.5 µg/m <sup>3</sup>	7.9 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	Mission Viejo
	24 hour	19.9 µg/m <sup>3</sup>	33.4 µg/m <sup>3</sup>	27.6 µg/m <sup>3</sup>	35 µg/m <sup>3</sup>	

Sources: CARB 2013d; EPA 2013b.

Notes: Data taken from CARB iADAM (2013d) or EPA AirData (2013b) represent the highest concentrations experienced over a given year. There is no federal standard for 1-hour O<sub>3</sub>, nor is there a state 24-hour standard for PM<sub>2.5</sub>.

N/A = insufficient data available to determine the value; µg/m<sup>3</sup> = micrograms per cubic meter; Costa Mesa Station: 2850 Mesa Verde Drive East, Costa Mesa, California 92626; Mission Viejo Station: 26081 Via Pera, Mission Viejo, California 92691

**Table 4.2-4**  
**Frequency of Air Quality Standard Violations**

Year	Number of Days Exceeding Standard		
	State 1-Hour O <sub>3</sub>	State 8-Hour O <sub>3</sub>	National 8-Hour O <sub>3</sub>
2010	1	2	1
2011	0	2	1
2012	0	1	1

Source: CARB 2013d.

Note: Exceedances of federal and state standards are only shown for O<sub>3</sub>. All other criteria pollutants did not exceed either federal or state standards during the years shown.

As the tables above demonstrate, air quality within the project region is in compliance with both CAAQS and NAAQS for NO<sub>2</sub>, CO, PM<sub>10</sub>, PM<sub>2.5</sub>, and SO<sub>2</sub> during the reporting period. Federal and state 8-hour O<sub>3</sub> standards were, however, exceeded during each of the 3 years reported. State 1-hour O<sub>3</sub> standards were exceeded in 2010, but not in 2011 or 2012.

### 4.2.3 Thresholds of Significance

The following significance criteria are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential air quality impacts. Impacts to air quality would be significant if the proposed project would:

- AQ-1:** Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2:** Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- AQ-3:** Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- AQ-4:** Expose sensitive receptors to substantial pollutant concentrations.
- AQ-5:** Create objectionable odors affecting a substantial number of people.

In addition, Appendix G of the CEQA Guidelines indicates that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the proposed project would have a significant impact on air quality. The significance thresholds in the SCAQMD CEQA Air Quality Handbook, as revised in March 2011 (SCAQMD 1993, 2011), set forth quantitative emission significance thresholds below which a project would not have a significant impact on ambient air quality. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 4.2-5, SCAQMD Air Quality Significance Thresholds, were exceeded. Only those thresholds related to potentially significant construction impacts are identified in Table 4.2-5, as the proposed project would not generate a substantial increase in criteria pollutant emissions or related impacts associated with operation of the proposed project.

**Table 4.2-5**  
**SCAQMD Air Quality Significance Thresholds**

Pollutant	Construction
<i>Criteria Pollutants Mass Daily Thresholds</i>	
VOCs	75 pounds/day
NO <sub>x</sub>	100 pounds/day
CO	550 pounds/day
SO <sub>x</sub>	150 pounds/day
PM <sub>10</sub>	150 pounds/day
PM <sub>2.5</sub>	55 pounds/day

Source: SCAQMD 1993.

A project would result in a substantial contribution to an existing air quality violation of the NAAQS or CAAQS for O<sub>3</sub> (see Table 4.2-2), which is a nonattainment pollutant, if the project's construction emissions would exceed the SCAQMD VOC or NO<sub>x</sub> thresholds shown in Table 4.2-5. These emission-based thresholds for O<sub>3</sub> precursors are intended to serve as a surrogate for an "ozone significance threshold" (i.e., the potential for adverse O<sub>3</sub> impacts to occur) because O<sub>3</sub> itself is not emitted directly (see the previous discussion of O<sub>3</sub> and its sources), and the effects of an individual project's emissions of O<sub>3</sub> precursors (VOC and NO<sub>x</sub>) on O<sub>3</sub> levels in ambient air cannot be determined through air quality models or other quantitative methods.

#### 4.2.4 Impact Discussion

**AQ-1:** *Would the project conflict with or obstruct implementation of the applicable air quality plan?*

The proposed project would not conflict with or propose to change existing land uses or applicable policies as designated in the City of Costa Mesa General Plan Conservation Element, the City of Huntington Beach General Plan Air Quality Element, or the City of Newport Beach General Plan Update EIR Air Quality Assessment. Since growth data from these plans were used as a basis for the SCAQMD 2012 AQMP, the proposed project would not conflict with AQMP, which is the current applicable air quality plan. The purpose of the proposed project is to consolidate facilities and reduce the reliance on pump station infrastructure, with the benefit of reducing overall risks associated with facility failure and the reduction of long-term operational, maintenance, and replacement costs associated with pump station infrastructure. Although the proposed project would include construction of new pipelines within an existing pipeline system, the proposed project would neither increase population nor would it require additional employment; ongoing operations and potential repair or maintenance of the wastewater collection system and sewer lines would be performed by existing staff. Based on these considerations, the proposed project would result in a **less than significant** impact.

**AQ-2:        *Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?***

The proposed project includes the construction of a new trunk sewer from the existing City of Newport Beach Pump Station at the west end of Walkabout Circle to the Orange County Sanitation District (OCSD) Interplant Line in Brookhurst Street (OCSD sewer pipeline). The proposed project also includes the construction of several Costa Mesa Sanitary District (CMSD) and City of Newport Beach pipelines connecting to proposed OCSD sewer pipeline, and the abandonment of several CMSD and City of Newport Beach pump stations.

**Construction Emissions**

Construction of the proposed project would result in a temporary addition of pollutants to the local airshed caused by soil disturbance, dust emissions, and combustion pollutants from on-site construction equipment, as well as from personal vehicles, vendor/delivery trucks, and off-site haul trucks. NO<sub>x</sub> and CO emissions would primarily result from the use of construction equipment and motor vehicles. Fugitive dust emissions would primarily result from trenching activities. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation, and, for dust, the prevailing weather conditions. Therefore, such emission levels can only be estimated, with a corresponding uncertainty in precise ambient air quality impacts.

Emissions from the construction phase of the project were estimated through the use of the California Emissions Estimator Model (CalEEMod), available online ([www.caleemod.com](http://www.caleemod.com)), Version 2011.1.1. Construction methods are described in Chapter 3, Project Description. The project would install sewer pipelines in a linear fashion, with open trench construction contractors completing approximately 60 feet of pipeline per day and horizontal directional drilling (HDD) contractors completing approximately 30 feet per day. It was assumed that the three segments of the proposed OCSD sewer pipeline would be constructed sequentially and the four proposed CMSD and City of Newport Beach pipelines would also be constructed sequentially; however, the proposed OCSD, CMSD, and City of Newport Beach pipeline construction would occur concurrently and would commence in June 2016. The abandonment of the CMSD, City of Newport Beach, and private pump stations would follow completion of the pipeline installation.

Construction of the pipelines and abandonment of the pump stations is anticipated to occur over a 24-month period with intermittent periods of no construction activity. For the purposes of emissions modeling, it was assumed that construction would occur continuously. Accordingly, OCSD pipeline construction was assumed to occur from June 2016 to October 2016 and CMSD/



City of Newport Beach pipeline construction would occur from June 2016 to October 2016. The pump station removal was assumed to occur from October 2016 to June 2017.

It is anticipated that open trench pipeline installation would involve the use of one crane, one forklift, one water truck (off-highway truck), and one tractor/loader/backhoe in operation from 4 to 8 hours per day, 5 days per week (22 days per month). For HDD pipeline installation, the same equipment would be used as with open trench activities, with the addition of a directional boring unit (bore/drill rig). Pump station abandonment is anticipated to involve the use of one bore/drill rig, one excavator, one water truck, and one tractor/loader/backhoe.

Construction phasing is anticipated as follows:

- **OCSD Pipeline Trenching/Grading** for approximately 3,500 linear feet of 24-inch-diameter gravity sewer from the City of Newport Beach Pump Station at the west end of Walkabout Circle along the eastern border of Talbert Regional Park and then west from the western terminus of 19th Street toward the Santa Ana River (60 days)
- **OCSD Pipeline HDD Trenching/Grading** for approximately 800 linear feet of a dual 14-inch-barrel inverted sewer siphon beneath the Santa Ana River (25 days)
- **OCSD Pipeline Trenching/Grading** for approximately 500 linear feet of 24-inch-diameter gravity sewer from the west end of the inverted sewer siphon to the existing OCSD Interplant Line in Brookhurst Street (10 days)
- **CMSD Pipeline Trenching/Grading** for a new 24-inch gravity sewer from the service areas of the Canyon Pump Station (CMSD No. 7) and West Bluff Pump Station (CMSD No. 20) to the existing sewer in Canyon Park (approximately 2,400 linear feet, 40 days)
- **CMSD Pipeline Trenching/Grading** for a new 12-inch gravity sewer from the service areas of the Avimore Terrace Pump Station (CMSD No. 5) and Sea Bluff Pump Station (CMSD No. 16) to a connection with a new 18-inch sewer carrying flow westerly from an existing gravity sewer in Canyon Park (approximately 1,700 linear feet, 30 days)
- **CMSD/City of Newport Beach Pipeline Trenching/Grading** for a new 18-inch sewer from Canyon Park picking up flows from the service areas of Canyon Pump Station (CMSD No. 7), West Bluff Pump Station (CMSD No. 20), President Pump Station (CMSD No. 14), Avimore Terrace Pump Station (CMSD No. 5), and Sea Bluff Pump Station (CMSD No. 16) to the new OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 in the vicinity of the City of Newport Beach Pump Station at the west end of Walkabout Circle (approximately 700 linear feet, 15 days)
- **CMSD/City of Newport Beach Pipeline Trenching/Grading** for a new 12-inch sewer from the service area of the 19th Street Pump Station (CMSD No. 1) and the West 18th Street Private Pump Station (private) to the new OCSD Southwest Costa

Mesa Trunk Sewer in the vicinity of the west end of 19th Street (approximately 900 linear feet, 15 days)

- **CMSD/City of Newport Beach Grading** for abandonment of eight pump stations: President Pump Station (CMSD No. 14), West Bluff Pump Station (CMSD No. 20), Canyon Pump Station (CMSD No. 7), Aviemore Terrace Pump Station (CMSD No. 5), Sea Bluff Pump Station (CMSD No. 16), 19th Street Pump Station (CMSD No. 1), West 18th Street Private Pump Station, and the City of Newport Beach Pump Station at Walkabout Circle (22 days for each pump station abandonment).

Because the OCSO pipeline installation would occur concurrently with CMSD/City of Newport Beach pipeline installation, the overlapping of these activities would result in a maximum daily, or worst-case, scenario. Table 4.2-6, Estimated Daily Maximum Construction Emissions, shows the estimated maximum unmitigated daily construction emissions associated with the construction of the proposed project.

**Table 4.2-6**  
**Estimated Daily Maximum Construction Emissions (pounds/day unmitigated)**

	VOC	NO <sub>x</sub>	CO	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>
2016 estimated emissions	4.59	33.35	24.28	1.32	2.35	1.50
2017 estimated emissions	1.48	9.77	9.01	0.02	1.74	0.43
<i>Threshold</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
Threshold exceeded?	No	No	No	No	No	No

Notes: See Appendix B for complete results.

The PM<sub>10</sub> and PM<sub>2.5</sub> estimates reflect control of fugitive dust required by SCAQMD Rule 403.

As shown in Table 4.2-6, daily construction emissions would not exceed the thresholds for VOCs, NO<sub>x</sub>, CO, SO<sub>x</sub>, PM<sub>10</sub>, or PM<sub>2.5</sub>. As such, the proposed project would result in a **less than significant** impact during construction.

In addition, the project must adhere to SCAQMD Rules during construction-related activities: 401 (Visible Emissions), 403 (Fugitive Dust), and 431.2 (Sulfur Content of Liquid Fuels). These measures would assist in minimizing less than significant project-generated fugitive dust emissions and combustion pollutants.

### Operational Emissions

The purpose of the proposed project is to consolidate facilities and reduce the reliance on pump station infrastructure, with the benefit of reducing overall risks associated with facility failure and the reduction of long-term operational, maintenance, and replacement costs associated with pump station infrastructure. In addition, the proposed project would

successfully divert flows from the Fairview Road Trunk Sewer, which is currently planned for upsizing to accommodate ultimate system flows. This diversion is expected to eliminate the need for upsizing of the Fairview Road Trunk Sewer, saving infrastructure replacement costs and impacts to the public during its construction phase.

Once the new sewer pipelines are installed, no additional routine daily operational activities that would generate air pollutant emissions are anticipated to occur. Operational vehicle trips associated with inspection, maintenance, and repair of the sewer mains and laterals would periodically occur; however, inspection and maintenance activities are already occurring under existing conditions as performed by existing staff. No ground-disturbing activities would be required for maintenance. In the event that repair of the pipelines would be required, the construction activities described above may occur on a localized portion of the sewer system. However, repair activity would likely result in fewer emissions compared to the analyzed construction scenario that assumes simultaneous pipeline construction of larger portions of OCSD and CMSD/City of Newport Beach sewer pipelines, in addition to emissions associated with truck trips. These potential repair activities would be temporary and would not be a source of long-term operational emissions. As the project would not result in a new land use that would involve increased operational activities, air quality impacts associated with operational air pollutant emissions would be **less than significant**.

**AQ-3:**        *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?*

The SCAB is a nonattainment area for O<sub>3</sub>, NO<sub>2</sub>, and PM<sub>2.5</sub> under the NAAQS and/or CAAQS. The poor air quality in the SCAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emissions sources. Projects that emit these pollutants or their precursors (e.g., VOCs and NO<sub>x</sub> for O<sub>3</sub>,) potentially contribute to poor air quality. As indicated in Table 4.2-6, the construction emissions from the proposed project would not exceed SCAQMD significance thresholds. The proposed project is not anticipated to generate substantial operational emissions. Furthermore, the project would not conflict with the SCAQMD 2012 AQMP, which addresses the cumulative emissions in the SCAB. Accordingly, the proposed project would not result in a cumulatively considerable increase in emissions of nonattainment pollutants. Thus, this impact would be **less than significant**.

**AQ-4:        *Would the project expose sensitive receptors to substantial pollutant concentrations?***

The SCAQMD recommends the evaluation of localized NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> impacts as a result of construction activities to sensitive receptors in the immediate vicinity of the project site. Urban development, including residences in the Cities of Costa Mesa and Newport Beach, is located near the proposed pipelines and is adjacent to some portions of the proposed pipeline. Brookhurst Street separates construction from the closest residences in Huntington Beach. Proposed pipelines would also border Talbert Regional Park to the north, east, and south. Although sensitive receptors are located within the project area (the closest being the residences within approximately 50 feet of the proposed pipelines), operation of equipment would occur for a very short duration (i.e., 1–2 days) in any one area, as approximately 30–60 feet of pipeline would be constructed each day. In addition, diesel equipment would also be subject to the Airborne Toxic Control Measures for in-use mobile construction equipment promulgated by CARB, which would minimize diesel particulate matter emissions.

Construction activities would not generate substantial emissions of TACs, specifically diesel exhaust particulate matter, and impacts to sensitive receptors in the vicinity of project construction would be less than significant. Operation of the proposed sewer mains and laterals would not result in direct emissions (e.g., those from a point source such as stationary boilers or engines). Thus, it would not result in exposure to sensitive receptors in the vicinity of the project, and impacts would be **less than significant**.

**AQ-5:        *Would the project create objectionable odors affecting a substantial number of people?***

Odors are a form of air pollution that is most obvious to the public. Odors can present significant problems for both the source and the surrounding community. Although offensive odors seldom cause physical harm, they can be annoying and cause concern. Construction and operation of the proposed sewer pipelines would not create objectionable odors affecting a substantial number of people.

**Construction Impacts.** Potential sources that may emit odors during construction activities include diesel equipment and gasoline fumes and asphalt paving material. Odors from these sources would be localized and generally confined to the project site. The project would install sewer pipelines in a linear fashion, with open trench construction contractors completing approximately 60 feet of pipeline per day and HDD contractors completing approximately 30 feet per day; therefore, construction activity would not occur in one location for an extended period. The proposed project would use typical construction techniques in compliance with

SCAQMD rules. Additionally, the odors would be temporary. As such, proposed project construction would not cause an odor nuisance, and odor impacts would be **less than significant**.

**Operational Impacts.** Land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (SCAQMD 1993). Included in the proposed project's purpose and objectives is avoiding the potential for chronic odor complaints due to force-main air release appurtenances required at high points in the pipeline profile. Emanation of foul odor is not anticipated to be a significant issue. If necessary, foul air generation would be prevented by raising the pH of the wastewater by upstream addition of magnesium hydroxide solution or other odor control method tailored to the resulting conditions. Therefore, project operations would result in a **less than significant** odor impact.

#### **4.2.5 Mitigation Measures**

Implementation of the proposed project would not result in significant impacts that would require mitigation. The project must adhere to SCAQMD Rules during construction-related activities, which would assist in minimizing less than significant air pollutant emissions generated during construction.

#### **4.2.6 Level of Significance After Mitigation**

No mitigation would be required since potential air quality impacts associated with project implementation would be less than significant.

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## 4.3 BIOLOGICAL RESOURCES

This section describes the existing biological resources within the project study area, analyzes the potential environmental effects of the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project), and recommends mitigation measures where necessary to reduce or avoid significant effects. Findings are based on the Biological Technical Report prepared by Dudek in July 2013 (see Appendix C).

### 4.3.1 Regulatory Setting

#### **Federal**

##### *Federal Endangered Species Act*

The federal Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), provides for listing of endangered and threatened species of plants and animals and designation of critical habitat for listed animal species. The ESA also prohibits all persons subject to U.S. jurisdiction from “taking” endangered species, which includes any harm or harassment. Section 7 of the ESA requires that federal agencies, prior to project approval, consult the U.S. Fish and Wildlife Service (USFWS) and/or the National Marine Fisheries Service (NMFS) to ensure adequate protection of listed species that may be affected by the project.

##### *Migratory Bird Treaty Act*

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 et seq.) is a federal statute that implements treaties with several countries on the conservation and protection of migratory birds. The list of bird species covered by the MBTA is extensive and is detailed in 50 CFR 10.13. The regulatory definition of “migratory bird” is broad and includes any mutation or hybrid of a listed species, including any part, egg, or nest of such a bird (50 CFR 10.12). Migratory birds are not necessarily federally listed endangered or threatened birds under the ESA. The MBTA, which is enforced by USFWS, makes it unlawful “by any means or in any manner, to pursue, hunt, take, capture, [or] kill” any migratory bird or attempt such actions, except as permitted by regulation. The applicable regulations prohibit the take, possession, import, export, transport, sale, purchase, barter, or offering of these activities, except under a valid permit or as permitted in the implementing regulations (50 CFR 21.11).

##### *Clean Water Act*

The federal Water Pollution Control Act Amendments of 1972 (Clean Water Act; 33 U.S.C. 1251 et seq.), as amended by the Water Quality Act of 1987 (PL 1000-4), is the major federal legislation governing water quality. The purpose of the Clean Water Act is to “restore and maintain the chemical, physical, and biological integrity of the nation’s waters.” Discharges into waters of the

United States are regulated under Section 404. Waters of the United States include (1) all navigable waters (including all waters subject to the ebb and flow of tides); (2) all interstate waters and wetlands; (3) all other waters, such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, or natural ponds; (4) all impoundments of waters mentioned above; (5) all tributaries to waters mentioned above; (6) the territorial seas; and (7) all wetlands adjacent to waters mentioned above. In California, the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) are responsible for implementing the Clean Water Act. Important applicable sections of the Clean Water Act are discussed below:

- **Section 303** requires states to develop water quality standards for inland surface and ocean waters and submit to the EPA for approval. Under Section 303(d), the state is required to list waters that do not meet water quality standards and to develop action plans, called total maximum daily loads, to improve water quality.
- **Section 304** provides for water quality standards, criteria, and guidelines.
- **Section 401** requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the Clean Water Act. Certification is provided by the respective RWQCB.
- **Section 402** establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredge or fill material) into waters of the United States. The NPDES program is administered by the RWQCB. Conformance with Section 402 is typically addressed in conjunction with water quality certification under Section 401.
- **Section 404** provides for issuance of dredge/fill permits by the U.S. Army Corps of Engineers (ACOE). Permits typically include conditions to minimize impacts on water quality. Common conditions include (1) ACOE review and approval of sediment quality analysis before dredging, (2) a detailed pre- and postconstruction monitoring plan that includes disposal site monitoring, and (3) required compensation for loss of waters of the United States.

### *U.S. Army Corps of Engineers*

The ACOE has primary federal responsibility for administering regulations that concern waters and wetlands in the project study area. In this regard, the ACOE acts under two statutory authorities, the Rivers and Harbors Act (33 U.S.C., Sections 9 and 10), which governs specified activities in navigable waters, and the Clean Water Act (Section 404), which governs specified activities in waters of the United States, including wetlands and special aquatic sites. Wetlands and



non-wetland waters, e.g., rivers, streams and natural ponds, are a subset of waters of the United States and receive protection under Section 404 of the Clean Water Act. The ACOE has primary federal responsibility for administering regulations that concern waters and wetlands in the project study area under statutory authority of the Clean Water Act (Section 404). In addition, the regulations and policies of various federal agencies mandate that the filling of wetlands be avoided to the extent feasible. The ACOE requires obtaining a permit if a project proposes placing structures within navigable waters and/or alteration of waters of the United States.

## **State**

### ***California Endangered Species Act***

Similar to the federal ESA, the California ESA of 1970 provides protection to species considered threatened or endangered by the State of California (California Fish and Game Code, Section 2050 et seq.). The California ESA recognizes the importance of threatened and endangered fish, wildlife, and plant species and their habitats, and prohibits the taking of any endangered, threatened, or rare plant and/or animal species unless specifically permitted for education or management purposes.

### ***California Fish and Game Code***

The California Fish and Game Code regulates the handling and management of the state's fish and wildlife. Most of the code is administered or enforced by the California Department of Fish and Wildlife (CDFW; prior to September 2012, California Department of Fish and Game (CDFG)). One section of the code generally applies to public infrastructure projects such as the proposed project:

- **Section 1602** regulates activities that would divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake that supports fish or wildlife. CDFW has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources.

### ***Porter-Cologne Water Quality Act***

The Porter-Cologne Water Quality Act of 1969, updated in 2012 (California Water Code, Section 13000 et seq.), provides for statewide coordination of water quality regulations. The act established the California SWRCB as the statewide authority, and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis.

### ***California Coastal Act***

The California Coastal Act of 1976 (PRC 30000–30900) is administered by the California Coastal Commission (CCC) and implemented locally by Local Coastal Programs (LCPs). The California Coastal Act contains coastal resources planning and management policies that address public access, recreation, marine environment, land resources, development, and industrial development. The goal of the California Coastal Act is to assure orderly, balanced utilization and conservation of coastal zone resources taking into account the social and economic needs of the people of the state.

### **Local**

#### ***Regional Resource Planning Context***

The entire project study area is located within the County of Orange Central and Coastal Natural Community Conservation Planning and Habitat Conservation Plan (NCCP/HCP). In general, the NCCP/HCP evaluated a set of covered species and habitat (mostly focused on coastal sage scrub species including coastal California gnatcatcher (*Poliophtila californica californica*) and coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)) and determined an acreage of covered species/habitat take that could be authorized because adequate conservation would be achieved through assemblage and management of a reserve as designated by the plan. Covered species/habitat within the project study area includes coastal sage scrub. Wetlands are not covered habitats and least Bell's vireo (*Vireo bellii pusillus*) is a conditionally covered species. The project study area is within the Central Subarea under the NCCP/HCP and includes portions of the designated NCCP/HCP Reserve (within Talbert Regional Park), with the remaining areas designated as Urban (or authorized take areas). Infrastructure projects are an allowed use within these reserves provided that the facility is designed, constructed, and operated consistent with policies regarding the siting, construction, and operation of such infrastructure.

Under the NCCP/HCP, a list of entities is identified as participating landowners, including the County of Orange and Irvine Ranch Company, among others. These entities were granted an acreage of specific take authorization for specific projects/activities that would result in impacts both within the Urban (take authorized) area and the NCCP/HCP Reserve. The Orange County Sanitation District (OCSD) is not listed as a participating landowner in the Central/Coastal Subregion NCCP/HCP. However, non-participating landowners have the option of addressing unavoidable impacts/take within the NCCP/HCP Reserve by either providing acceptable mitigation through separate permits or authorizations under the federal/California ESA or paying a mitigation fee to the NCCP nonprofit corporation. Selection of the mitigation fee option to address impacts to coastal sage scrub species will be covered under the terms of the USFWS Section 10(a)(1)(B) permit and CDFW management

authorization granted to the local government with jurisdiction over the proposed activity. No additional approvals pursuant to the federal ESA, the California ESA, and the NCCP Act (California Fish and Game Code, Section 2800 et seq.) will be required.

#### ***City of Costa Mesa General Plan***

The City of Costa Mesa General Plan Conservation Element (City of Costa Mesa 2000) establishes the official policy relative to the identification, establishment, preservation, and management of natural resources in the City of Costa Mesa. The element states that a majority of valuable biologic resources are located in areas free from large-scale development intrusion. Areas such as these are found in western Costa Mesa near the Santa Ana River. Additionally, the agricultural fields in northern Costa Mesa support a unique animal community related to field crop production. The Conservation Element contains goals, objectives, and policies that affirm the city's commitment to conservation of biological resources. The following goal, objective, and policy affirm the city's commitment to resource conservation and are relevant to the proposed project:

- **Goal CON-1:** It is the goal of the City of Costa Mesa to provide its citizens with a high quality environment through the conservation of resources, including land, water, wildlife, and vegetation; the protection of areas of unique natural beauty; the integration of natural features into the man-made environment.
  - **Objective CON-1A:** Evaluate the preservation of the City's existing biotic resources in as ecologically viable and natural a condition as possible, and, where feasible, restore and integrate these resources into the urban environment.
    - **Policy CON-1A.1:** Ensure that all future development will be adequately reviewed with regard to possible adverse effects on plant and animal life and critical wildlife habitat and wetlands, and incorporate feasible mitigation measures into the project design to reduce such effects (City of Costa Mesa 2000, CON-44).

#### ***City of Huntington Beach General Plan***

The City of Huntington Beach General Plan Environmental Resources and Conservation Element (City of Huntington Beach 1996) is in accordance with California State Law Government Code Section 65302(d), 65302(e), and 655560. This element of the General Plan discusses marine waters, plant life, and wildlife for each of the ecological categories of the city. The goals, objectives, and policies of the Environmental Resources and Conservation Element have been put in place to protect the biological resources of the City of Huntington Beach. The goal, objective, and policies relevant to the proposed project are as follows:

- **Goal ERC 2:** Protect and preserve significant habitats of plant and wildlife species, including wetlands, for their intrinsic values.
  - **Objective ERC 2.1:** Evaluate, enhance, and preserve the City's important habitat areas.
    - **Policy ERC 2.1.1:** Acquire and maintain the most current information available regarding the status and location of sensitive biological elements (species and natural communities) throughout the City.
    - **Policy ERC 2.1.10:** Conduct construction activities to minimize adverse impacts on existing wildlife resources.
    - **Policy ERC 2.1.12:** Promote the preservation and restoration of those sensitive biological areas identified by Policy 2.1.1 (City of Huntington Beach 1996, IV-ERC-21, IV-ERC-22).

#### *City of Newport Beach General Plan*

The City of Newport Beach General Plan Natural Resources Element (City of Newport Beach 2006) provides direction regarding the conservation, development, and utilization of natural resources. It identifies the City's natural resources and policies for their preservation, development, and wise use. The element addresses: water supply (as a resource) and water quality (includes bay and ocean quality, and potable drinking water), air quality, terrestrial and marine biological resources, open space, archaeological and paleontological resources, mineral resources, visual resources, and energy. The goals and policies of the Natural Resources Element outline the City of Newport Beach's commitment to sustainable development through the efficient use and conservation of natural resources.

- **Goal NR 10:** Protection of sensitive and rare terrestrial and marine resources from urban development.
  - **Policy NR 10.1:** Cooperate with the state and federal resource protection agencies and private organizations to protect terrestrial and marine resources.
  - **Policy NR 10.3:** Require a site-specific survey and analysis prepared by a qualified biologist as a filing requirement for any development permit applications where development would occur within or contiguous to areas identified as ESAs.
  - **Policy NR 10.6:** Maintain a buffer of sufficient size around significant or rare biological resources, if present, to ensure the protection of these resources. Require the use of native vegetation and prohibit invasive plant species within these buffer areas (City of Newport Beach 2006, 10-26, 10-27).

### 4.3.2 Existing Conditions

The following discussion describes the biological character of the project study area in terms of vegetation, wildlife, and wildlife habitats based on surveys conducted by Dudek in 2012 and 2013.

#### Methodology

##### *Literature Review*

Prior to the field investigations conducted by Dudek, special-status biological resources present or potentially present in the project study area were identified through a literature search conducted in 2012 and focused survey reports prepared for the project study area. The following sources were used during the literature review process:

- California Natural Diversity Database (CNDDDB) (CDFW 2012) was queried to compile a list of potentially occurring flora and fauna tracked by the CNDDDB in the Newport Beach quadrangle and surrounding six quadrangles.
- California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California, 8th online edition (CNPS 2012), was searched to compile a list of potentially occurring special-status plants in the Newport Beach quadrangle and surrounding six quadrangles.
- *Focused Least Bell's Vireo and Southwestern Willow Flycatcher Survey Report for the Orange County Sanitation District Southwest Costa Mesa Trunk Sewer Project, Orange County, California* (Dudek 2013a).
- *2012 Focused Survey for the Presence/Absence of California Gnatcatcher for the Orange County Sanitation District Southwest Costa Mesa Trunk Sewer Project, Orange County, California, Permit No. TE-139634-2* (Dudek 2013b).
- *Newport Banning Ranch Draft Environmental Impact Report* (City of Newport Beach 2011).

The Central/Coastal Subregion NCCP/HCP (County of Orange 1996) was also reviewed with respect to regional reserve planning and conservation.

##### *Field Reconnaissance*

Between April and August 2012, Dudek biologists conducted vegetation mapping, special-status plant surveys, and focused surveys for the state- and federally listed endangered least Bell's vireo, the state- and federally listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*), the federally listed threatened coastal California gnatcatcher,

and the state species of special concern (SSC) and USFWS bird of conservation concern (BCC) burrowing owl (*Athene cunicularia*).

In May 2013, Dudek conducted a formal (routine) jurisdictional wetland delineation within the project study area. All areas identified as being potentially subject to the jurisdiction of ACOE, RWQCB, CDFW, and CCC were field-verified and mapped.

The wetlands delineation was performed in accordance with the methods prescribed in the *Corps of Engineers Wetland Delineation Manual* (ACOE Manual; ACOE 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (ACOE 2008), and the ACOE and EPA Rapanos guidance (ACOE and EPA 2007). Pursuant to the federal Clean Water Act, ACOE and RWQCB jurisdictional areas include those supporting all three wetlands criteria described in the ACOE manual: hydric soils, hydrology, and hydrophytic vegetation. The ACOE/EPA Rapanos guidance states that the ACOE will regulate traditional navigable waters of the United States, adjacent wetlands, and relatively permanent waters tributary to navigable waters, and adjacent wetlands if there is a significant nexus from the site. Areas regulated by the RWQCB/CDFW/CCC are generally coincident with the ACOE, but can also include isolated features that have evidence of surface water inundation pursuant to the state Porter-Cologne Act. These areas generally support at least one of the three ACOE wetlands indicators but are considered isolated through the lack of surface water hydrology/connectivity downstream. The identification of wetlands and/or non-wetland waters under ACOE/CDFW/RWQCB/CCC jurisdiction was determined by investigations of the three environmental characteristic parameters: hydrology, hydrophytic vegetation, and hydric soils. Additional areas that are considered CDFW/CCC-regulated wetlands/riparian habitat were identified where a predominance of hydrophytic vegetation was associated with a lake or stream channel. CCC regulated wetlands are defined by the presence of any one of the three wetlands criteria regardless of associated with a lake or streambed.

#### **4.3.2.1 Vegetation Communities**

Eleven vegetation communities and land covers (including disturbed and revegetated forms) were mapped in the project study area based on general physiognomy and species composition, including eight native or naturalized vegetation types and three non-native land covers. These vegetation communities and land cover types are presented in Table 4.3-1 and on Figure 4.3-1a and 4.3-1b and described in the following subsections. Vegetation communities considered special status are denoted by bold type in Table 4.3-1.

**Table 4.3-1**  
**Vegetation Communities and Land Cover Types in Project Study Area**

Vegetation Community/Land Cover	Acreage
<i>Upland Vegetation (State Rank)</i>	
Coastal sage scrub (S3.1) <sup>a</sup>	2.16
Annual grassland (S4)	1.05
Ruderal (not ranked)	3.19
<i>Subtotal</i>	<i>6.40</i>
<i>Wetland/Riparian Vegetation (State Rank)</i>	
Southern willow scrub (S2.1) <sup>a</sup>	8.59
Sycamore riparian woodland	0.09
Mulefat scrub (S4)	2.97
Riparian herb (S2.1) <sup>a</sup>	1.02
Perennial rivers and streams	1.26
<i>Subtotal</i>	<i>13.93</i>
<i>Land Cover Types</i>	
Developed land	28.11
Disturbed land	3.14
Ornamental	5.43
<i>Subtotal</i>	<i>36.68</i>
<b>Total<sup>b</sup></b>	<b>57.01</b>

S = state rank

<sup>a</sup> Communities listed by CDFW as high priority for inventory (i.e., S1, S2, or S3).

<sup>b</sup> Total does not sum due to rounding.

## Upland Communities

### *Coastal Sage Scrub*

Within the project study area, coastal sage scrub was mapped in areas supporting a minimum of 50% cover of native shrubs and subshrubs including California sagebrush (*Artemisia californica*), California brittlebush (*Encelia californica*), Menzies' goldenbush (*Isocoma menziesii*), golden-yarrow (*Eriophyllum confertiflorum*), black sage (*Salvia mellifera*), orange bush monkeyflower (*Mimulus aurantiacus*), common deerweed (*Acmispon glaber* var. *glaber*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), and lemonade sumac (*Rhus integrifolia*). The herbaceous layer was sparse and was composed of black mustard (*Brassica nigra*) and bristly oxtongue (*Helminthotheca echioides*).

Revegetated coastal sage scrub is similar in species composition to coastal sage scrub, but is the result of planting and seeding revegetation efforts, generally occurring on manufactured slopes connected to developments. Depending on the age and success of the revegetation effort, the

plant community may resemble coastal sage scrub, or may have a more diverse species composition or a higher percentage of non-native weedy species and/or open ground.

California sagebrush scrub has a rank of G5S5 in the *List of Vegetation Alliances and Associations* (CDFG 2010), meaning it is globally secure and secure in the state. This alliance is the obligate habitat type for the federally listed threatened coastal California gnatcatcher and is considered a special-status vegetation community; however, because this community in the project study area is a habitat restoration site, this community is not considered sensitive.

### ***Annual Grassland***

According to Gray and Bramlet (1992), non-native annual grassland is characterized by weedy, introduced annuals, primarily grasses, including wild oats (*Avena* spp.), bromes (*Bromus diandrus*, *B. madritensis*, and *B. hordeaceus*), black mustard, stork's bills (*Erodium botrys* and *E. cicutarium*), and Russian thistle (*Salsola australis*). It may occur where disturbance by maintenance (mowing, scraping, disking, spraying, etc.), grazing, repetitive fire, agriculture, or other mechanical disruption has altered soils and removed native seed sources from areas formerly supporting native vegetation. Annual grassland typically occurs on gradual slopes with deep soils below 3,000 feet above mean sea level throughout Orange County. Annual grassland may support sensitive plant and animal species and provide valuable foraging habitat for raptors (birds of prey).

In the project study area, annual grasslands are found along the southeastern portion of the project study area. This community is immediately adjacent to Balboa Boulevard and public access trails. Due to the disturbance regime, most of the native vegetation has been replaced with extensive ruderal (weedy) plant growth. Wild oats and bromes are the dominant species with some areas also containing a low cover of black mustard and poison hemlock (*Conium maculatum*).

### ***Ruderal***

Ruderal habitat is not recognized as a native plant community by Gray and Bramlet (1992). Ruderal habitat is similar to annual grassland in that non-native species predominate over natives and native habitat recovery is unlikely, yet differs in the type of non-native species that dominate the vegetative cover. Generally, non-native forbs become more dominant in ruderal habitat, as opposed to grasses.

Ruderal habitat often consists of weedy species that are the result of some sort of ground disturbance. Ruderal habitat is found throughout the project study area and is dominated by Hottentot fig (*Carpobrotus edulis*), Uruguayan pampas grass (*Cortaderia selloana*), black mustard, or poison hemlock.



## **Wetland/Riparian Communities**

### ***Mulefat Scrub***

Mulefat scrub is a relatively low (7 to 10 feet (2 to 3 meters)), dense, shrubby plant community that occurs in riparian habitats, edges of catchment basins, and in canyons. It is dominated by mulefat (*Baccharis salicifolia* ssp. *salicifolia*), and may contain a small number of arroyo willow (*Salix lasiolepis*), upland shrubs, and facultative wetland herbs such as Douglas' sagewort (*Artemisia douglasiana*). Under natural conditions, this early seral community is maintained by frequent flooding. It often occurs in association with intermittent stream channels with fairly coarse substrate and moderate depth to water table.

Mulefat scrub occurs throughout the project study area except in the portion of the site within Canyon Park. The acreage of mulefat scrub includes areas of undisturbed mulefat scrub, disturbed mulefat scrub, and revegetated mulefat scrub.

### ***Riparian Herb***

Riparian herb (herbaceous riparian) vegetation is an early successional stage of riparian scrub and forest (County of Orange 1992), occurring in sites where frequent flooding often scours woody vegetation away and allows for the rapid colonization of soil by pioneer herbaceous wetland plants such as verbena (*Verbena* spp.), Douglas' sagewort, sweetclover (*Melilotus* spp.), dallisgrass (*Paspalum* spp.), barnyardgrass (*Echinochloa crus-galli*), Bermudagrass (*Cynodon dactylon*), cattails (*Typha* spp.), nutsedge (*Cyperus* spp.), and others (County of Orange 1992).

In the project study area, this community is characterized by a shrubby herbaceous layer dominated by riparian plant species such as pale spikerush (*Eleocharis macrostachya*), tall flatsedge (*Cyperus eragrostis*), curly dock (*Rumex crispus*), and alkali seaheath (*Frankenia salina*). The acreage of riparian herb includes areas of undisturbed riparian herb and revegetated riparian herb. This community is very open and generally less than 2 to 3 feet in height.

### ***Sycamore Riparian Woodland***

Sycamore riparian woodland is a tall, open, broad-leaved, winter-deciduous riparian woodland that is dominated by well-spaced western sycamore (*Platanus racemosa*). Common species include hollyleaf redberry (*Rhamnus ilicifolia*), California buckthorn (*Frangula californica*), laurel sumac, and blue elderberry (*Sambucus nigra* ssp. *caerulea*) (Holland 1986). It occurs in large intermittent streams in Orange County (Gray and Bramlet 1992).

Sycamore riparian woodland is only found in the northwest corner of the project study area, within Canyon Park. This community is dominated by a canopy of mature California sycamore; the understory consists of mainly non-native grasses and forbs similar to the adjacent ornamental areas.

### ***Southern Willow Scrub***

Southern willow scrub is typically a broad-leaved, winter-deciduous riparian community dominated by willow species (*Salix* spp.), with scattered Fremont's cottonwood (*Populus fremontii* ssp. *fremontii*) and California sycamore in the canopy and a limited understory (Holland 1986). Due to the high density of the shrub canopy, the understory is often depauperate. This vegetation community occurs on loose, sandy, or fine gravelly alluvial soils along intermittent streams and creeks in Southern California (Holland 1986).

Southern willow scrub occurs all throughout the project study area. Within the project study area this community is characterized by a mixed stratum including arroyo willow and mulefat, and acreages include undisturbed and disturbed southern willow scrub. Disturbed southern willow scrub contains a higher cover of non-native species such as bromes and black mustard.

### ***Perennial Rivers and Streambeds***

On site, the Santa Ana River is mapped as perennial rivers and streambeds. The Santa Ana River occurs in the western portion of the project study area.

## **Land Cover Types**

### ***Developed Land***

Developed land describes areas occupied by structures, paving, and other impermeable surfaces that cannot support vegetation or habitat for wildlife. Within the project study area, developed land use types include developed roadways, such as Canyon Drive and the Santa Ana River access road along the concrete-lined channel.

### ***Disturbed Land***

Disturbed land typically occurs in areas where soils have been recently or repeatedly disturbed by grading or compaction, resulting in the growth of very few native perennials. It is usually dominated by bare ground or non-native dicotyledonous species, including redstem stork's bill (*Erodium cicutarium*), black mustard, thistles (e.g., *Cynara cardunculus*, *Carduus pycnocephalus*, and *Centaurea melitensis*), dove weed (*Croton setigerus*), and others. Within the project study area, disturbed land includes dirt paths that are present throughout the park.

### ***Ornamental Plantings***

Not described by Holland (1986) and included within disturbed land (11300) in Oberbauer et al. (2008), ornamental plantings refer to areas where non-native ornamentals and landscaping have been installed. Ornamental plantings are not regulated by the environmental resource agencies and do not require mitigation. Agencies, such as the California Department of Transportation (Caltrans), or local governments may require that disturbed or damaged ornamental plantings be replaced to restore aesthetics or functions such as screening or erosion control.

Ornamental plantings occur in the northeast portion of the project study area. These plantings are associated with the landscaping for Talbert Regional Park.

#### **4.3.2.2 Floral Diversity**

A total of 103 species of vascular plants, including 46 native species (45%) and 57 non-native species (55%) were recorded during the rare plant surveys and vegetation mapping effort. The cumulative list of plant species observed within the project study area is provided in Appendix C.

### **Special-Status Vegetation Communities**

Special-status vegetation communities are those that are considered to be unique or support sensitive plant and/or wildlife species. Special-status vegetation communities are those listed by the CDFW (CDFG 2010) as an alliance or association with state rank 1 to 3 and with on-site occurrences that constitute high-quality occurrences of the given community. The CDFW describes the determination of high-quality occurrences to include evaluation of the level of invasive exotic species, evidence of human-caused disturbance, evidence of reproduction, and evidence of insect/disease damage. Special status may also be conferred if the community type is regulated by local, state, or federal agencies, such as through wetlands or oak woodland regulations.

With the exception of mulefat scrub, all wetland and riparian vegetation communities have a state rank of 2.1 or 3.2; mulefat scrub has a state rank of 4. All wetland/riparian vegetation communities are regulated by the CDFW/CCC and therefore are considered special-status vegetation communities. These communities include mulefat scrub, southern willow scrub, sycamore riparian woodland, and riparian herb. The only upland community considered special status is coastal sage scrub (S3.1). Although the occurrences of coastal sage scrub within the project study area are small, fragmented, and generally low in species diversity, they are located relatively proximate to other larger patches of coastal sage scrub and therefore may occasionally be used by special-status species such as coastal California gnatcatcher, and are therefore considered a special-status vegetation community.

### Special-Status Plant Species

Special-status plant surveys were conducted to determine the presence or absence of plant species that are considered endangered, rare, or threatened under California Environmental Quality Act (CEQA) Guideline 15380 (14 CCR 15000 et seq.). One special-status plant was identified in the project study area during the 2012 rare plant surveys. A list of all special-status plant species known to occur in the vicinity of the project study area (the surrounding six topographic quadrangles) and plant species covered under the Central/Coastal Subregion NCCP/HCP, including their habitat requirements, potential to occur in the project study area, and survey observations, is provided in Appendix C. This appendix provides evaluations for each of these special-status species' occurrence in the project study area vicinity and its potential to occur in the project study area based on known range, habitat associations, preferred soil substrate, life form, elevation, and blooming period. Appendix C also includes special-status plant species that were observed or have at least moderate to high potential to occur in the project study area. In addition, Appendix C includes special-status plant species that have low potential or are not expected to occur in the project study area; however, these species are not further analyzed in this Draft Environmental Impact Report (EIR) because no direct, indirect, or cumulative impacts are expected based on the negative surveys and the evaluation that these species do not have a moderate or high potential to occur in the project study area.

One special-status plant species was observed in the project study area: southern tarplant (*Centromadia parryi* ssp. *australis*). Southern tarplant is a California Rare Plant Rank (CRPR) 1B.1 species, indicating it is seriously threatened in California. This annual herb occurs in marshes and swamps, valley and foothill grassland, and vernal pools from sea level to 1,394 feet (0 to 425 meters) and blooms from May to November (CNPS 2012). There are approximately 2,845 individuals of southern tarplant, associated with the edges of the dirt trail, occupying approximately 0.3 acre along dirt roads in the project study area.

#### 4.3.2.3 Wildlife Diversity

A total of 70 species of wildlife were observed on the site, including 3 reptile species, 1 amphibian species, 60 bird species, and 6 mammal species. The cumulative list of wildlife species observed within the project study area is provided in Appendix C.

#### Reptiles and Amphibians

Three common reptiles were observed: western fence lizard (*Sceloporus occidentalis*), common side-blotched lizard (*Uta stansburiana*), and western skink (*Plestidon skiltonianus*). Other common reptiles, such as gophersnake (*Pituophis catenifer*), western rattlesnake (*Crotalus oreganus*), and southern alligator lizard (*Elgaria multicarinata*) are also likely to occur. One amphibian species was observed during the surveys: California treefrog (*Pseudacris cadaverina*).

## **Birds**

A total of 60 bird species were observed during the surveys. Typical species commonly encountered include song sparrow (*Melospiza melodia*), common yellowthroat (*Geothlypis trichas*), bushtit (*Psaltirparus minimus*), American crow (*Corvus brachyrhynchos*), Bewick's wren (*Thryomanes bewickii*), Anna's hummingbird (*Calypte anna*), house finch (*Carpodacus mexicanus*), and lesser goldfinch (*Spinus psaltria*). Raptors observed include red-shouldered hawk (*Buteo lineatus*), white-tailed kite (*Elanus leucurus*), osprey (*Pandion haliaetus*), and turkey vulture (*Cathartes aura*).

## **Mammals**

Evidence of six mammal species was noted during the surveys, including brush rabbit (*Sylvilagus bachmani*), California ground squirrel (*Spermophilus (Otospermophilus) beecheyi*), coyote (*Canis latrans*), long-tailed weasel (*Mustela frenata*), Virginia opossum (*Didelphis virginiana*), and raccoon (*Procyon lotor*).

## **Invertebrates**

No species of butterflies were noted during the surveys. Common species that could occur include checkered white (*Pontia protodice*), west coast lady (*Vanessa annabella*), and painted lady (*V. cardui*). Numerous other insects and other invertebrates are expected to occur in the project study area.

## **Special-Status Wildlife Species**

A list of all special-status wildlife species known to occur in the vicinity of the project study area (the surrounding six topographic quadrangles) and wildlife species covered under the Central/Coastal Subregion NCCP/HCP, including their habitat requirements, potential to occur in the project study area, and survey observations, is provided in Appendix C. Appendix C includes special-status wildlife species that were observed or have at least moderate to high potential to occur in the project study area. Appendix C also includes special-status wildlife species that have low potential or are not expected to occur in the project study area; however, these species are not further analyzed in this Draft EIR because no direct or indirect impacts are expected based on the negative surveys and the evaluation that these species do not have a moderate or high potential to occur in the project study area.

The coastal California gnatcatcher, least Bell's vireo, and 11 other special-status wildlife species were observed in the project study area during the wildlife surveys: Cooper's hawk (*Accipiter cooperii*), a CDFW Watch List (WL) species; osprey, a CDFW WL species; yellow-breasted chat (*Icteria virens*), a CDFW SSC; yellow warbler (*Setophaga petechia*), a

CDFW SSC and USFWS BCC; Allen's hummingbird (*Selasphorus sasin*), a USFWS BCC; Nuttall's woodpecker (*Picoides nuttallii*), a USFWS BCC; white-tailed kite, a CDFW Fully Protected (FP) species; California least tern (*Sternula antillarum browni*), a federally and state-listed endangered species and a CDFW FP species; black skimmer (*Rynchops niger*), a CDFW SSC and USFWS BCC; double-crested cormorant (*Phalacrocorax auritus*), a CDFW WL species; and California brown pelican (*Pelecanus occidentalis californicus*), a federally and state-delisted species and a CDFW FP species.

Notably, the non-native brown-headed cowbird (*Molothrus ater*) was also observed. Through nest parasitism, brown-headed cowbirds can have adverse effects on native passerine populations, including special-status species such as least Bell's vireo (USFWS 1998) and coastal California gnatcatcher (Patten and Campbell 1998).

#### ***Least Bell's Vireo and Southwestern Willow Flycatcher***

The least Bell's vireo was identified in riparian vegetation on the project site during the 2012 focused surveys (Appendix C). A pair of least Bell's vireos were documented in the southern part of the project study area during four of the focused southwestern willow flycatcher and least Bell's vireo survey visits (May 11; June 11 and 22; and July 2, 2012) and two additional times during focused burrowing owl surveys (May 8 and June 26, 2012). The individuals were observed moving between the southern portion of the project study area and into the property adjacent to the southern boundary of the project study area. The male vireo vocalized frequently during all of the observations. A separate least Bell's vireo individual was detected calling in riparian vegetation on June 20, 2012, during focused California gnatcatcher surveys, approximately 300 feet west of the project study area in the central portion of Talbert Regional Park. No southwestern willow flycatchers were observed during the 2012 focused survey effort.

#### ***Coastal California Gnatcatcher***

No coastal California gnatcatchers were observed during the 2012 focused survey effort (Appendix C). Prior to the focused survey, a single pair of coastal California gnatcatchers were observed on March 23, 2012, by a Dudek biologist (with no 10(a)(1)(A) permit for gnatcatcher) conducting vegetation mapping of the project study area. The pair was observed foraging in the northern portion of Talbert Regional Park, outside the project study area. The site is within the sagebrush scrub vegetation approximately 200 feet south of Victoria Avenue. In addition, a number of gnatcatcher pairs are known to occur on the adjacent property to the south; however, as mentioned previously, no gnatcatchers were detected during the focused survey.

### *Burrowing Owl*

No burrowing owl or burrowing owl sign was observed during the 2012 focused survey effort. Eight burrows with potential to support burrowing owl (less than 4 inches (11 centimeters) in diameter and less than 59 inches (150 centimeters) in depth) were observed on the project study area. However, no burrowing owl or burrowing owl sign was observed at any of the burrows.

#### **4.3.2.4 Jurisdictional Waters**

The results of the 2013 jurisdictional delineation concluded that there are approximately 13.90 acres of jurisdictional wetlands and waters within the project study area. This is composed of approximately 1.26 acres of ACOE/RWQCB/CDFW/CCC perennial jurisdictional waters (Santa Ana River); approximately 0.07 acre of ACOE/RWQCB/CDFW/CCC ephemeral jurisdictional waters (earthen and concrete-lined drainages adjacent to Balboa Boulevard); approximately 1.67 acres of ACOE/RWQCB/CDFW/CCC jurisdictional wetlands (southern willow scrub within Talbert Regional Park); and approximately 10.90 acres of additional wetlands under the jurisdiction of the CDFW and CCC only (mulefat scrub, riparian herb, and southern willow scrub within Talbert Regional Park) that were mapped within the project study area (Table 4.3-2).

**Table 4.3-2  
Jurisdictional Wetland Delineation Summary**

Jurisdiction	Wetland Vegetation Community/Waters Type	Acreage <sup>a</sup>
ACOE/RWQCB/CDFW/CCC waters	Ephemeral waters – earthen bottom	0.01
	Ephemeral waters – concrete-lined/trapezoidal	0.06
	Perennial waters (Santa Ana River)	1.26
<i>ACOE/RWQCB/CDFW/CCC waters subtotal</i>		<i>1.33</i>
ACOE/RWQCB/CDFW/CCC wetlands	Southern willow scrub	1.41
	Disturbed southern willow scrub	0.27
<i>ACOE/RWQCB/CDFW/CCC wetlands subtotal</i>		<i>1.67</i>
CDFW/CCC only wetlands/riparian habitat	Southern willow scrub	4.81
	Disturbed southern willow scrub	0.79
	Revegetated southern willow scrub	1.31
	Mulefat scrub	0.94
	Disturbed mulefat scrub	1.70
	Revegetated mulefat scrub	0.33
	Riparian herb	1.02
<i>CDFW/CCC-only wetlands/riparian habitat subtotal</i>		<i>10.90</i>
<b>Jurisdictional total</b>		<b>13.90</b>

<sup>a</sup> May not sum due to rounding.

Figures 4.3-2a and 4.3-2b show the distribution of jurisdictional wetlands in the project study area. As described in Section 4.3.2, soils, hydrology, and vegetation were assessed at eight data-station locations to determine the presence or absence of wetlands criteria (field indicators). Results from the eight data stations document that the project study area is characterized by a variety of soil textures (i.e., silty clay, clay loam, sand, sandy loam, and silt loam), and three data stations were found to exhibit all three field indicators (hydric soils, hydrology, and hydrophytic vegetation). The data collected at each data station are included in Appendix C, on the ACOE's Wetland Determination Data Forms for the Arid West Region.

### **ACOE/RWQCB Overview**

ACOE/RWQCB-jurisdictional areas within the project study area total 4.26 acres (Table 4.3-2). The Santa Ana River is a navigable water of the United States; however, it lacks hydrophytic vegetation. The Santa Ana River flows approximately 1.2 miles west until its confluence with the Pacific Ocean. An additional ephemeral channel (both earthen and concrete-lined portions) was mapped based on the presence of hydrology indicators. The majority of the riparian habitat within Talbert Regional Park, however, did not exhibit all three wetlands criteria. In most cases, both hydric soils and evidence of hydrology were lacking, with the exception of two areas proximate to storm drain outfalls.

### **CDFW/CCC Overview**

CDFW jurisdiction extends over all areas under ACOE and RWQCB jurisdiction discussed above, as well as additional areas that meet ACOE wetland (i.e., hydrophytic) vegetation criteria but lack wetlands hydrology and/or hydric soils indicators. CDFW/CCC-jurisdictional only (mulefat scrub, riparian herb, southern willow scrub) areas on site total 10.90 acres, in addition to the ACOE/RWQCB acreages listed above (Table 4.3-2). These areas support a predominance of hydrophytic vegetation; however, they are not under the jurisdiction of the ACOE or RWQCB pursuant to the federal Clean Water Act due to the lack of two of the wetlands parameters.

#### **4.3.2.5 Wildlife Corridors and Habitat Linkages**

Wildlife corridors are linear features that connect large patches of natural open space and provide avenues for dispersal or migration of animals, as well as dispersal of plants (e.g., via wildlife vectors). Habitat linkages are patches of native habitat that function to join two larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation.

The project study area is not identified in the Central/Coastal Subregion NCCP/HCP as a habitat linkage. It lies on the northern end of the Central Subregion; the NCCP/HCP therefore does not identify biological resources adjacent to the north of this area. To the south, the NCCP/HCP



identifies habitats associated with Newport Bay, approximately 3.5 miles from Talbert Regional Park, separated by urbanized areas within the City of Costa Mesa. There are upland and wetland habitats on the adjacent property to the south. There are additional coastal wetlands approximately 1 mile and 2.5 miles to the southwest and west of the project study area, but these two are separated from the project study area by urbanized development within the City of Huntington Beach. Based on these characteristics, the potential for the project study area functioning as a wildlife corridor or habitat linkage is limited to potential linkages for migratory birds, shorebirds, and possibly some urban-adapted small and medium-sized mammals. Coyote would be the largest species expected to use this corridor.

### **4.3.3 Thresholds of Significance**

The following significance criteria are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential biological resource impacts. Impacts to biological resources would be significant if the proposed project would:

- BIO-1:** 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 CDFW, NMFS, or USFWS.
- BIO-2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW, NMFS, or USFWS.
- BIO-3:** Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- BIO-4:** 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.
- BIO-5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- BIO-6:** Conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan.

### 4.3.4 Impact Discussion

#### Definition of Impacts

##### *Direct Impacts*

Direct impacts are impacts that result from planned or potential future direct ground disturbance. For the proposed project, construction of the OCSD Southwest Costa Mesa Trunk Sewer (OCSD sewer pipeline) alignment would result in temporary vegetation disturbance within the proposed 30-foot wide permanent easement and, along the southern portion of the alignment, within an additional 20-foot wide temporary construction easement. Temporary construction impacts are also expected within the various existing Costa Mesa Sanitary District (CMSD)/City of Newport Beach pipeline alignments and within the existing footprint of various CMSD/City of Newport Beach pump stations that will be abandoned as part of the project. The exception to this is the portion of the proposed segment of the OCSD sewer pipeline that will be installed via horizontal directional drilling (HDD) techniques beneath the Santa Ana River (SAR) (SAR HDD segment). For this SAR HDD segment, no construction activities would occur aboveground within the boundaries of the SAR.

*Permanent direct impacts* would result from installation of new proposed aboveground facilities. The existing access roads are mostly adequate for accessing the new proposed facilities, with the exception of manholes along the southern portion of the proposed OCSD sewer alignment. For this portion of the alignment, several lateral access roads are required to allow access from the existing access road to the manholes. As such, new proposed aboveground facilities are limited to numerous manholes (which consist of a 20-foot circular area that is presumed to remain clear of vegetation) within Talbert Nature Preserve associated with the OCSD sewer pipeline and these lateral access roads on the southern portion of the alignment. There are no direct permanent impacts associated with the SAR HDD segment or CMSD/City of Newport Beach pump station abandonments as these project components do not include any permanent aboveground facilities. Additionally, there are no direct permanent impacts associated with the CMSD/City of Newport Beach pipelines because all new manholes would be located within existing streets or previously disturbed dirt paths.

*Temporary direct impacts* would occur during construction within the 30-foot-wide OCSD sewer pipeline easement, in the additional 2,000-square-foot SAR HDD segment construction area, and in the new 30-foot-wide CMSD/City of Newport Beach pipeline easements. Aside from the new permanent aboveground manholes, all other portions of the construction area are anticipated to be restored to preconstruction conditions; therefore, impacts are considered temporary.

Temporary impacts would include vegetation removal and other various biological disturbances associated with trenching, drilling portals, demolition, staging, and access. These temporary

impacts would not occur within the portion of the OCSD sewer pipeline easement over the Santa Ana River, which will be constructed via HDD (therefore, no aboveground disturbance would occur). This technique involves the use of pressurized bentonite as a drilling lubricant. Although highly unlikely, uncontrolled discharges through fissures and fractures below the ground surface (frac-out) could occur during this process. Although bentonite is non-toxic and small quantities would likely be diluted and dispersed with no appreciable effect to the environment, a large discharge could result in smothering of aquatic plants, benthic invertebrates, fish, and fish eggs. The HDD construction process has a very small potential to result in a frac-out during construction, which would create temporary impacts within the Santa Ana River. Temporary impacts may also occur over the long term during maintenance activities, particularly during potential OCSD and CMSD/City of Newport Beach sewer pipeline repairs. There are no direct temporary impacts associated with the CMSD/City of Newport Beach pump station abandonments, as construction would occur completely within existing developed areas.

### ***Indirect Impacts***

Indirect impacts are difficult to quantify but may be as significant as direct impacts. They primarily result from adverse edge effects, either short-term indirect impacts related to construction or long-term indirect impacts associated with the operation and maintenance of facilities in proximity to biological resources.

*Short-term indirect impacts* are indirect impacts associated with construction, including dust, human activity, pollutants (including potential erosion), and noise that extend beyond the identified construction work area. With respect to potential downstream impacts to the SAR, all project grading will be subject to the typical restrictions and requirements that address erosion and runoff, including the federal Clean Water Act, NPDES requirements, and preparation of a Storm Water Pollution Prevention Plan (SWPPP). The indirect impacts could occur as a result of the OCSD sewer pipeline (not including the SAR HDD segment), CMSD/City of Newport Beach pipeline, and CMSD/City of Newport Beach abandoned pump stations.

*Long-term indirect impacts* can include changes to hydrology, introduction of invasive species, dust, and noise that are operation related or occur over the long term.

As described in Section 4.8, Hydrology and Water Quality, the project will be properly designed and installed such that existing hydrology will be essentially unchanged following construction; therefore, these potential long-term indirect adverse impacts related to hydrology would be avoided.

The proposed project includes routine maintenance activities for the new proposed pipelines, which may result in long-term indirect impacts. All of the pipelines are within or adjacent to existing roads that are already routinely accessed as public roads, trails, or utility/park access roads. Since pump stations require more routine maintenance activities than pipelines and the

proposed project is reducing the number of pump stations within the sanitation system, long-term indirect impacts from maintenance activities would generally be reduced. The greatest reduction in impacts would be in areas surrounding the abandoned pump stations. However, the OCSD and CMSD/City of Newport Beach sewer alignments within and directly adjacent to the Talbert Nature Preserve could result in adverse long-term indirect impacts due to additional maintenance activities associated with the pipelines. In particular, the inverted siphon portion of the OCSD sewer will require monthly cleaning using a Vactor truck. This monthly cleaning will occur primarily within the existing OCSD Plant 2 facility and will not adversely affect biological resources. However, the remainder of the OCSD sewer will require annual cleaning using a Vactor truck and such cleaning can generate noise that could be disruptive to wildlife if conducted during the breeding season. No long-term indirect impacts are anticipated along the SAR HDD segment of the OCSD sewer pipeline.

A summary of the generalized biological resource impacts analysis is provided, by project component, in Table 4.3-3.

**Table 4.3-3  
Summary of General Biological Resource Impacts**

Project Proponent	Project Component	Permanent Direct Impacts	Temporary Direct Impacts	Short-term Indirect Impacts	Long-term Indirect Impacts
OCSD	Sewer pipeline (not including SAR HDD segment)	Yes, from new manholes and lateral access road segments in Talbert Regional Park	Yes, within 30-foot-wide easement	Yes, within or adjacent to Talbert Regional Park	Yes, during maintenance of new sewer pipelines
OCSD	Sewer pipeline (SAR HDD segment)	None; no new aboveground facilities	Potential for frac-out	None	None
CMSD/City of Newport Beach	Sewer pipelines	None; new manholes would be located in existing streets or previously disturbed dirt paths	Yes, within 30-foot-wide easement	Yes, within or adjacent to Talbert Regional Park	Yes, during maintenance of new sewer pipelines
CMSD/ City of Newport Beach	Pump stations (abandoned)	None; no new aboveground facilities	None; all construction within existing pump station facilities	Yes, adjacent to Talbert Regional Park	No adverse impacts (beneficial, due to reduced maintenance from abandoned pump stations)

**BIO-1:** *Would the project 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 CDFW, NMFS, or USFWS?*

## Plant Species

### *Direct Impacts*

As described in Section 4.3.2, Existing Conditions, one special-status plant species, southern tarplant, was documented as occurring within the project study area. Table 4.3-4 lists the permanent and temporary direct impacts to southern tarplant from various components of the proposed project (Figures 4.3-1a and 4.3-1b).

**Table 4.3-4**  
**Summary of Permanent and Temporary Direct Impacts to Special-Status Plant Species**

Species	CRPR	OCSD – Permanent Impact	OCSD – Temporary Impact	CMSD/City of Newport Beach – Temporary Impact
Southern tarplant	1B.1	--	384 individuals 0.01 acre	665 individuals 0.05 acre

In addition to anticipated temporary impacts associated with construction of the proposed project, the OCSD sewer pipeline and CMSD/City of Newport Beach pipelines would require future maintenance and possibly repair. Although routine maintenance would occur within existing access roads and therefore would not result in direct impacts to biological resources, potential future repairs/maintenance may occur within areas potentially occupied by southern tarplant within the 30-foot-wide permanent easement. These potential future impacts are expected to be rare and temporary in nature, similar to construction of the proposed project, because the affected areas would be restored to preconstruction conditions following completion of the repair/maintenance activity. In addition, the potential for frac-out from HDD drilling is not expected to affect southern tarplant or other special-status species as these effects would occur within the Santa Ana River, which is largely unvegetated throughout the project study area.

Temporary direct impacts to 1,049 individual southern tarplants are considered significant due to the relative rarity of this species, as indicated by its CRPR of 1B.1. In addition, impacts may occur outside the proposed impact area and may occur in the future during maintenance/repair; these impacts would be **significant (Impact BIO-1)**; mitigation measures are provided in Section 4.3.5, Mitigation Measures.

There are no permanent direct impacts to the southern tarplant.

### *Indirect Impacts*

Potential short- and long-term indirect impacts could occur from implementation of the proposed project. Potential short- and long-term indirect impacts to southern tarplant in the project study area would primarily result from the generation of fugitive dust, chemical pollutants, altered hydrology, increased human activity, and other adverse effects that may be associated with construction and future maintenance activities within and adjacent to Talbert Regional Park. Implementation of standard construction best management practices (BMPs) and construction-related minimization measures to control dust, erosion, and runoff would ameliorate the short-term effects. However, even with implementation of BMPs the proposed project would potentially have **significant (Impact BIO-2)** short- and long-term indirect impacts to special-status plant species. Mitigation measures are provided in Section 4.3.5, Mitigation Measures.

### **Wildlife Species**

#### *Direct Impacts*

The permanent direct impact of 0.02 acre of wetlands/riparian habitat due to new manholes and lateral access roads has the potential to adversely affect special-status wildlife species. In particular, much of this impacted habitat occurs along the southern portion of the OCSO sewer alignment within wetlands/riparian habitat that serves as mitigation for other project impacts and supports several special-status riparian bird species. Specific impacts include the permanent loss of suitable breeding habitat and/or foraging habitat for special-status wildlife species. Therefore, these potential permanent direct impacts are considered **significant (Impact BIO-3)** and mitigation measures are provided in Section 4.3.5, Mitigation Measures.

Permanent and temporary direct impacts to annual grassland, ruderal, developed land, disturbed habitat, and ornamental vegetation communities and land cover types are considered **less than significant** because these areas do not support habitat for special-status species. In particular, annual grassland and ruderal areas are too small to support significant raptor foraging habitat or use by special-status mammal species. These special-status wildlife species primarily rely upon the wetland/riparian and coastal sage scrub communities within Talbert Nature Preserve and would therefore not be significantly affected by temporary impacts to these other communities/land covers.

However, temporary direct impacts to 1.56 acres of wetlands/riparian habitat and 0.18 acre of coastal sage scrub habitat associated with construction of the proposed project could adversely affect special-status wildlife species that use these habitats. In particular, the one observed territory of least Bell's vireo within Talbert Regional Park would be temporarily impacted during construction. Specific impacts include the temporary loss of suitable breeding habitat and/or foraging habitat for special-status wildlife species, including least Bell's vireo. Therefore, these

potential temporary direct impacts are considered **significant (Impact BIO-4)** and mitigation measures are provided in Section 4.3.5, Mitigation Measures.

### ***Indirect Impacts***

Potential short-term indirect impacts to special-status wildlife in the project study area would primarily result from construction activities and include impacts related to or resulting from the generation of fugitive dust, noise, chemical pollutants, increased human activity, and non-native animal species. Short-term indirect impacts to annual grassland, ruderal, developed land, disturbed land, and ornamental vegetation communities and land cover types would not be significant because these areas do not support habitat for special-status species. In particular, annual grassland and ruderal areas are too small to support significant raptor foraging habitat or use by special-status mammal species. However, noise generated during construction may significantly affect special-status wildlife during the breeding season due to disruption of reproduction potential, resulting in population declines. Similarly, noise generated by future maintenance and repair during the breeding season of special-status wildlife has the potential to significantly impact special-status wildlife. Therefore, short- and long-term indirect impacts associated with the proposed project would be **significant (Impact BIO-5)** and mitigation measures are provided in Section 4.3.5, Mitigation Measures.

Special-status wildlife species use of areas more than 300 feet north, west, and east of Talbert Regional Park is highly limited. There may be some occasional perching on street trees and other ornamental vegetation within these urbanized areas, but nesting is not expected to occur. The 300-foot distance is a commonly accepted safe distance beyond which indirect impacts are not likely to affect special-status vegetation communities (CBI 2000). Therefore, construction and maintenance in developed streets more than 300 feet from Talbert Regional Park would result in **less than significant** impacts to special-status wildlife species.

**BIO-2:**        *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW, NMFS, or USFWS?*

### **Direct Impacts**

Special-status vegetation communities within the project study area include coastal sage scrub and several wetland/riparian communities. These communities occur only within and directly adjacent to Talbert Nature Preserve. As such, project activities that are located greater than 300 feet from Talbert Nature Preserve would have no impact on special-status vegetation communities. Permanent direct impacts to vegetation communities were quantified by comparing the footprint of the proposed new aboveground facilities (which are

limited to new manholes and lateral access roads within Talbert Regional Park) with the boundaries of the vegetation communities mapped in the project study area. Temporary direct impacts to vegetation were quantified by comparing the footprint of the remainder of the 30-foot permanent easement and the additional 20-foot temporary construction easement with the boundaries of the vegetation communities mapped in the project study area.

Table 4.3-5 shows the acreage of permanent and temporary direct impacts to vegetation communities and land covers in the project study area. Figures 4.3-1a and 4.3-1b show, spatially, the impacts to vegetation communities and land covers. Vegetation communities considered special status are denoted by bold type in Table 4.3-5.

**Table 4.3-5**  
**Permanent and Temporary Direct Impacts to Vegetation Communities**  
**and Land Cover Types**

Vegetation Community/Land Cover	OCSD – Permanent Impact (acre)	OCSD – Temporary Impact (acre)	CMSD/City of Newport Beach – Temporary Impact (acre)
<i>Upland Vegetation (State Rank)</i>			
Coastal sage scrub (S3.1) <sup>a</sup>	—	—	0.07
Revegetated coastal sage scrub (S3.1) <sup>a</sup>	—	—	0.11
Annual grassland (S4)	—	0.06	0.03
Ruderal (not ranked)	0.02	0.66	0.14
<i>Subtotal</i>	<i>0.02</i>	<i>0.72</i>	<i>0.35</i>
<i>Wetland/Riparian Vegetation (State Rank)</i>			
<b>Southern willow scrub (S2.1)<sup>a</sup></b>	0.01	0.68	0.13
Disturbed southern willow scrub (S2.1) <sup>a</sup>	—	0.04	—
Revegetated southern willow scrub (S2.1) <sup>a</sup>	—	0.46	—
Mulefat scrub (S4)	—	—	0.07
Disturbed mulefat scrub (S4)	0.01	0.20	—
Revegetated mulefat scrub (S4)	—	0.18	—
<b>Riparian herb (S2.1)<sup>a</sup></b>	—	—	0.12
<i>Subtotal</i>	<i>0.02</i>	<i>1.56</i>	<i>0.32</i>
<i>Land Cover Types</i>			
Developed land	0.03	0.29	2.61
Disturbed land	0.05	0.75	0.50
Ornamental	—	0.09	0.54
<i>Subtotal</i>	<i>0.08</i>	<i>1.13</i>	<i>3.65</i>
<b>Total<sup>b</sup></b>	<b>0.12</b>	<b>3.41</b>	<b>4.32</b>

<sup>a</sup> Communities listed by CDFW as high priority for inventory (i.e., S1, S2, or S3).

<sup>b</sup> Total may not sum due to rounding.

Due to the rarity of wetland/riparian communities, and the fact that portions of these area were revegetated as mitigation for other projects and are regulated jurisdictional communities, the



proposed project's permanent direct impacts to wetlands/riparian vegetation communities, as listed in Table 4.3-5, are considered **significant (Impact BIO-6)** absent mitigation measures. Similarly, the proposed project's temporary direct impacts to special-status vegetation communities (wetlands/riparian and coastal sage scrub), as listed in Table 4.3-5, are considered **significant (Impact BIO-7)** absent mitigation measures. Permanent impacts to non-special-status vegetation communities and land cover types (ruderal, developed land, and disturbed land) are considered **less than significant** as these communities are not rare and do not support special-status species.

In addition to anticipated permanent and temporary impacts associated with construction, the OCSO sewer pipeline and CMSD/City of Newport Beach pipelines may require future repair and maintenance. Routine maintenance would occur within existing access roads, new lateral roads, and the clearance area around each manhole and therefore would not result in additional direct permanent impacts to biological resources. Potential future repairs however, may occur within vegetated portions of the 30-foot-wide permanent easement within Talbert Regional Park and these potential future impacts are considered long-term direct temporary impacts because they are expected to be rare and temporary in nature, similar to construction of the proposed project, and because the affected areas would be restored to preconstruction conditions following completion of the repair/maintenance activity. Given the rarity of wetland/riparian and coastal sage scrub vegetation communities and special-status species supported by these communities in this area, these long-term direct temporary impacts are considered **significant (Impact BIO-8)** absent mitigation measures. The potential for frac-out during HDD construction under the Santa Ana River is not expected to affect vegetation communities as these effects would occur within the Santa Ana River, which is largely unvegetated.

### **Indirect Impacts**

Potential short- and long-term indirect impacts to special-status vegetation communities in the project study area would primarily result from the generation of fugitive dust, chemical pollutants, altered hydrology, increased human activity, and other adverse effects that may be associated with construction and future maintenance activities of the proposed project within and adjacent to Talbert Regional Park. The proposed project's potential short- and long-term indirect impacts to special-status vegetation communities are considered **significant (Impact BIO-9)**, absent mitigation measures.

**BIO-3:** *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

### Direct Impacts

Permanent and temporary direct impacts to jurisdictional waters were quantified by comparing the permanent and temporary impact areas with the jurisdictional areas. Table 4.3-6 lists the permanent and temporary direct impacts to jurisdictional waters, including wetlands, from various components of the proposed project (Figures 4.3-2a and 4.3-2b).

**Table 4.3-6**  
**Permanent and Temporary Direct Impacts to Jurisdictional Waters, Including Wetlands**

Vegetation Communities and Land Covers	OCSD – Permanent Impact (acre)	OCSD – Temporary Impact (acre)	CMSD/City of Newport Beach – Temporary Impact (acre)
<i>ACOE/RWQCB/CDFW/CCC</i>			
Southern willow scrub	—	0.02	0.03
<i>CDFW/CCC</i>			
Southern willow scrub	0.01	0.66	0.10
Disturbed southern willow scrub	—	0.04	—
Revegetated southern willow scrub	—	0.46	—
Mulefat scrub	—	—	0.07
Disturbed mulefat scrub	0.01	0.20	—
Revegetated mulefat scrub	—	0.18	—
Riparian herb	—	—	0.12
Unvegetated ephemeral channel (earthen)	—	—	—
Unvegetated ephemeral channel (concrete)	—	—	0.02
<b>Total Jurisdictional Resources<sup>a</sup></b>	<b>0.02</b>	<b>1.55</b>	<b>0.32</b>

<sup>a</sup> Total may not sum due to rounding.

The proposed project would result in temporary and permanent direct impacts to several jurisdictional waters, including wetlands, as summarized in Table 4.3-6. The identified direct permanent impact of 0.02 acre of new manholes and lateral access roads are considered **significant (Impact BIO-10)** absent mitigation. In addition, temporary construction activities and long-term maintenance and repairs within jurisdictional waters would require review and approval by wetlands resources agencies and these impacts are also considered **significant (Impact BIO-11)** absent mitigation. The following agency permits would be obtained for the proposed project in compliance with state and federal regulations for impacts to jurisdictional waters and wetlands:

- Section 401/404 permit issued by the RWQCB and the ACOE for all project-related disturbances of waters of the United States and/or associated wetlands
- Section 1602 Streambed Alteration Agreement issued by the CDFW for all project-related disturbances of any streambed
- Coastal Development Permit issued by CCC or authorized jurisdiction.

In addition, installation of the proposed OCSD dual 14-inch inverted sewer siphon under the Santa Ana River would be performed using an HDD technique. Although highly unlikely, frac-out could occur during this process. This potential discharge within jurisdictional waters/streambed may be regulated by the ACOE, RWQCB, CDFW, and/or CCC. The potential for frac-out (as well as associated cleanup activities) would have temporary direct impacts on an undetermined area of perennial unvegetated waters (the Santa Ana River). Temporary direct impacts may include mortality of benthic macroinvertebrates, fish, and aquatic plants. Therefore, temporary direct impacts to jurisdictional waters as a result of HDD operations would be **significant (Impact BIO-12)**; mitigation is provided in Section 4.3.5.

### Indirect Impacts

Potential short- and long-term indirect impacts to jurisdictional waters in the project study area would primarily result from the generation of fugitive dust, chemical pollutants, altered hydrology, increased human activity, and other adverse effects that may be associated with construction and future maintenance activities of the proposed project. These potential short- and long-term indirect impacts to jurisdictional waters, including wetlands, in the project study area are considered **significant (Impact BIO-13)** and mitigation measures are provided in Section 4.3.5.

**BIO-4:** *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites?*

### Direct Impacts

As described under Thresholds BIO-1 and BIO-2, the direct permanent impacts of the proposed project are small (0.02 acre). Although these impacts to vegetation communities and special-status species are considered significant, the effect on potential wildlife corridor and habitat linkage functions would be minimal because the impact is so small compared to the overall amount of habitat in the area (less than 0.01%). Direct temporary impacts to annual grassland, ruderal, developed land, disturbed land, and ornamental vegetation communities and land cover types would not be considered significant because these communities and land cover types do not support habitat for special-status species and are therefore unlikely to support important wildlife

corridor and habitat connectivity functions. Similarly, wildlife species' use of areas more than 300 feet north, east, and west of Talbert Nature Preserve is highly limited. Therefore, construction and maintenance in developed streets more than 300 feet from Talbert Nature Preserve would not result in significant impacts to wildlife corridors and habitat connectivity functions. However, temporary direct impacts to 1.56 acres of wetlands/riparian habitat and 0.18 acre of coastal sage scrub habitats associated with the proposed project could adversely affect special-status wildlife species behavior, and therefore temporarily impact wildlife movement/habitat linkage functions. These impacts are considered **significant (Impact BIO-14)**.

### **Indirect Impacts**

Potential short- and long-term indirect impacts on wildlife movement/habitat linkage functions in the project study area would primarily result from potential additional fugitive dust, noise, chemical pollutants, human activity, non-native animal species, and other adverse effects that may be associated with construction and future maintenance activities of the proposed project within and adjacent to Talbert Regional Park. These potential short- and long-term indirect impacts due to construction and future maintenance and repair are considered **significant (Impact BIO-15)**.

**BIO-5:**        *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

As discussed in Section 4.9, Land Use and Planning, Tables 4.9-4, 4.9-5, 4.9-6, and 4.9-7, the proposed project would be in compliance with all local policies and ordinances protecting biological resources. The proposed project would be in compliance with the California Coastal Act, Section 302031 and Section 30240, with mitigation measures in place to minimize potential impacts to biological resources and protect environmentally sensitive habitats, respectively (see Table 4.9-4). The proposed project would also be in compliance with the City of Costa Mesa General Plan Conservation Element Policies CON-1A.1 and CON-1A.5, with mitigation. These policies are in place to protect biological resources from development and to pursue off-site mitigation when on-site mitigation is infeasible (see Table 4.9-5).

In addition, the proposed project would be in compliance with the City of Huntington Beach General Plan Land Use Element Policy LU 5.1.1, which requires that development protects environmental resources through consideration of federal, state, and local policies. The proposed project would also be in compliance with Coastal Element Policies C-6.1.3 and C-7.1.2, which are in place to maintain, protect, and restore marine resources and to ensure that development is sited and designed to minimize impacts to sensitive habitats (see Table 4.9-6).

Furthermore, the proposed project would be in compliance with the City of Newport Beach General Plan Natural Resources Element Policies 10.5, 10.6, 13.1, and 13.2. Policies 10.5 and

10.6 are in place to limit development and require the use of buffers in areas containing significant or rare biological resources. Policies 13.1 and 13.2 are in place to protect wetlands and require a jurisdictional delineation survey when the presence or potential for wetland species exists. The proposed project is in compliance with all policies outlined in the City of Newport Beach General Plan Natural Resources Element.

Since the proposed project would not conflict with any local policies or ordinances protecting biological resources, impacts would be **less than significant**.

**BIO-6:** *Would the project conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or state habitat conservation plan?*

Assessing impacts to regional resource planning takes into consideration whether the project is in conflict with the requirements of an adopted plan, such as an NCCP, an HCP, an associated subarea plan, or another regional resource planning effort. Compliance with the County of Orange Central/Coastal NCCP/HCP requires compliance with several siting, construction, and operations and maintenance policies. The proposed project has been designed to be consistent with requirements of the Central/Coastal NCCP/HCP. The proposed project's compliance with the NCCP/HCP is presented in Table 4.3-7. Areas that require particular demonstration of compliance during project construction and ongoing maintenance include preparation of revegetation and monitoring plans, biological monitoring, and ongoing communication and reporting to Orange County Parks (OC Parks) as the reserve owner/manager for this portion of the NCCP/HCP Reserve. Since the proposed project is compliant with the NCCP/HCP, impacts would be **less than significant**.

**Table 4.3-7**  
**Compliance with NCCP/HCP Siting Criteria and Policies**

Siting Criteria – Section 5.9.1 of NCCP/HCP	
1. Operation and maintenance of existing and future infrastructure facilities is a permitted use within the Reserve System and is included as authorized Incidental Take under this NCCP/HCP.	Sewer facilities are included in the allowable uses within the NCCP/HCP.
2. Infrastructure facilities included in Figure 28 (or comparable facilities) shall be treated as permitted uses in the subregional Reserve System, subject to the specific policies set forth in sections 5.9.2 through 5.9.4.	The proposed project is considered a comparable facility to those included in Figure 28 of the NCCP/HCP.
3. To the extent feasible, siting of new infrastructure within the Reserve System should minimize impacts to coastal sage scrub, other habitat, and "Target Species."	Impacts to biological resources are avoided and minimized to the maximum extent practicable.
4. The loss of habitat and take of species associated with the new infrastructure facilities is identified in Chapter 7 of this NCCP/HCP. The identified loss of habitat and take of species associated with the new infrastructure facilities sited within the Reserve System is considered authorized Incidental Take and is mitigated under this subregional NCCP/HCP.	The proposed project is in compliance.

**Table 4.3-7**  
**Compliance with NCCP/HCP Siting Criteria and Policies**

5. Because many of the proposed facilities will not be constructed in the immediate future (e.g., certain arterial roads and water facilities), and because of the dynamic service environment for public utilities, flexibility will be allowed in future design and siting of facilities.	The proposed project is in compliance.
6. Other permitted uses within the Reserve System include those activities or facilities that are necessary to carry out activities in accordance with other governmental regulations affecting public health, safety, and welfare.	The proposed project is in compliance.
<b>Construction Policies for New Facilities within the Reserve – Section 5.9.3 of NCCP/HCP</b>	
Each infrastructure project proponent will coordinate the siting of new infrastructure with the reserve owner/manager to document compliance with NCCP/HCP policies in a timely manner.	OCSD and CMSD/City of Newport Beach are coordinating with OC Parks.
To the extent feasible, infrastructure will be located and designed to minimize impacts to sensitive resources within the reserve. The physical and engineering requirements of the proposed infrastructure shall be considered during the siting procedure.	Impacts to biological resources are avoided and minimized to the maximum extent practicable.
Access roads for permitted facilities will be routed as feasible to minimize disturbance and impacts to sensitive resources. This will generally mean the shortest feasible route. The cleared roadbed will be the minimum feasible width taking into account specific slope and safety requirements. Necessary erosion control measures and/or drainage pipes will be included. The project proponent shall hire a qualified biologist to document the resources and vegetation in the area to be disturbed by the proposed facility. The biological findings shall provide the basis for revegetation and monitoring plans. The biologist used may be in the employ of the reserve owner/manager, the non-profit reserve management corporation, the proposing agency, or an independent consultant acceptable to the reserve owner/manager.	Existing access roads have been used to the extent feasible. In one portion of the OCSD sewer alignment, a new access road is designed to minimize impacts to existing wetlands. The roadbed width has been minimized. Documentation of compliance will be provided via implementation of mitigation measures.
Improvement plans, including those for access roads, will be distributed to the reserve owner/manager as part of the coordination process concurrent with submittal to the approving jurisdiction. Said plans shall include revegetation of any temporarily disturbed areas in accordance with reserve standards. Provision shall be made for monitoring the revegetated areas for 5 years following completion of revegetation.	OCSD and CMSD/City of Newport Beach are required to coordinate with OC Parks to obtain appropriate easements and entry permits.
Activities shall be permitted that are necessary to comply with other governmental regulations affecting public health, safety, and welfare. Examples include compliance with Water Quality Control Board regulations to use "best construction practices" to minimize sedimentation.	The proposed project is in compliance.
<b>Section 5.9.2 provides policies for the operation and maintenance of proposed facilities within the NCCP/HCP Reserve.</b>	
The operations and maintenance activities listed above are permitted as required within facility easements and are considered authorized Incidental Take.	The proposed project is in compliance.
Periodic regrading and repair of roads within the existing cleared area will be permitted as needed.	The proposed project is in compliance.
Routine facility operation, maintenance, and repairs that extend outside the cleared area will be allowed consistent with project proponent compliance with the following procedures: Need for the action will be coordinated with the public reserve owner/manager; The area to be disturbed shall be delineated on a map; Existing biological resources in the area to be disturbed will be documented using existing or new surveys and submitted to the reserve owner/manager; A revegetation plan shall be prepared, implemented, and monitored by the agency proposing the action. The results of the monitoring will be submitted to the reserve owner/manager; and	The proposed project is in compliance. Documentation of compliance will be provided via implementation of mitigation measures.

**Table 4.3-7**  
**Compliance with NCCP/HCP Siting Criteria and Policies**

Incidental Take that results from operations/maintenance activities will be considered authorized, and will not be considered new take. Mitigation shall be satisfied by replacement of the area disturbed or other appropriate areas within the reserve on an acre-for-acre basis.	
Where feasible and consistent with public safety, and where agreed to by the facility owner/easement holder, joint use for public access shall be permitted on infrastructure access roads. This policy is intended to reduce the need for new trail construction and associated Incidental Take. Public use will be monitored. Damage or vandalism to facilities or habitat resulting from public use will be cause for prohibiting use of access roads.	Access roads are proposed for joint use. Public use within Talbert Nature Preserve will continue to be conducted by OC Parks.
Routine, periodic patrol and inspection of roads and facilities shall be permitted.	The proposed project is in compliance.
Insulator washing on electrical transmission facilities shall be permitted as determined necessary by the operator/owner.	Not applicable.
Weed abatement and clearing around facilities shall be allowed using mechanical and chemical means consistent with current regulations.	The proposed project is in compliance.
Each infrastructure operator shall prepare a plan for the reserve owner/manager detailing its expected operational needs. The first such plan shall be submitted within six months of the identification of a reserve manager. Plans shall include expected patrol and maintenance time intervals, describe, to the extent practicable, routine repair/maintenance activities and location, describe areas and procedures to be used for routine weed abatement and clearing, and any other anticipated operational activities.	The proposed project is in compliance. Documentation of compliance will be provided via implementation of mitigation measures.
The reserve non-profit management corporation shall prepare and implement a program to educate operations and maintenance personnel about the reserve and its sensitive resources. The program shall include guidelines on behavior of field personnel and procedures for working in the reserve.	OCSD and CMSD/City of Newport Beach are required to coordinate with OC Parks to obtain appropriate easements and entry permits.
Attempts will be made to undertake activities outside the breeding/nesting season.	The proposed project is in compliance. Documentation of compliance will be provided via implementation of mitigation measures.

### 4.3.5 Mitigation Measures

**MM-BIO-1:** Mitigation for direct permanent and temporary impacts shall be implemented through on-site restoration and enhancement/restoration of coastal sage scrub and riparian/wetland communities in accordance with the mitigation ratios presented in Table 4.3-8.

**Table 4.3-8**  
**Permanent and Temporary Direct Impacts to Vegetation Communities, Jurisdictional Waters, and Special-Status Plant Species (including existing mitigation areas)**

Biological Resource	OCSD Permanent Impact (acre)	OCSD – Temporary Impact (acre)	OCSD Mitigation <sup>a</sup>	CMSD/City of Newport Beach – Temporary Impact (acre)	CMSD/City of Newport Beach Mitigation <sup>a</sup>
<i>Upland Vegetation (State Rank)</i>					
Coastal sage scrub (S3.1) <sup>b</sup>		—	—	0.07	0.14
Revegetated coastal sage scrub – existing mitigation area (S3.1) <sup>b</sup>		—	—	0.11	0.55
<i>Subtotal<sup>2</sup></i>		—	—	<i>0.18</i>	<i>0.69</i>
<i>Wetland/Riparian Vegetation (State Rank)</i>					
<b>Southern willow scrub (S2.1)<sup>b</sup></b>	0.01	0.68	1.86	0.13	0.26
<b>Disturbed southern willow scrub (S2.1)<sup>b</sup></b>		0.04	0.08		
<b>Revegetated southern willow scrub (S2.1)<sup>b</sup></b>		0.46	2.30	—	—
Mulefat scrub (S4)		—	—	0.07	0.14
Disturbed mulefat scrub (S4)	0.01	0.20	0.42	—	—
Revegetated mulefat scrub (S4)		0.18	0.90	—	—
<b>Riparian herb (S2.1)<sup>b</sup></b>		—	—	0.12	0.24
Unvegetated ephemeral channel (concrete)		—	—	0.02	0.02
<i>Subtotal<sup>c</sup></i>	<i>0.02</i>	<i>1.56</i>	<i>5.56</i>	<i>0.34</i>	<i>0.66</i>
<i>Special-Status Plant Species</i>					
Southern tarplant		384 individuals	768 individuals	665 individuals	1,330 individuals

**Note:** Communities considered special status are presented in bold type.

OCSD = Orange County Sanitation District; CMSD = Costa Mesa Sanitary District; S = state rank

<sup>a</sup> Permanent impacts within existing mitigation areas require restoration at a 5:1 ratio. The remainder of permanent impacts requires restoration at a 2:1 ratio. All temporary impacts require 1:1 restoration on site (in situ). In addition, temporary impacts within existing mitigation areas require an additional 4:1 enhancement; temporary impacts to vegetated areas not currently designated as mitigation require an additional 1:1 enhancement; temporary impacts to unvegetated areas do not require additional enhancement. Existing mitigation areas include vegetation communities classified as “revegetated” as well as one area of southern willow scrub (0.16 acre).

<sup>b</sup> Communities listed by CDFW as high priority for inventory (i.e., S1, S2, or S3).

<sup>c</sup> Total may not sum due to rounding.

OCSD, CMSD, and the City of Newport Beach shall each develop and implement a conceptual restoration plan for direct permanent and temporary impacts within each agency’s service area as identified in Table 4.3-8 (see Figures 3-3 and 3-4 for identification of service areas).



The conceptual restoration plans shall provide for restoration of permanent and temporary impacts of construction and implementation of required additional enhancement (or other restoration) activities either on site, at an acceptable off-site location, or through acquisition of approved mitigation credits. Mitigation site/credit acceptability will be determined by the ACOE, CDFW, RWQCB, and CCC. The conceptual restoration plans shall, at a minimum, include an implementation plan, planting/seeding plan, invasive species eradication methods, interim and final success criteria/performance standards, estimated costs, and identification of responsible entities. The conceptual restoration plans shall be approved by the ACOE, CDFW, RWQCB, and CCC prior to construction of the proposed project.

Temporary impacts that occur during construction, outside the approved limits, will require mitigation at a 5:1 ratio (1:1 in situ and 4:1 additional enhancement). Future temporary impacts within the proposed utility easements due to maintenance and/or repair shall require restoration at a 1:1 ratio (in situ restoration only).

**MM-BIO-2:** Project construction shall be completed by each agency (OCSD, CMSD, and the City of Newport Beach) in conformance with the County of Orange Central and Coastal Subregion Natural Community Conservation Planning and Habitat Conservation Plan (NCCP/HCP), which provides for avoidance of impacts during the breeding season of most special-status wildlife species as well as minimization of impacts to biological resources. Implementation of the following measures (text in italics is language directly taken from the Central/Coastal NCCP/HCP) shall be documented in a biological compliance report completed by a designated, qualified project biologist. Whereas the conditions below reference coastal sage scrub (CSS), these measures will also apply to other native habitats within the project study area (i.e., riparian/wetland communities).

*1) To the maximum extent practicable, no grading of CSS habitat that is occupied by nesting gnatcatchers will occur during the breeding season (February 15 through July 15). It is expressly understood that this provision and the remaining provisions of these “construction-related minimization measures,” are subject to public health and safety considerations. These considerations include unexpected slope stabilization, erosion control measure and emergency facility repairs. In the event of such public health and safety circumstances, landowners or public agencies/utilities will provide USFWS/CDFW with the maximum practicable notice (or such notice as is*

*specified in the NCCP/HCP) to allow for capture of gnatcatchers, cactus wrens and any other CSS Identified Species that are not otherwise flushed and will carry out the following measures only to the extent as practicable in the context of the public health and safety considerations.*

- 2) Prior to the commencement of grading operations or other activities involving significant soil disturbance, all areas of CSS habitat to be avoided under the provisions of the NCCP/HCP, shall be identified with temporary fencing or other markers clearly visible to construction personnel. Additionally, prior to the commencement of grading operations or other activities involving disturbance of CSS, a survey [using USFWS-protocol survey methods] will be conducted to locate gnatcatchers and cactus wrens within 100 feet of the outer extent of projected soil disturbance activities and the locations of any such species shall be clearly marked and identified on the construction/grading plans.*
- 3) A monitoring biologist, acceptable to USFWS/CDFW will be on site during any clearing of CSS. The landowner or relevant public agency/utility will advise USFWS/CDFW at least seven (7) calendar days (and preferably fourteen (14) calendar days) prior to the clearing of any habitat occupied by Identified Species to allow USFWS/CDFW to work with the monitoring biologist in connection with bird flushing/capture activities. The monitoring biologist will flush Identified Species (avian or other mobile Identified Species) from occupied habitat areas immediately prior to brush-clearing and earth-moving activities. If birds cannot be flushed, they will be captured in mist nets, if feasible, and relocated to areas of the site to be protected or to the NCCP/HCP Reserve System [mist net capture and relocation is required for this project but may be conducted by the NCCP/HCP reserve owner/manager(s)]. It will be the responsibility of the monitoring biologist to assure that Identified bird species will not be directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities on a timely basis.*
- 4) Following the completion of initial grading/earth movement activities, all areas of CSS habitat to be avoided by construction equipment and personnel will be marked with temporary fencing and other appropriate markers clearly visible to construction personnel. No construction access, parking or storage of equipment or materials will be permitted within such marked areas.*
- 5) In areas bordering the NCCP Reserve System or Special Linkage/Special Management areas containing significant CSS identified in the NCCP/HCP*

*for protection, vehicle transportation routes between cut-and-fill locations will be restricted to a minimum number during construction, consistent with project construction requirements. Waste dirt or rubble will not be deposited on adjacent CSS identified in the NCCP/HCP for protection. Preconstruction meetings involving the monitoring biologist, construction supervisors and equipment operators will be conducted and documented to ensure maximum practicable adherence to these measures.*

- 6) *CSS identified in the NCCP/HCP for protection and located within the likely dust drift radius of construction areas shall be periodically sprayed with water to reduce accumulated dust on the leaves as recommended by the monitoring biologist.*

In addition, the following measures not listed in the NCCP/HCP shall be implemented by OCSD, CMSD, and the City of Newport Beach under the direction of the project biologist:

1. At the end of each workday, the project biologist (or contractor under the direction of the project biologist) will check that all potential wildlife pitfalls (trenches, bores, and other excavations) have been backfilled, covered, or sloped to allow wildlife egress. Should wildlife individuals become trapped, a qualified biologist shall remove and relocate them.
2. All pipes or other construction materials or supplies will be covered or capped in storage or laydown areas at the end of each workday. No pipes or tubing of sizes or inside diameters ranging from 1 to 10 inches will be left open either temporarily or permanently.
3. No equipment maintenance will be performed within 100 feet of coastal sage scrub and/or wetland/riparian communities and jurisdictional waters, where petroleum products or other pollutants from the equipment may enter these areas.
4. All applicable measures of the current National Pollutant Discharge Elimination System (NPDES) permit for construction activities are being implemented.

**MM-BIO-3:** OCSD, CMSD, and the City of Newport Beach shall each develop an operations and maintenance manual for the project components within each agency's service area (see Figures 3-3 and 3-4 for identification of service areas).

The operations and maintenance manuals, to be developed in coordination with Orange County Parks (OC Parks), shall outline the restrictions and best practices related to conducting operations, maintenance, and potential repair activities within Talbert Regional Park. At a minimum, the manuals shall include: identification of designated access roads and gates; procedures for notification of OC Parks regarding operations and maintenance activities; and measures to minimize dust, runoff, trash/debris, chemical pollutant spills, and introduction of non-native invasive species. Measures shall also be included in the manuals that provide for avoidance and minimization of maintenance activities during the bird breeding season (February 15–July 15) where feasible.

**MM-BIO-4:** OCSD, CMSD, and the City of Newport Beach shall each be responsible for monitoring noise impacts to sensitive wildlife species. During the bird breeding season (February 15–July 15), construction activities associated with the OCSD, CMSD, and City of Newport Beach components that have the potential to generate greater than 60 A-weighted decibels (dBA) hourly equivalent level ( $L_{eq}$ ) shall be monitored by a qualified biologist to confirm that construction-generated noise is less than 60 dBA hourly  $L_{eq}$  at the location of any coastal California gnatcatcher, least Bell's vireo, and/or raptor nests. Nest locations shall be determined by conducting focused surveys weekly during the bird breeding season within 300 feet of any current or planned construction. If construction occurs within 300 feet of any active nests of these species, noise attenuation (e.g., sound walls, limitations on the duration/frequency of noise-generating activities) shall be implemented as necessary to reduce noise levels below the 60 dBA hourly  $L_{eq}$  threshold. This measure shall be incorporated into the operations and maintenance manual to be prepared by each agency (OCSD, CMSD, and City of Newport Beach) and shall apply to each agency's future major operations and maintenance activities, such that routine maintenance near wildlife habitat areas is scheduled outside of the breeding season (to the extent practicable) and noise limitations (as discussed above) are employed when maintenance and operations during the breeding season are unavoidable.

**MM-BIO-5:** OCSD shall prepare a frac-out plan for distribution and approval by the ACOE, CDFW, RWQCB, CCC, and USFWS. The plan shall, at a minimum, include:

- Maintenance of a 25-foot minimum depth below the bottom of the Santa Ana River.
- Use of lower pressure and nontoxic leak sealants in substrates where frac-outs are more likely to occur.

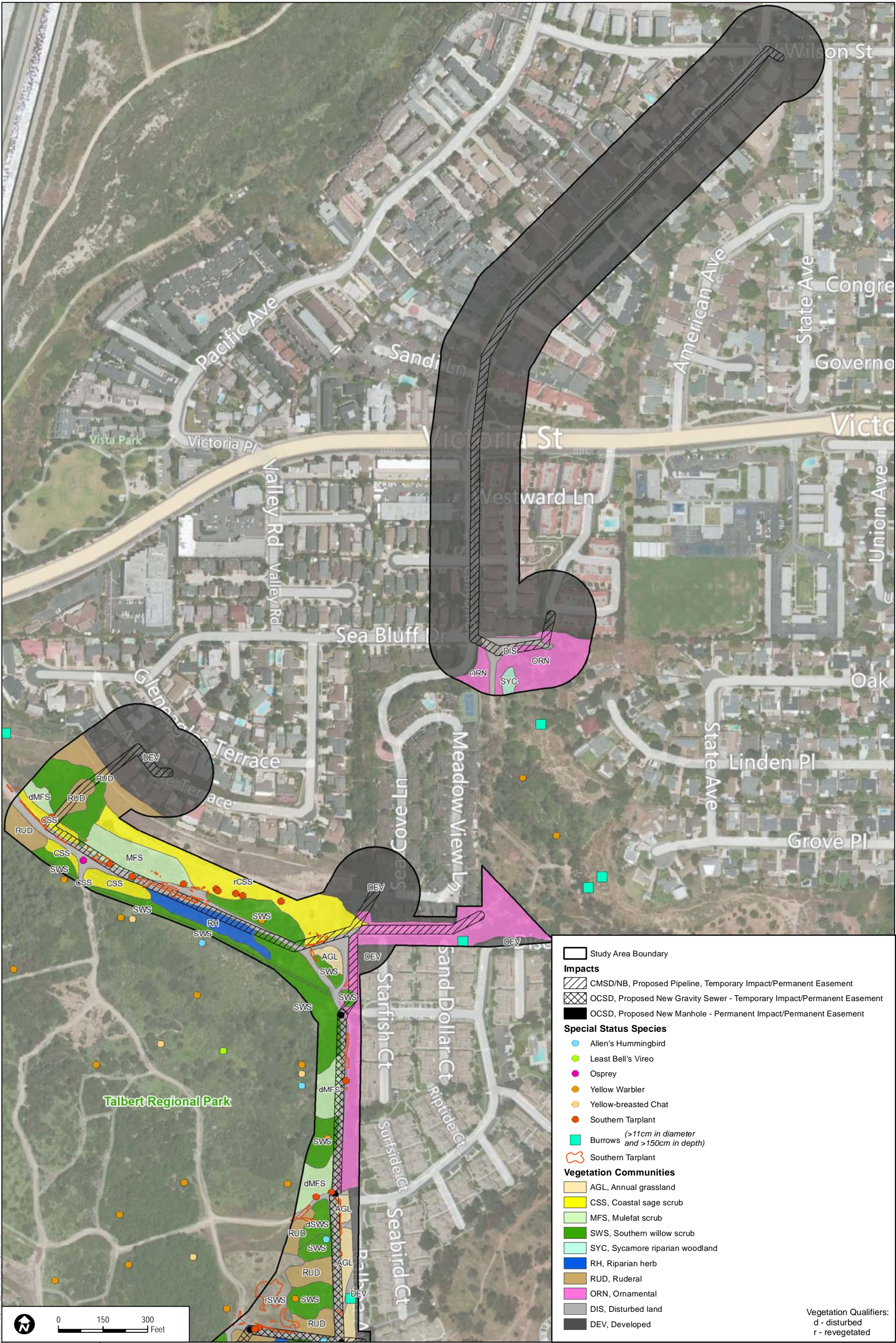
- Procedures for cleanup, including storage of necessary cleanup materials on site (e.g., silt curtains and turbidity barriers, pumps, hoses, and tanks).
- Notification procedures, including notification of resource agencies, in the event of a frac-out.

#### **4.3.6 Level of Significance after Mitigation**

Implementation of Mitigation Measures MM-BIO-1 through MM-BIO-5 would reduce all potentially significant impacts to biological resources to below a level of significance.

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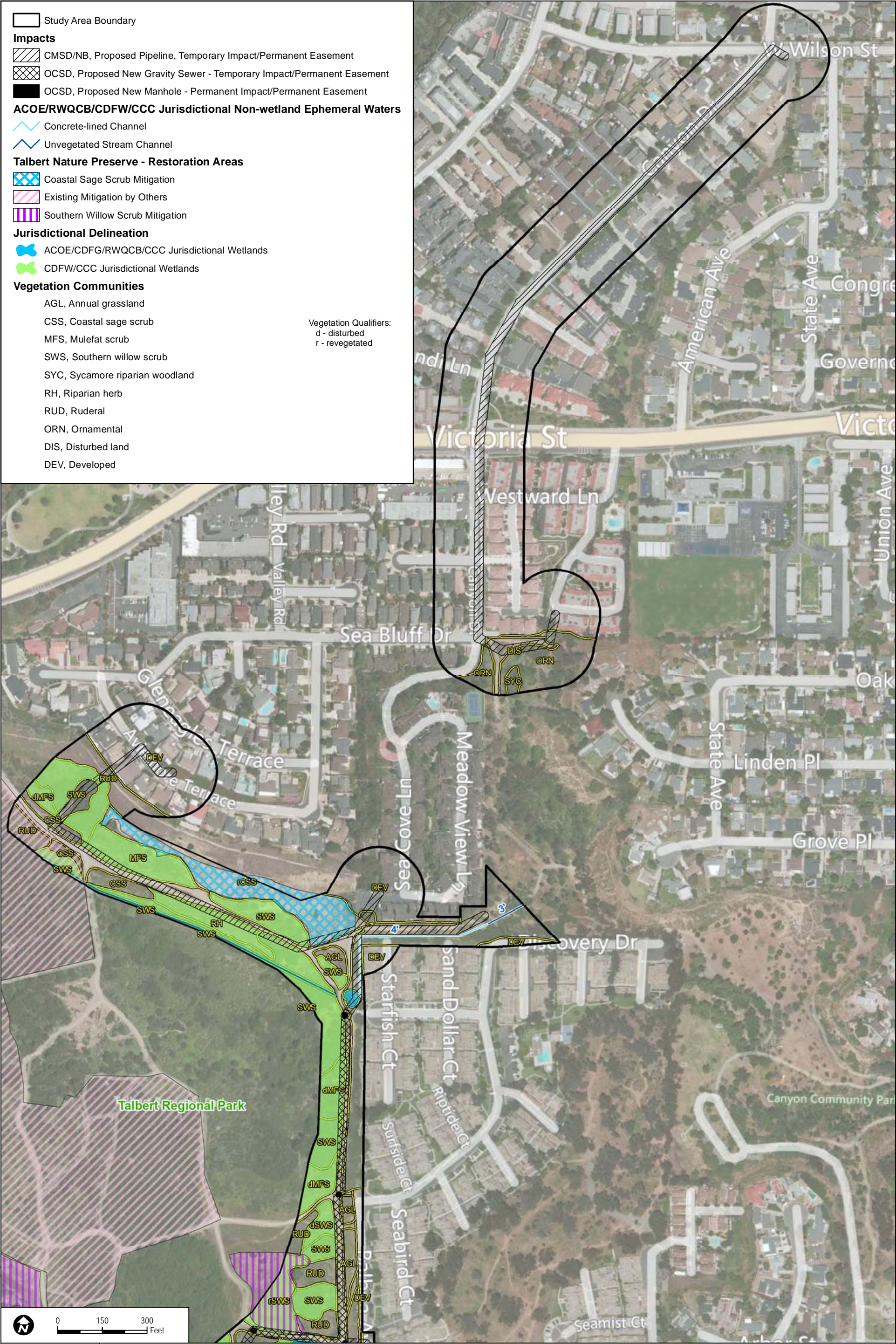






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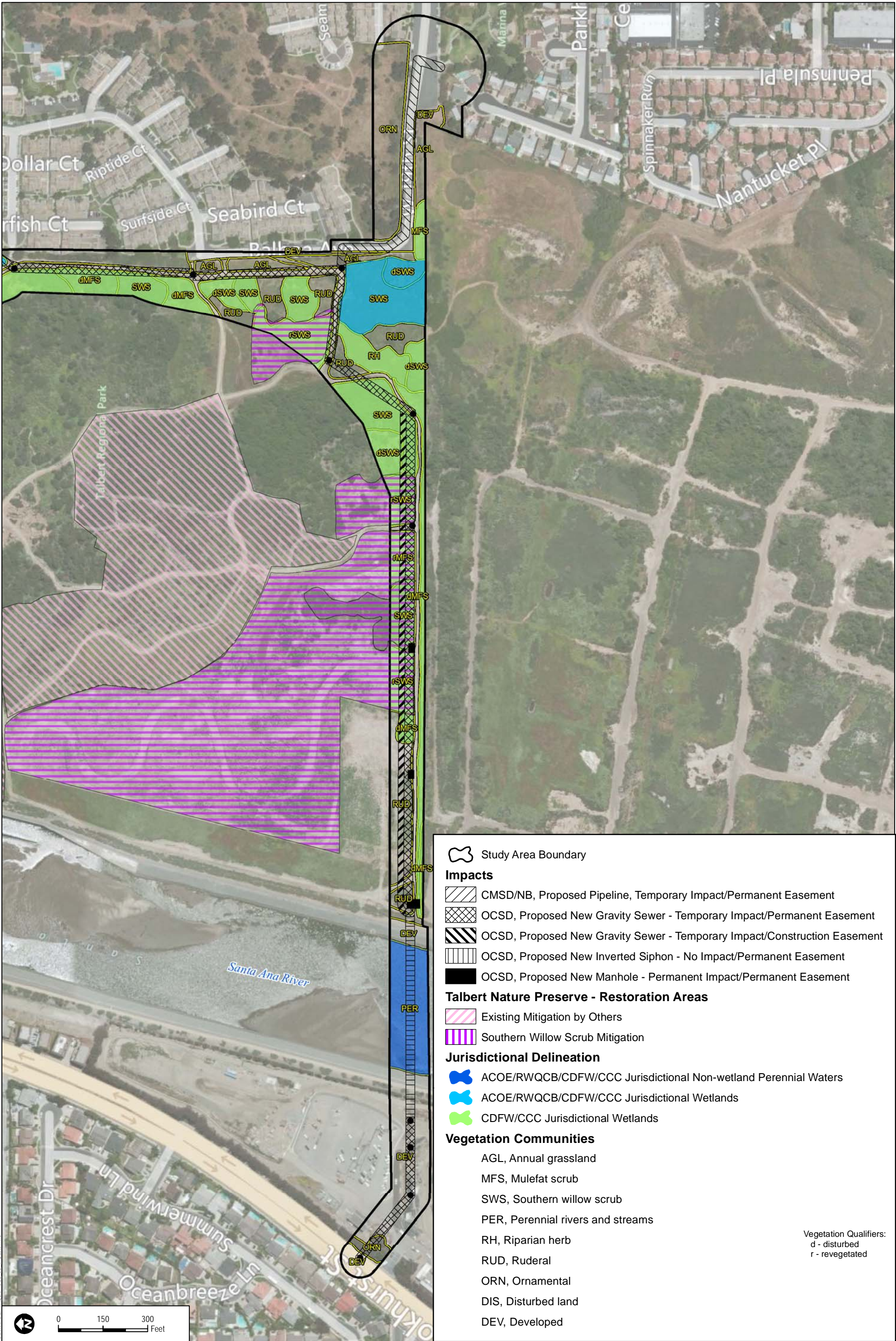






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## 4.4 CULTURAL RESOURCES

This section describes the existing cultural resources setting of the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project) area, identifies regulatory requirements, evaluates potential impacts, and identifies mitigation measures as necessary to reduce or avoid significant impacts. The information in this section is based on the Archaeological Survey Report prepared by Dudek in June 2013, which is provided in Appendix D of this Draft Environmental Impact Report (EIR).

### 4.4.1 Regulatory Setting

#### Federal

##### *National Historic Preservation Act*

The National Historic Preservation Act (NHPA) (16 U.S.C. 470 et seq.) establishes the nation's policy for historic preservation and sets in place a program for the preservation of historic properties by requiring federal agencies to consider effects to significant cultural resources (e.g., historic properties) prior to undertakings.

Section 106 of the NHPA requires federal agencies to take into account the effects of projects on historic properties (resources included in or eligible for the National Register of Historic Places (NRHP)). It also gives the Advisory Council on Historic Preservation and the state historic preservation offices an opportunity to consult. Federal agencies issuing permits for the proposed project will be required to comply with NHPA requirements.

##### *Executive Order 11593, "Protection and Enhancement of the Cultural Environment"*

Executive Order 11593 (36 FR 8921) (1) orders the protection and enhancement of the cultural environment through requiring federal agencies to administer the cultural properties under their control in a spirit of stewardship and trusteeship for future generations; (2) initiates measures necessary to direct their policies, plans, and programs in such a way that federally owned sites, structures, and objects of historical, architectural, or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the people; and (3) in consultation with the Advisory Council on Historic Preservation, institutes procedures to assure that federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures, and objects of historical, architectural, or archaeological significance (16 U.S.C. 470-1).

##### *National Register of Historic Places*

The NRHP is the nation's official list of historic places. The register is overseen by the National Park Service and requires that a property or resource eligible for listing in the register meet one

or more of the following four criteria at the national, state, or local level to ensure integrity and obtain official designation.

- The property is associated with events that have made a significant contribution to the broad patterns of our history.
- The property is associated with the lives of persons significant to our past. Eligible properties based on this criterion are generally those associated with the productive life of the individual in the field in which the person achieved significance.
- The property embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic value, or represents a significant and distinguishable entity whose components lack individual distinction.
- The property has yielded, or is likely to yield, information important to prehistory or history.

In addition to meeting at least one of these four criteria, listed properties must also retain sufficient physical integrity of those features necessary to convey historic significance. The register has identified the following seven aspects of integrity: (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association.

Properties are nominated to the register by the state historic preservation officer of the state in which the property is located, by the federal preservation officer for properties under federal ownership or control, or by the tribal preservation officer if on tribal lands. Listing in the NRHP provides formal recognition of a property's historic, architectural, or archaeological significance based on national standards used by every state. Once a property is listed in the NRHP, it becomes searchable in the NRHP database of research information. Documentation of a property's historic significance helps encourage preservation of the resource.

## **State**

### ***California Public Resources Code***

California Public Resources Code (PRC), Sections 5097–5097.6, identify that the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands is a misdemeanor. It prohibits the knowing destruction of objects of antiquity without a permit (express permission) on public lands, and it provides for criminal sanctions. This section was amended in 1987 to require consultation with the Native American Heritage Commission (NAHC) whenever Native American graves are found. Violations that involve taking or possessing remains or artifacts are felonies.

Public Resources Code, Section 5097.5, states that “no person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial



grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historic feature situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.”

### ***California Register of Historical Resources***

The California Office of Historic Preservation maintains the California Register of Historical Resources (CRHR). The CRHR is the authoritative guide to the state’s significant historic and archaeological resources. The program provides for the identification, evaluation, registration, and protection of California’s historic resources. The CRHR encourages public recognition and protection of resources of architectural, historic, archaeological, and cultural significance; identifies historic resources for state and local planning purposes; determines eligibility for state historic preservation grant funding; and affords certain protection to resources under the California Environmental Quality Act (CEQA).

The CRHR also has established context types to be used when evaluating the eligibility of a property or resource for listing. The four criteria are as follows:

- It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- It is associated with the lives of persons important to local, California, or national history.
- represents the work of a master, or possesses high artistic values.
- It has yielded, or is likely to yield, information important to prehistory or history of the local area, California, or the nation.

Similar to the NRHP, eligibility for the CRHR requires an establishment of physical integrity, including the seven aspects previously described. The CRHR’s list of special considerations is less stringent than the NRHP’s, providing allowances for relocated buildings, structures, or objectives as reduced requirements for physical integrity.

### ***California Health and Safety Code***

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code, Section 7050.5, requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the county coroner has examined the remains (Section 7050.5b). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the

NAHC within 24 hours (Section 7050.5c). The NAHC will notify a Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 24 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

## **Local**

### ***City of Costa Mesa Historic Preservation Ordinance***

The City of Costa Mesa, through provisions cited in the municipal code, has established procedures for preserving its designated historic and cultural resources. The provision relative to historic preservation is documented in the city's Historic Preservation Ordinance (City of Costa Mesa 2012). The Historic Preservation Ordinance states that a historic resource is any building, structure, natural feature, site, landscape, object, or improvement that is of significance to the citizens of the city, the state, or the nation.

### ***City of Huntington Beach General Plan***

The City of Huntington Beach identifies the significance of a structure or a place based on its overall contribution to the community by its historical, age, cultural, social, or visual functions (City of Huntington Beach 1996). There are a number of cultural facilities in the City of Huntington Beach, including multi-faceted visual and performing arts spaces, historic sites, and outdoor facilities.

### ***City of Newport Beach General Plan***

The City of Newport Beach General Plan Historical Resources Element (City of Newport Beach 2006) addresses the protection and sustainability of the City of Newport Beach's historic and paleontological resources. Preserving and maintaining these resources helps to create an awareness and appreciation of the city's history.

### 4.4.2 Existing Conditions

The following discussion is based on the Archaeological Survey Report prepared by Dudek in June 2013 (Appendix D). Included in this discussion is the archaeological, historical, and ethnographic background that provides the context for the evaluation of the NRHP and CRHR eligibility of any identified cultural resources within the area of potential effect (APE) for the proposed project. The APE includes approximately 4,800 feet of sewer pipeline that would be constructed in the following three sequential segments (see Chapter 3, Project Description, Figure 3-3):

1. Approximately 3,500 linear feet of 24-inch-diameter gravity sewer from the City of Newport Beach Pump Station at the west end of Walkabout Circle along the eastern border of Talbert Regional Park and then west from the western terminus of 19th Street toward the Santa Ana River
2. Approximately 800 linear feet of a dual 14-inch inverted sewer siphon beneath the Santa Ana River
3. Approximately 500 linear feet of 24-inch-diameter gravity sewer from the west end of the inverted sewer siphon to the existing Orange County Sanitation District (OCSD) Interplant Line in Brookhurst Street.

### Prehistoric Context

Regional syntheses for the Southern California coastal area follow chronological sequences presented by Wallace (1978 and 1955) and Warren (1968). Wallace defined four cultural horizons (Early Man, Millingstone, Intermediate, Late Prehistoric) based on limited stratigraphic data, while Warren defined six traditions (San Dieguito, Encinitas, Campbell, Chumash, Yuman, and Shoshonean) based on more data and absolute radiocarbon dates. The horizons/traditions are briefly discussed below.

#### *Early Man Horizon/San Dieguito Tradition*

The key cultural feature of this period is the emphasis on large terrestrial-mammal hunting, resulting in the nearly complete absence in archaeological deposits of milling stones used for hard seed processing. Artifacts generally associated with this period include flake knives, leaf-shaped projectile points, crude scrapers and choppers used for plant processing, and hammerstones. Social organization was characterized by smaller groups of nomadic hunters.

***Millingstone Horizon/Encinitas Tradition (6000–1000 BC)***

This period marks a shift from a nomadic hunting way of life to that of groups of hunter/gatherers who depended on relatively consistent subsistence settlement activities dependent on the seasonal availability of food resources. Increased utilization of seeds is evident by the frequencies of handstones (manos) and milling slabs (metates) used to grind hard seeds (Kowta 1969). This shift is thought to have been caused by an environmental change toward a drier, warmer climate. The warmer climate resulted in less foraging vegetation for large terrestrial animals, leading to the reduction of some species' range and availability.

Subsistence practices emphasized the gathering and processing of plant foods, specifically agave/yucca and seeds, while large game hunting became of secondary importance. Wallace proposed that a warming trend dried up interior lakes and forced the inhabitants toward moderate-climate coastal areas (Wallace 1978). He speculates that people from the Great Basin brought seed-gathering subsistence activities to the coastal areas.

Manos and metates are abundantly identified in archaeological sites dating to this period, while the large projectile points associated with the previous Early Man Horizon/San Dieguito Tradition are scarce. Artifact assemblages from this period include apparently ornamental (rather than having a particular subsistence application) cog stones and crude core and flake tools (Wallace 1978). Sites are typically situated on bluffs above the shoreline and the size and depth of some coastal sites suggest a tendency toward sedentism during this period.

***Intermediate Horizon/Campbell Tradition (1000 BC–AD 600)***

A return to subsistence practices emphasizing hunting characterizes this period. Cooler, wetter temperatures have been identified as resulting in increased terrestrial mammal populations. Projectile points identified in archaeological sites from this period were still primarily large, leaf-shaped points, though smaller points used to hunt smaller terrestrial mammals were introduced. Mortars and pestles, used for processing acorns and other pulpy plant foods, are important during this period, reflecting an emphasis on the acorn as a food source. The cooler climate resulted in the spread of oak woodland and savannah habitats, making acorn collection a relatively efficient method of supplementing the animal meat diet with this source of protein.

***Late Prehistoric Horizon/Shoshonean Tradition (AD 600–1769)***

This period of prehistory was characterized by a generally drier climate, punctuated by periods of intense drought. An increased number of large, permanent villages occupied during this period indicate that hunter/gatherer populations increased in spite of the less favorable climate. Resulting important cultural/social changes during this period included the development of trade networks and distinctive mortuary customs. Important technological developments during this

period included the broad-scale introduction of the bow and arrow, with the production of small arrowheads used to hunt small terrestrial mammals and birds. Fishing, though of secondary importance in earlier periods, increased in importance with the introduction of circular shell fishhooks and canoes used to exploit deep ocean habitats.

### **Ethnographic Setting**

The first contact between Native Americans and the Spanish occurred in 1769 when Gaspar de Portola's expedition landed within what is now Orange County. The Gabrielino-Tongva Indians were descendants of those Native Californians who were baptized by the Franciscan fathers at the Mission San Gabriel Arcángel in Los Angeles County. Beginning with the Mission Period, Native Americans suffered severe depopulation and their traditional culture was radically altered. Nonetheless, Gabrielino-Tongva descendants still reside in the greater Los Angeles and Orange County areas and maintain an active interest in their heritage.

### **Cultural Resources Records Search**

An archaeological site records and literature search of the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC), California State University, Fullerton, was requested on July 6, 2012, and was conducted on July 10, 2012, by Lindsey Noyes, SCCIC lead staff researcher, to identify all recorded archaeological sites within one-half mile of the APE (see Appendix D). The records searches identified all known archaeological sites and historic resources within this distance and any previous cultural resource surveys within the project area. The SCCIC records indicate that a total of 35 previous cultural resources surveys have been performed and four archaeological sites have been identified within one-half mile of the APE. Of the 35 previous studies, 3 evaluated all or portions of the project area (Leonard and Hall 1975; Van Horn 1978; Langenwalter and Brock 1985). No prehistoric archaeological sites are recorded within the project area. However, three archaeological sites are recorded within one-half mile of the proposed APE and are listed below.

**CA-ORA-839** was recorded on October 12, 1979. The site is located on a north-south ridge "adjacent to the southern side of the Santa Ana River floodplain," approximately 984 feet south of the APE. "Shell midden and associated lithic artifacts and debitage" covered a 1,050- by 164-foot area. The site soil, characterized as hard packed loam, was darker than the surrounding soil.

**CA-ORA-845** was recorded on November 16, 1979, extending approximately 150 feet south of the proposed APE. The resource is described as a "heavily impacted shell midden" with "surface shell scattered over [a] large area," measuring 656 by 246 feet. The site is located in the "far northwest corner of Banning Ranch overlooking Balboa Boulevard and 19th Street to the north and the wetlands downslope to the west." When revisited on June 18, 1998, vegetation in the site vicinity was overgrown and a visual assessment of the site boundary was not possible.

**CA-ORA-906** was recorded on July 17, 1980. The site, approximately 1,312 feet south of the APE, is described as a dense shell midden buried under approximately 10 feet of modern fill. The site soil was characterized as “sandy black midden.”

Importantly, all three sites are located on the bluff/mesa or at the base of the slope above the low-lying Santa Ana River floodplain area. Given that the proposed APE is within a low-lying floodplain that was periodically inundated, it is considered unlikely that any intact, unknown, subsurface archaeological resources exist.

### **Native American Consultation**

A search of the NAHC Sacred Land File was requested on July 6, 2012, and was conducted on July 9, 2012, by Dave Singleton, NAHC program analyst, to determine the presence of any Native American cultural resources within the project area (see Appendix D). The NAHC indicated that no known Native American heritage resources are located within the project area. The NAHC identified 14 Native American tribal representatives within Orange County and Los Angeles County who would potentially have specific knowledge of cultural resources located within the APE. Letters were sent on July 20, 2012, to these 14 Native American contacts and two responses had been received as of June 22, 2013 (see Appendix D).

### **Historic Aerial Photo Review**

Review of historic aerial photographs indicates that the APE is located within the Santa Ana River floodplain. Rivulets and braided streams reviewed in a May 1938 aerial photograph indicate that the Santa Ana River flows periodically inundated the APE. Since stable ground surfaces within the floodplain would have been ephemeral and constantly changing, any prehistoric use would have been limited.

### **Field Reconnaissance**

The APE incorporates all direct impact areas associated with project construction, the 30-foot-wide easement, and temporary impact areas associated with construction equipment and material staging. A Phase 1 survey of the project area was conducted on May 22, 2013, by Dudek Senior Archaeologist Ken Victorino, RPA.

### ***OCSD Project Area***

The OCSD portion of the proposed project is located primarily within Talbert Regional Park and OCSD Plant No. 2 (see Figure 3-3 in Chapter 3, Project Description). The proposed OCSD sewer pipeline would connect with the City of Newport Beach Pump Station at Walkabout Circle, run along the eastern border of Talbert Regional Park, transect the southeast corner of Talbert

Regional Park, head west toward the Santa Ana River along the border of Talbert Regional Park and Banning Ranch, and then cross beneath the Santa Ana River to connect with the OCSD Interplant Line in Brookhurst Street.

The survey of the OCSD Plant No. 2 west of the concrete-lined Santa Ana River employed parallel transects with less than 10-foot spacing. The APE adjacent to the riprap river berm is approximately 2 to 4 feet higher than the surrounding asphalt road surfaces. Dumping of imported fill was suggested by the presence of pieces of partially buried horizontal landscaping matting and a piece of nylon rope embedded in the ground. Imported gravel and cobble-sized aggregate observed throughout the area also indicated the presence of imported fill deposition. Previous disturbances within the OCSD Plant No. 2 APE included grading for asphalt roadways, installation of wooden poles, and installation of underground electrical and water lines and facilities. Shellfish were observed within the OCSD Plant No. 2 APE. Some of the shellfish were sun-bleached but many retained their natural coloring, suggesting that they were natural deposits rather than elements of a prehistoric cultural deposit. No other cultural material that might indicate prehistoric human occupation was observed, such as chipped or ground stone artifacts, animal bone, or darkened soil.

Shellfish were also observed in the southeast corner of Talbert Regional Park, often in small erosional features. This, along with bottle fragments and candy wrappers buried just below the ground surface, indicates that the area is subject to erosion and deposition. A white crust on the ground surface, along with wetland vegetation, indicate that this area was periodically inundated. No shellfish were recovered below the ground surface.

The portion of the project area that runs along the eastern border of Talbert Regional Park and then transects the southeast corner of Talbert Regional Park is located within or adjacent to an existing dirt biking/hiking trail. Irrigation boxes were observed along the western edge of the trail and a concrete ditch was noted along the eastern edge. Shellfish were observed on the slope between the trail and Balboa Boulevard. However, glass was also partially buried in the slope, indicating that at least portions of the slope were constructed of imported fill.

At the point where the project area transects the southeast corner of Talbert Regional Park, a concentration of shellfish was observed. Two small shovel probes were dug in this area and the results suggest that the shellfish are limited to the ground surface or just below the surface. To the northwest, the existing dirt biking/hiking trail is wider and appears to be at least partially constructed with imported fill, as evidenced by two large pieces of concrete embedded in the trail. Shellfish were observed in low density. Some of the shellfish were sun-bleached but some retained natural coloring.

***CMUSD/City of Newport Beach Project Area***

The Costa Mesa Sanitary District (CMUSD) portion of the proposed project would involve the installation of two sewer pipelines: one 24-inch gravity sewer that would run along Canyon Drive from the West Bluff Pump Station (CMUSD No. 20) to the Canyon Pump Station (CMUSD No. 7), and one 12-inch sewer that would run along the northeast portion of Talbert Regional Park from the Sea Bluff Pump Station (CMUSD No. 16) to the Aviemore Terrace Pump Station (CMUSD No. 5; see Figure 3-4 in Chapter 3, Project Description). The City of Newport Beach portion of the proposed project would also involve the installation of two sewer pipelines: one 12-inch sewer that would run west along 19th Street from the 19th Street Pump Station (CMUSD No. 1) and connect with the proposed OCSO 24-inch gravity sewer along the eastern border of Talbert Ranch, and one 18-inch gravity sewer in the northwest corner of the City of Newport Beach jurisdiction that would run from the City of Newport Beach Pump Station at Walkabout Circle to an existing pipeline (see Figure 3-4 in Chapter 3, Project Description).

The southern portion of Canyon Drive has been previously disturbed, as evidenced by manholes and valve covers in the road and storm drains, cable television and irrigation boxes, and AT&T and Southern California Edison vaults in the sidewalks. Shellfish were observed along the existing dirt biking/hiking trail that leads to Canyon Drive. Three small probes were dug and the results suggest that the shellfish are limited to the ground surface or just below the surface. This area has been disturbed by activities associated with the construction of a 20-foot-high retaining wall.

The northern portion of Canyon Drive has also been previously disturbed, as evidenced by manholes in the road. The survey along both the southern and northern portions of Canyon Drive examined planter beds, landscaped areas, undeveloped areas, cleared areas, and bare ground adjacent to the roadway.

The western end of 19th Street, at the intersection with Balboa Boulevard, appears to be constructed on fill soils. Pieces of metal, whole bottles and aluminum cans, bricks, asphalt, and wood are buried in the slope. Whole shellfish valves were observed on the surface of the slope.

The location of shellfish identified within the APE contrasts with the recorded archaeological site locations in the vicinity, all of which are on upland landforms above the Santa Ana River floodplain. It is reasonable to assume that prehistoric populations selected these site locations for their protection from river inundation. Therefore, the potential for intact, unknown, subsurface prehistoric archaeological materials to be present in low-lying floodplain areas along the Santa Ana River is very unlikely.



### 4.4.3 Thresholds of Significance

The following significance criteria are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential cultural resource impacts. Impacts to cultural resources would be significant if the proposed project would:

- CUL-1:** Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5.
- CUL-2:** Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5.
- CUL-3:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- CUL-4:** Disturb any human remains, including those interred outside formal cemeteries.

### 4.4.4 Impact Discussion

- CUL-1:** *Would the project cause a substantial adverse change in the significance of a historical resource as defined in CEQA Section 15064.5?*

As described in Section 4.4.2, Existing Conditions, there are no known historical resources within the APE. Therefore, implementation of the proposed project would not impact any known, significant historical resources and **no impact** would occur.

- CUL-2:** *Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Section 15064.5?*

The SCCIC records search indicated that a total of 35 previous cultural resources surveys have been performed and three archaeological sites have been identified within one-half mile of the project area (CA-ORA-839, CA-ORA-845, and CA-ORA-906). However, no prehistoric archaeological sites are recorded within the APE. Since none of the sites are located within the APE, none of them would be directly impacted as a result of the proposed project. Given the characteristics of the project area as a low-lying floodplain that was periodically inundated, the potential for intact, unknown, subsurface prehistoric archaeological materials to be present in the project area is considered very low. However, in the unexpected event that grading and excavation activities during construction of the proposed project unearth intact archaeological materials, a potentially significant impact could result. In addition, although the NAHC indicated that no known Native American heritage resources are located within the project area, Native American monitoring has been requested during ground-disturbing activities. For these reasons,

impacts to archaeological resources would be **potentially significant (Impact CUL-1)** and mitigation measures would be required (see Section 4.4.5, Mitigation Measures).

***CUL-3: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?***

Most paleontological resources are not exposed at the surface, and fossils are usually found during earthmoving activities when geologic features are exposed. According to the County of Orange General Plan, Historic and Cultural Resources Element, Figure VI-9 (County of Orange 2005), the project area is not designated as a general area of sensitivity for paleontological resources. The APE is underlain by fills and by younger alluvium, which is not conducive for bearing fossils. However, there are old paralic deposits, which are potentially fossil-bearing deposits, mapped beneath the City of Newport Beach jurisdiction (see Appendix E, Figure 4). Therefore, construction activities associated with the proposed CMSD and City of Newport Beach pipelines have the potential to encounter unknown paleontological resources. Depth of excavation during open-trench construction activities within Talbert Regional Park would be between 4 feet and 10 feet below mean sea level (msl), while HDD techniques for the proposed OCSD 14-inch inverted sewer siphon would reach depths of up to 10 feet below the riprap of the Santa Ana River (or a total depth of 25 feet below msl) and the 24-inch gravity sewer would run approximately 20 feet below msl under Plant No. 2. Similar depths would be associated with the CMSD and the City of Newport Beach portions of the proposed project. Since the exact location and depth of sensitive paleontological resources are unknown, in the event that unexpected, intact paleontological resources are unearthed during construction, impacts would be **potentially significant (Impact CUL-2)** and mitigation measures would be required (see Section 4.4.5, Mitigation Measures).

***CUL-4 Would the project disturb any human remains, including those interred outside formal cemeteries?***

The project area is not currently, nor has it historically, been used as a cemetery. As described above, it is highly unlikely that the low-lying Santa Ana River floodplain was used for human inhabitants and there is a low probability of encountering human remains. However, unanticipated discoveries of human remains require handling in accordance with PRC 5097.98, which states that in the event that human remains are discovered during construction, construction activity shall be halted and the area shall be protected until consultation and treatment can occur as prescribed by law. In the unexpected event that human remains are unearthed during construction activities, impacts would be **potentially significant (Impact CUL-3)** and mitigation measures would be required (see Section 4.4.5, Mitigation Measures).

#### 4.4.5 Mitigation Measures

**MM-CUL-1:** Prior to the start of any earthmoving activity within the OCSD, CMSD, or City of Newport Beach service areas of the proposed project, an archaeological monitor and Native American representative shall be retained by the agency conducting earthmoving activity to monitor ground-disturbing activities associated with their respective components of the proposed project, including but not limited to grading, excavation, brush clearance, and grubbing. The archaeological monitor and Native American representative shall conduct preconstruction cultural resources worker sensitivity training to bring awareness to personnel of actions to be taken in the event of a cultural resources discovery. The archaeological monitor shall be, or shall work under the supervision of, a qualified archaeologist, defined as an archaeologist meeting the Secretary of the Interior's Standards for professional archaeology (U.S. Department of the Interior 2010). The duration and timing of monitoring shall be determined by the qualified archaeologist and Native American representative in consultation with OCSD, CMSD, and the City of Newport Beach. Initially, all ground-disturbing activities associated with the proposed project shall be monitored. However, the qualified archaeologist and Native American representative, based on observations of soil stratigraphy or other factors, and in consultation with OCSD, CMSD, and the City of Newport Beach, may reduce the level of monitoring as warranted. In the event that cultural resources are unearthed during ground-disturbing activities, the archaeological monitor and Native American representative shall have the authority to halt or redirect ground-disturbing activities away from the vicinity of the find so that the find can be evaluated.

If a cultural resource is encountered during construction, construction activities shall be redirected away from the immediate vicinity of the find until it can be evaluated by a qualified archaeologist and Native American representative. If the find is determined to be potentially significant, the archaeologist, in consultation with OCSD, CMSD, or the City of Newport Beach and appropriate Native American group(s) (if the find is a prehistoric or Native American resource), shall develop a treatment plan. Construction activities shall be redirected to other work areas until the treatment plan has been implemented or the qualified archaeologist and Native American representative determines that work can resume in the vicinity of the find.

**MM-CUL-2:** Prior to the start of any earthmoving activities within the OCSD, CMSD, or City of Newport Beach service areas of the proposed project, an Orange County-certified (OCC) paleontologist shall be retained by the agency conducting earthmoving activity. Based on geotechnical findings and the construction design plans for the proposed OCSD, CMSD, and City of Newport Beach pipelines, the OCC paleontologist shall develop a paleontological resources mitigation and monitoring plan for each agency's respective components of the proposed project, prior to construction. The mitigation and monitoring plans shall address preconstruction salvage and reporting; preconstruction contractor sensitivity training; procedures for paleontological resources monitoring; microscopic examination of samples where applicable; the evaluation, recovery, identification, and curation of fossils; and the preparation of a final mitigation report.

In the event that paleontological resources are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted until the discovery is examined by the qualified paleontologist. The paleontologist shall notify the appropriate agencies to determine procedures that should be followed before construction is allowed to resume at the location of the find. If the lead agencies determine that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the proposed project on the qualities that make the resource important. The plan shall be submitted to the County for review and approval prior to implementation.

**MM-CUL-3:** In the event of accidental discovery of any human remains during construction of the OCSD, CMSD, or City of Newport Beach components of the proposed project, the agency responsible for the discovery shall contact the county coroner immediately and construction activities shall be halted in accordance with Section 15064.4(e)(1) of the CEQA Guidelines and California Health and Safety Code Section 7050.5. If the remains are found to be Native American, Health and Safety Code Section 7050.5, Subdivision (c), and Public Resources Code 5097.98 (as amended by Assembly Bill 2641) shall be followed by the appropriate agency.

#### **4.4.6 Level of Significance After Mitigation**

Implementation of Mitigation Measures MM-CUL-1 through MM-CUL-3 would reduce potentially significant impacts to cultural resources to below a level of significance.

## **4.5 GEOLOGY AND SOILS**

This section describes the existing geology and soils setting of the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project), identifies associated regulatory requirements, evaluates potential impacts, and identifies mitigation measures as necessary to reduce or avoid significant impacts. The following discussion is based on the Preliminary Geotechnical Evaluation for the proposed project that was prepared by Ninyo & Moore on January 22, 2013, and an addendum was prepared on October 4, 2013. The complete report is contained in Appendix E of this Draft Environmental Impact Report (EIR).

### **4.5.1 Regulatory Setting**

#### **Federal**

##### ***International Building Code***

The International Building Code (IBC) is a model building code developed by the International Code Council that provides the basis for the California Building Code (CBC). The purpose of the IBC is to provide minimum standards for building construction to ensure public safety, health, and welfare. Prior to the creation of the IBC, several different building codes were used; however, by the year 2000, the IBC had replaced these previous codes. The IBC is updated every 3 years.

##### ***Occupational Safety and Health Administration Regulations***

Excavation and trenching are among the most hazardous construction activities. The Occupational Safety and Health Administration (OSHA) Excavation and Trenching standard, Title 29 of the Code of Federal Regulations (CFR), Part 1926.650, covers requirements for excavation and trenching operations. OSHA requires that all excavations in which employees could potentially be exposed to cave-ins be protected by sloping or benching the sides of the excavation, supporting the sides of the excavation, or placing a shield between the side of the excavation and the work area.

#### **State**

##### ***California Building Code***

The 2010 CBC is based on the 2009 IBC, which is a model building code developed by the International Code Council that sets rules specifying the minimum acceptable level of safety for constructed objects such as buildings in the United States. In addition, the CBC contains necessary amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes means for determining earthquake and other types of loads for inclusion in building

codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure, and any appurtenances connected or attached to such buildings or structures, throughout California.

#### ***Alquist-Priolo Earthquake Fault Zoning Act***

The Alquist-Priolo Earthquake Fault Zoning Act (PRC, Sections 2621–2630) was signed into law in 1972. The purpose of this act is to prohibit the location of most structures for human occupancy across the traces of active faults and to thereby mitigate the hazard of earthquake fault rupture. Under the act, the state geologist is required to delineate earthquake fault zones along known active faults in California. Cities and counties affected by the zones must regulate certain development projects within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting.

#### ***Seismic Hazards Mapping Act***

The Seismic Hazards Mapping Act (California Public Resources Code (PRC), Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction, landslides, strong ground shaking, or other earthquake and geologic hazards. The Seismic Hazards Mapping Act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

### **Local**

#### ***OCSD Design and Construction Requirements for Sanitary Sewers***

Prior to the construction of any Orange County Sanitation District (OCSD) facilities (or facilities to become the property of OCSD), construction drawings for the subject work are subject to approval by the engineer, and are stamped and signed by the design engineer preparing the plans. Approval by the engineer on drawings for facilities to become the property of OCSD apply only to general design concepts with respect to OCSD’s master planned capacity, maintenance procedures, and quality materials (OCSD 2012).

#### ***OCSD Sewer System Management Plan***

OCSD is required to comply with the State Water Resources Control Board (SWRCB) Order No. 2006-0003-DWQ adopted May 2, 2006, titled “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems” (Statewide WDRs). The purpose of the Statewide WDRs is to prevent sanitary sewer overflow (SSO) or sewer spills by establishing a statewide

monitoring and reporting program and requiring each local or regional sewer agency to create and implement their own sewer system management plan (SSMP) based on the mandatory requirements of the order. The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the OCSD sanitary sewer system to prevent SSOs and mitigate any SSOs that do occur (OCSD 2013).

#### ***CMSD Standard Plans and Specifications for the Construction of Sanitary Sewers***

The Costa Mesa Sanitary District (CMSD) has standard plans and specifications for the construction of sanitary sewers to ensure that its sewer lines and connections are properly designed and constructed (CMSD 2011). CMSD's specifications incorporate by reference the *Standard Plans and Specifications for Public Works Construction* (Green Book), which ensures proper design and construction of sewer facilities.

#### ***CMSD Sewer System Management Plan***

CMSD is required to comply with SWRCB Order No. 2006-0003-DWQ, the Statewide WDRs (SWRCB 2006). The purpose of the Statewide WDRs is to prevent SSOs or sewer spills by establishing a statewide monitoring and reporting program and requiring each local or regional sewer agency to create and implement their own SSMP based on the mandatory requirements of the order. The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the CMSD sanitary sewer system to prevent SSOs and mitigate any SSOs that do occur (CMSD 2011).

#### ***City of Newport Beach Standard Design Requirements***

The City of Newport Beach Standard Design Requirements (City of Newport Beach 2012) guide the installation of new sanitary sewer systems, pump stations and other appurtenances, as well as the rehabilitation and repair of existing sanitary sewer systems. The requirements include specifications for excavation dewatering and shoring, material specifications, and compaction of backfill material.

#### ***City of Newport Beach Sewer System Management Plan***

The City of Newport Beach is required to comply with SWRCB Order No. 2006-0003-DWQ, the Statewide WDRs. The purpose of the Statewide WDRs is to prevent SSOs or sewer spills by establishing a statewide monitoring and reporting program and requiring each local or regional sewer agency to create and implement their own SSMP based on the mandatory requirements of the order. The SSMP provides a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system to prevent SSOs and mitigate any SSOs that do occur (City of Newport Beach 2009).

***City of Costa Mesa General Plan***

The City of Costa Mesa General Plan Safety Element (City of Costa Mesa 2000) is a guide for the city council, government agencies, and individuals to identify and understand potential hazards confronting the City of Costa Mesa. The Safety Element examines natural and man-made hazards that could endanger the public safety and welfare. These concerns are subsequently incorporated into goals, objectives, policies, and implementation measures to reduce the impacts of hazards. Natural hazards include flooding, earthquakes, ground rupture, and liquefaction. Man-made hazards can result from hazardous and toxic materials, fires, and crime. The Safety Element discusses geologic hazard constraints, impacts, and mitigation when developing land use policies and when making public decisions relating to land development. Development and construction projects are subject to a condition of approval that requires geotechnical reports to be prepared for all land development projects that involve substantial earthwork. These geotechnical reports shall address soil conditions, including low soil strength, shrink/swell potential, and other unstable soil conditions.

***City of Huntington Beach General Plan***

The City of Huntington Beach General Plan contains an Environmental Hazards Element and a Coastal Element that address geologic hazards (City of Huntington Beach 1996). The Environmental Hazards Element of the General Plan has objectives and policies that relate to ensuring that future planning activities account for the risk associated with geologic conditions and seismic safety. The Environmental Hazards Element also contains policies that are designed to minimize damage resulting from seismic hazards, ensure that existing unsafe structures are retrofitted to reduce hazards, and mitigate other existing unsafe conditions. The Coastal Element includes land use plans and policies to be used by decision makers when reviewing coastal-related issues and proposed development within a Coastal Zone boundary.

***City of Huntington Beach Grading and Excavation Code***

The City of Huntington Beach Municipal Code, Chapter 17.05, Grading and Excavation, sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills and embankments. This chapter establishes administrative requirements for the issuance of grading permits, approval of plans, and inspection of grading construction, as well as water quality requirements.

***City of Newport Beach General Plan***

The City of Newport Beach General Plan Safety Element (City of Newport Beach 2006) is the most current local hazards mitigation plan and is regularly updated. The primary goal of the Safety Element is to reduce the potential risk of death, injuries, property damage, economic and



social dislocation, and disruption of essential services resulting from natural and man-made disasters. The Safety Element specifically addresses coastal hazards, geologic hazards, seismic hazards, flood hazards, wildland and urban fire hazards, hazardous materials, aviation hazards, and disaster planning. Policy S-4.6 of the City of Newport Beach General Plan Safety Element is in place to ensure that existing essential facilities that have been built in or on seismic and geologic hazards are upgraded and maintained to prevent and reduce loss. Similarly, Policy S-4.7 of the Safety Element is in place to ensure that further seismic studies are conducted for new development in areas where potentially active faults may occur.

#### ***City of Newport Beach Building Code***

The City of Newport Beach Municipal Code, Title 15, Buildings and Construction, regulates excavation and grading activities, drainage conditions, erosion control, and earthwork construction (including fills, embankments, and the use of earth materials as a structural component). This code provides for the approval of grading and building plans and inspection of grading construction and drainage control for projects in compliance with the current Municipal Separate Storm Sewer System (MS4) Permit issued by the Regional Water Quality Control Board (RWQCB), Santa Ana Region, on January 18, 2002, under the National Pollutant Discharge Elimination System (NPDES).

### **4.5.2 Existing Conditions**

#### **Regional Geologic Setting**

The project area is located near the mouth of the Santa Ana River near the southeast end of the Los Angeles Basin and the Newport–Inglewood Uplift. Uplift is ongoing along the Newport–Inglewood fault zone, which is characterized by broadly warped coastal mesas composed of late Miocene (several million years old) bedrock units to late Pleistocene age (several hundred thousand years old) alluvial sediments. The mesas are cut by ancestral streams of the Santa Ana River system of late Pleistocene age to Holocene age (up to 11,000 years old).

#### **Project Area Geology**

The project area is generally underlain by relatively shallow fills overlying younger alluvium of the Santa Ana River floodplain. The bordering mesas are mapped as older paralic deposits (nearshore marine and lagoonal deposits). The geologic units are described briefly below.

***Fill.*** Existing fill soils are present along the levees bordering the Santa Ana River and Greenville Banning channels, along the edge of the residential developments and streets, and scattered across the preserve area where access trails/roads were graded. In general, the fill materials are expected to consist of very loose to medium dense, silty and clayey sand and soft to stiff sandy clay. The fill materials may range from a few feet thick up to approximately 15 feet thick

adjacent to Talbert Regional Park near 19th Street. Riprap composed of boulders up to 27 inches in diameter or more is present along the channel slopes. In addition, some construction debris may be present in the fill soils.

***Younger Alluvial Deposits.*** Unconsolidated younger alluvial deposits underlie the project area. Boring log data indicate the relatively shallow alluvial soils (upper 10–15 feet) are generally composed of soft, interbedded silts and clays with some organic peat. The upper silts and clays are generally underlain by sandy alluvial deposits. The sandy alluvium includes very loose to medium dense, poorly graded sand and silty sand with shell fragments and gravel to depths on the order of 70 or more feet below the ground surface. Well logs for groundwater monitoring and production wells in the vicinity of the project area indicate the alluvium consists of interbedded sand, silts, and clays with shells to depths on the order of 80 feet. Below 80 feet the alluvium is coarser and includes sand, gravel, and boulders.

***Older and Very Old Paralic Deposits.*** Regional geologic maps indicate that the elevated mesa in the project area is generally underlain by older and very old paralic deposits of Pleistocene age. The paralic deposits consist of nearshore marine and non-marine sediments and typically include medium dense to dense interbedded sands and silts with some shells, cobbles, and boulders. Geotechnical data for the proposed Banning Ranch Development south of the site indicate that the elevated mesa is underlain by marine terrace deposits overlying the Pleistocene age San Pedro Formation. The marine terrace deposits reportedly lie along an abrasion platform approximately 20–30 feet above the Santa Ana River and extend up to the top of the slope. These deposits generally consist of thin to thick bedded sands with some silt and clayey silt interbeds. The San Pedro Formation was reportedly composed of interbedded siltstones and friable sandstones.

### **Geologic Hazards**

The ground surface surrounding the project area is not mapped as being transected by any known active or potentially active faults and the project area is not located within an Alquist-Priolo fault zone. However, the project area is located in a seismically active region, and is located within the active Newport–Inglewood fault zone. The Newport–Inglewood fault zone in the vicinity of the project area includes the concealed North Branch fault and South Branch fault to the south and continues offshore. The Bolsa–Fairview fault has been mapped north of the project area within the zone. Additional major fault systems bounding the project area include the Palos Verdes fault zone and the Whittier–Elsinore fault zone. Table 4.5-1 lists principal known active faults that may affect the project area and the maximum moment magnitude ( $M_{max}$ ). The location of these faults relative to the project area is shown on Figure 4.5-1.

**Table 4.5-1**  
**Principal Active Faults near Project Area**

Fault	Approximate Fault-to-Project-Area Distance (miles)	M <sub>max</sub>
Newport–Inglewood (Los Angeles Basin)	0.4	7.1
San Joaquin Hills Blind Thrust	0.9	6.6
Newport–Inglewood (Offshore)	4.2	7.1
Palos Verdes	11.8	7.3
Puente Hills Blind Thrust	19.8	7.1
Whittier	20.4	6.8
Chino–Central Avenue (Elsinore)	21.0	6.7
Elsinore (Glen Ivy)	23.2	6.8
Coronado Bank	25.9	7.6

Source: Appendix E of this Draft EIR.

In addition to the known faults listed in Table 4.5-1, recent research suggests the San Joaquin Hills may have been formed by folding and uplift in association with ongoing movement along a blind thrust fault in the southern Los Angeles basin. Blind thrust faults are low-angle faults at depth that do not break the surface. Although blind thrust faults do not pose a specific ground surface rupture hazard, they can be capable of generating damaging earthquakes. Both the Whittier Narrows (1987) and Northridge (1994) earthquakes were the result of movement along blind thrust faults. It has been hypothesized that the San Joaquin Hills blind thrust fault may have the potential to generate up to a magnitude 7.3 M<sub>max</sub> earthquake.

### ***Surface Rupture***

The proposed project is located within the active Newport–Inglewood fault zone. Existing faults in the area are concealed and there are no concealed faults mapped crossing the proposed alignments. Geologic evidence indicates that faults typically rupture repeatedly along existing fault planes; therefore, the risk for fault rupture hazard is higher for sites located over the trace of an active fault. This area of the Newport–Inglewood fault zone includes relatively dense urban development and the locations of faults are not well defined. Based on the existing mapped fault locations, the probability of damage due to surface ground rupture is low to moderate.

### ***Liquefaction Potential***

Liquefaction is the phenomenon in which loosely deposited granular soils and silts located below the water table undergo rapid loss of shear strength when subjected to strong earthquake-induced ground shaking. Ground shaking of sufficient duration causes the soil to behave as a fluid for a short period of time. Liquefaction is known to occur generally in saturated or near-saturated, cohesionless soils at depths shallower than 50 feet below the ground surface.

The California Seismic Hazards Zone Map (Appendix E, Figure 8) indicates that the project area is located in areas that are potentially liquefiable. It is anticipated that the sandy alluvial deposits beneath the project area will be susceptible to soil liquefaction during a large earthquake event.

### ***Landslides***

The project area is generally flat and not subject to slope instability. The hillsides bordering the project area are underlain by relatively flat-lying sands and silts. There is no evidence of landsliding within the project area; however, the materials within the slope areas are susceptible to erosion and shallow slumping. The erosion potential is relatively low during dry months but relatively severe during wet months and especially during large flood events. These slope areas are also mapped as potentially susceptible to landslide hazards during earthquakes. The existing levees are underlain by fill soils. During a seismic event, the levees may be subject to lateral spreading hazards.

### **4.5.3 Thresholds of Significance**

The following significance criteria are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential geology and soil impacts. Impacts to geology and soils would be significant if the proposed project would:

- GEO-1:** Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault.
- GEO-2:** Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.
- GEO-3:** Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.
- GEO-4:** Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.
- GEO-5:** Result in substantial soil erosion or the loss of topsoil.

- GEO-6:** 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.
- GEO-7:** Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- GEO-8:** Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

#### **4.5.4 Impact Discussion**

- GEO-1:** *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault?*

As described in Subsection 4.5.2, Existing Conditions, there are no known active or potentially active faults within the project area. Additionally, the project area is not located within an Alquist-Priolo Special Studies Zone. However, the project area is located within the active Newport–Inglewood fault zone. The closest active trace of the Newport–Inglewood fault zone, the Newport–Inglewood (Los Angeles Basin) Fault, is approximately 0.4 mile south of the project area. An estimated earthquake magnitude of 7.1 could occur on this fault zone. Based on the existing mapped fault location, the probability of damage due to surface ground rupture is low to moderate. Surface ground cracking related to shaking from distant events is not considered a significant hazard. Although lurching or cracking of the ground surface as a result of nearby seismic events is possible, ground surface rupture on or adjacent to the project area is not likely due to the absence of known active faults traversing the project area. In addition, the proposed project would be designed in accordance with the 2010 CBC, which recommends that the design of structures be based on the horizontal peak ground acceleration (PGA) having a 2 percent probability of exceedance in 50 years which is defined as the Maximum Considered Earthquake (MCE). The probabilistic PGAMCE for the project site was calculated as 0.72g using the USGS Ground Motion Calculator (web-based). The design PGA was estimated to be 0.48g using the USGS Ground Motion Parameter Calculator. Furthermore, the proposed project components would be constructed in accordance with the CBC and applicable design and construction requirements of OCSD, CMSD, and the City of Newport Beach, which would reduce the potential for risks related to seismic events. These include specifications for excavation, composition of fill, and materials to be used to ensure construction worker safety,

and to protect proposed sewer lines from damage during seismic events. Therefore, impacts associated with the rupture of a known earthquake fault would be **less than significant**.

**GEO-2:**        *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

### **Construction Impacts**

Despite the low likelihood of a large regional earthquake occurring during the 2-year construction period, there is the potential for risks to construction workers related to strong seismic ground shaking. The proposed project components would be constructed in accordance with applicable design and construction requirements of the CBC, OCSD, CMSD, and the City of Newport Beach, which would reduce the potential for risks. In addition, as listed in Table 3-1 in Chapter 3, Project Description, proper geotechnical characterization and design of shoring systems would be developed through further subsurface evaluations and all recommendations would be adhered to for excavation activities. Excavations that appear unstable or are deeper than 4 feet will be shored or the sides of the excavation will be laid back to slope inclinations of approximately 1.5:1 (horizontal to vertical). Therefore, impacts during construction would be **less than significant**.

### **Operational Impacts**

Once constructed, the proposed project would not include any structures intended for human occupancy and the components of the proposed project would be restricted from public use. As discussed above, there is the potential for strong seismic ground shaking to occur in the project area. The proposed project components would be constructed in accordance with applicable design and construction requirements of the CBC, OCSD, CMSD, and the City of Newport Beach, which would reduce the potential for risks associated with seismic ground shaking. These include specifications for excavation, composition of fill, and materials to be used to ensure construction worker safety, and to protect proposed sewer lines from damage during seismic events. In addition, as listed in Table 3-1 in Chapter 3, Project Description, subsurface evaluations would be performed in order to develop detailed design criteria for the proposed project. With adherence to all recommendations for the proposed project, operational impacts would be **less than significant**.

**GEO-3:**        *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*

The California Seismic Hazards Zone Map (Figure 8 in Appendix E) indicates that the project area is potentially liquefiable. It is anticipated that the sandy alluvial deposits beneath the project area would be susceptible to soil liquefaction during a large earthquake. Liquefaction could cause settlement, sand boils, and ground cracking, which could result in damage to the proposed pipelines. Liquefaction hazards are generally minimized by supporting improvements on deep pile foundations or performing in situ ground improvement. The proposed project components would be constructed in accordance with applicable design and construction requirements of the CBC, OCSD, CMSD, and the City of Newport Beach, which would reduce potential risks involving seismic-related ground failure. These include specifications for excavation, composition of fill, and materials to be used to ensure construction worker safety, and to protect proposed sewer lines from damage during seismic events. In addition, as listed in Table 3-1 in Chapter 3, Project Description, subsurface evaluations will be performed in order to develop detailed design criteria for the proposed project. With adherence to all recommendations for the proposed project, construction and operational impacts would be **less than significant**.

**GEO-4:**        *Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

Based on the geotechnical report prepared by Ninyo & Moore (Appendix E), there is no evidence of landslides within the project area and the potential for future landslides within the project area is low. However, there is a small possibility that a landslide could occur in the surrounding slope areas, which are identified as being susceptible to landslides during earthquakes. The proposed pipelines would be located underground and would not entail activities involving humans. In addition, the proposed project components would be constructed in accordance with applicable design and construction requirements of the CBC, OCSD, CMSD, and the City of Newport Beach, which would minimize potential risks associated with landslides. These include specifications for excavation, composition of fill, and materials to be used to ensure construction worker safety, and to protect proposed sewer lines from damage due to geologic hazards, such as landslides. Therefore, impacts would be **less than significant**.

**GEO-5:**        *Would the project result in substantial soil erosion or the loss of topsoil?*

### **Construction Impacts**

The erosion potential within the project area is relatively low during dry months but relatively severe during wet months and especially during large flood events. Excavation and ground-

disturbing activities during construction of the proposed project could potentially leave loose soil exposed to the erosive forces of rainfall and high winds, which would increase the potential for soil erosion and loss of topsoil. However, as listed in Table 3-1 in Chapter 3, Project Description, OCSD, CMSD, and the City of Newport Beach would prepare and implement a SWPPP, which would include construction best management practices (BMPs) to control erosion and sediment during construction activities. Construction BMPs may include physical stabilization (hydraulic mulch, soil binders, straw mulch, geotextiles, plastic covers, mats), vegetation stabilization (hydroseeding) and wind erosion control (application of water). With adherence to the SWPPP and associated construction BMPs related to erosion and sediment control, construction-related impacts to soil erosion and the loss of topsoil would be **less than significant**.

### **Operational Impacts**

As described above, the erosion potential within the project area is relatively low during dry months but relatively severe during wet months and especially during large flood events. The proposed project alignment is primarily along flat, low-lying land within Talbert Regional Park, Canyon Park, and nearby streets. Upon completion of construction all disturbed surfaces would be stabilized and restored to initial condition. It is therefore not anticipated that the proposed project would result in substantial soil erosion or significant losses in topsoil. In addition, compliance with the BMPs described under Threshold GEO-5, Construction Impacts, would ensure that operational impacts related to erosion would be **less than significant**.

***GEO-6: Would the project 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?***

As described under Thresholds GEO-3 and GEO-4, the proposed project is located on soils susceptible to liquefaction, while the potential for landslides is considered low. In addition, the existing Santa Ana River levees are underlain by fill soils, which may be subject to lateral spreading hazards during a seismic event. Construction of the proposed project would involve open trench methods as well as horizontal directional drilling (HDD). The beginning and ending segments of the proposed OCSD 24-inch gravity sewer, on either side of the Santa Ana River, would be installed by open trench construction methods. The proposed HDD operation would start on the west side of the Santa Ana River within the OCSD Treatment Plant No. 2 (Plant No. 2) property and extend east under the Santa Ana River; the bore path would be about 1,000 feet long. The proposed CMSD pipelines would be installed using open trench methods, with the exception of the portion within Canyon Drive, which would require HDD. There are inherent risks involved in the use of HDD methods (tunneling), including ground settlement and tunneling failure. Ground settlement may occur where soil excavating exceeds the advancement of casing, resulting in loss of soil around the tunnel face, which can result in ground surface settlement



(ground subsidence, in particular). In addition, excavations that expose friable, cohesionless sands may be subject to caving.

The proposed project components would be constructed in accordance with applicable design and construction requirements of the CBC, OCSD, CMSD, and the City of Newport Beach, which would reduce the potential for risks associated with unstable soils. These include specifications for excavation, composition of fill, and materials to be used to ensure construction worker safety, and to protect proposed sewer lines from damage due to unstable soils. Also, the elevation of the proposed inverted sewer siphon would be subject to final design and is conceptually proposed at a depth of approximately 25 feet under the current unlined channel invert and approximately 10 feet under the toe of the levee rip-rap. Installing the siphon with this clearance from the toe of rip rap would reduce risk of inadvertent drilling mud returns to the surface during the HDD work, and would also minimize risk of physical impact or subsidence to the SAR levees caused by the HDD operation.

In addition, as listed in Table 3-1 in Chapter 3, Project Description, subsurface evaluations will be performed in order to develop detailed design criteria for the proposed project. With adherence to all recommendations for the proposed project, impacts related to unstable soils would be **less than significant**.

***GEO-7: Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?***

As described in Subsection 4.5.2, Existing Conditions, the project site is underlain by fill and other soils that have the potential for expansion. In order to address potential risks associated with expansive soils, the proposed project would follow the recommendations of the Preliminary Geotechnical Evaluation prepared by Ninyo & Moore (Appendix E), which recommends that fill and/or trench backfill be compacted to 90% relative compaction in accordance with ASTM International (formerly known as American Society of Testing Materials (ASTM)) 1557. The proposed project components would be constructed in accordance with their respective agency requirements for construction, which would reduce potential risks involving expansive soils. In addition, as listed in Table 3-1 in Chapter 3, Project Description, subsurface evaluations will be performed in order to develop detailed design criteria for the proposed project. With adherence to all recommendations for the proposed project, impacts related to expansive soils would be **less than significant**.

**GEO-8:**      *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The proposed project does not involve any septic tanks or alternative wastewater disposal systems. Therefore, **no impact** would result.

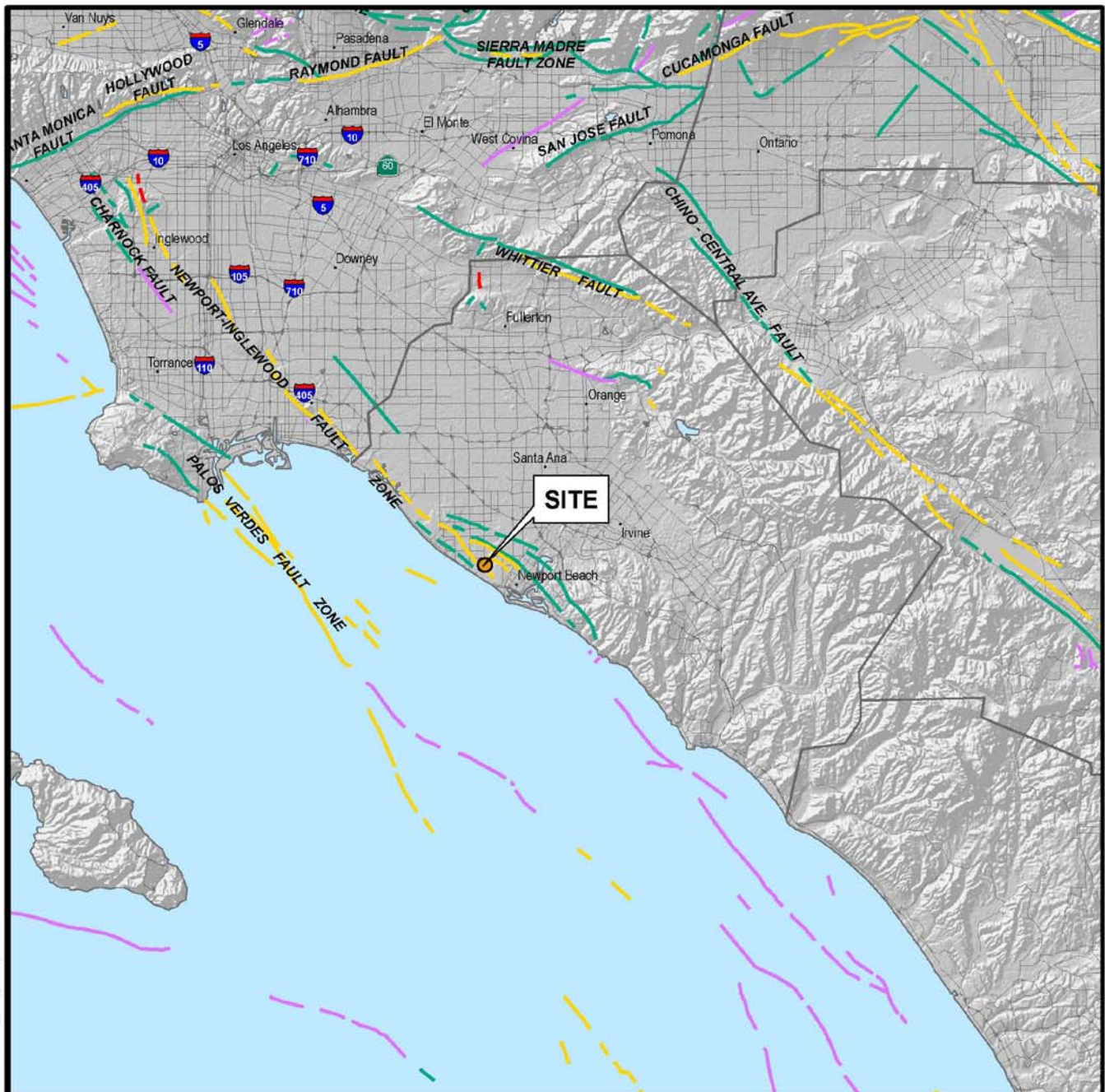
#### **4.5.5      Mitigation Measures**

No mitigation measures are required.

#### **4.5.6      Level of Significance After Mitigation**

Since no mitigation measures are required, impacts would remain below a level of significance.

208600001\_FL.gis.....GK



GIS DATA SOURCE: CALIFORNIA GEOLOGICAL SURVEY (CGS); ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE (ESRI)  
REFERENCE: JENNINGS, 2010, FAULT ACTIVITY MAP OF CALIFORNIA AND ADJACENT AREAS

#### LEGEND

##### FAULT ACTIVITY:

- |                     |                 |
|---------------------|-----------------|
| HISTORICALLY ACTIVE | LATE QUATERNARY |
| HOLOCENE ACTIVE     | QUATERNARY      |
| COUNTY BOUNDARIES   |                 |

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE.



**DUDEK**

7193-02  
JULY 2013

SOURCE: Ninyo & Moore

Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

**FIGURE 4.5-1  
Major Faults**

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## 4.6 GREENHOUSE GAS EMISSIONS

This section evaluates short-term (construction) and long-term (operational) impacts related to greenhouse gas (GHG) emissions and climate change that would potentially occur as a result of the proposed implementation of the Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project). Climate change refers to any significant change in measures of climate, such as temperature, precipitation, or wind, lasting for an extended period (decades or longer).

### 4.6.1 Regulatory Setting

#### Federal

##### *Energy Independence and Security Act*

On December 19, 2007, President George W. Bush signed the Energy Independence and Security Act of 2007. Among other key measures, the act would do the following, which would aid in the reduction of national GHG emissions:

1. 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.
2. 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 to establish a fuel economy program for medium- and heavy-duty trucks, and create a separate fuel economy standard for work trucks.
3. 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.

#### State

##### *Executive Order S-3-05*

In June 2005, former Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order S-3-05. The executive order established the following goals: GHG emissions should be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80% below 1990 levels by 2050. The California Environmental Protection Agency secretary is required to coordinate efforts of various agencies to collectively and efficiently reduce GHGs. The Climate Action Team is responsible for implementing global warming emissions reduction programs. The Climate Action Team consists of representatives from several state agencies. The Climate Action Team fulfilled its report requirements through the March 2006 Climate Action Team Report to the governor and the legislature (CAT 2006).

A second biennial report, released in April 2010 (CAT 2010), expands on the policy established in the 2006 assessment. The report provides new information and scientific findings regarding the development of new climate and sea-level projections using new information and tools that have recently become available and evaluates climate change within the context of broader social changes, such as land use changes and demographics. The 2010 report also identifies the need for additional research into several different aspects that affect climate change in order to support effective climate change strategies. The aspects of climate change determined to require future research include vehicle and fuel technologies, land use and smart growth, electricity and natural gas, energy efficiency, renewable energy and reduced carbon energy sources, low GHG technologies for other sectors, carbon sequestration, terrestrial sequestration, geologic sequestration, economic impacts and considerations, social science, and environmental justice.

### ***Assembly Bill 32***

In furtherance of the goals established in Executive Order S-3-05, the legislature enacted Assembly Bill (AB) 32 (Núñez and Pavley), the California Global Warming Solutions Act of 2006, which former Governor Schwarzenegger signed on September 27, 2006. The GHG emissions limit is equivalent to the 1990 levels, which are to be achieved by 2020.

The California Air Resources Board (CARB) has been assigned to carry out and develop the programs and requirements necessary to achieve the goals of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions. This program will be used to monitor and enforce compliance with the established standards. CARB is also required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 allows CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

The first action under AB 32 resulted in the adoption of a report listing early-action GHG emission reduction measures on June 21, 2007. The early actions include three specific GHG control rules. On October 25, 2007, CARB approved six additional early-action GHG reduction measures under AB 32. The three original early-action regulations meeting the narrow legal definition of “discrete early-action GHG reduction measures” are as follows:

1. A low-carbon fuel standard to reduce the carbon intensity of California fuels
2. Reduction of refrigerant losses from motor vehicle air conditioning system maintenance to restrict the sale of “do-it-yourself” automotive refrigerants
3. Increased methane capture from landfills to require broader use of state-of-the-art methane capture technologies.

The additional six early-action regulations, which were also considered “discrete early-action GHG reduction measures,” consist of:

1. Reduction of aerodynamic drag, and thereby fuel consumption, from existing trucks and trailers through retrofit technology
2. Reduction of auxiliary engine emissions of docked ships by requiring port electrification
3. Reduction of perfluorocarbons (PFCs) from the semiconductor industry
4. Reduction of propellants in consumer products (e.g., aerosols, tire inflators, and dust removal products)
5. Requirements that all tune-up, smog check, and oil change mechanics ensure proper tire inflation as part of overall service in order to maintain fuel efficiency
6. Restriction on the use of sulfur hexafluoride (SF<sub>6</sub>) from non-electricity sectors if viable alternatives are available.

As required under AB 32, on December 6, 2007, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was set at 427 million metric tons carbon dioxide equivalent (CO<sub>2</sub>E). In addition to the 1990 emissions inventory, CARB also adopted regulations requiring mandatory reporting of GHGs for large facilities that account for 94% of GHG emissions from industrial and commercial stationary sources in California. About 800 separate sources fall under the new reporting rules, including electricity generating facilities, electricity retail providers and power marketers, oil refineries, hydrogen plants, cement plants, cogeneration facilities, and other industrial sources that emit carbon dioxide (CO<sub>2</sub>) in excess of specified thresholds.

On December 11, 2008, CARB approved the *Climate Change Proposed Scoping Plan: A Framework for Change* (Scoping Plan; CARB 2008) to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California’s GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and CAT early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program.

The key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
- Achieving a statewide renewables energy mix of 33%

- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

**Senate Bill XI 2.** On April 12, 2011, Governor Jerry Brown signed Senate Bill (SB) XI 2 in the First Extraordinary Session, which would expand the Renewable Portfolio Standard (RPS) by establishing a goal of 20% of the total electricity sold to retail customers in California per year by December 31, 2013; 25% by December 31, 2016; and 33% by December 31, 2020, and in subsequent years. Under the bill, a renewable electrical generation facility is one that uses biomass, solar thermal, photovoltaic, wind, geothermal, fuel cells using renewable fuels, small hydroelectric generation of 30 megawatts or less, digester gas, municipal solid waste conversion, landfill gas, ocean wave, ocean thermal, or tidal current and that meets other specified requirements with respect to its location. In addition to the retail sellers covered by SB 107, SB XI 2 adds local publicly owned electric utilities to the RPS. The statute also requires that the governing boards for local publicly owned electric utilities establish the same targets, and the governing boards would be responsible for ensuring compliance with these targets. The California Public Utilities Commission will be responsible for enforcement of the RPS for retail sellers, while the California Energy Commission and CARB will enforce the requirements for local publicly owned electric utilities.

### **Local**

The City of Huntington Beach adopted its Energy Action Plan in 2011, published *Steps toward a Sustainable Huntington Beach* in 2011, and has initiated green programs including the Huntington Beach Surf and Sun program aimed at increasing solar capacity. The city's Energy Action Plan outlines the city's history and commitment to eliminating energy waste, preparing for peak oil production, and reducing greenhouse gas emissions. The City of Huntington Beach has yet to adopt thresholds of significance for GHGs that could be used in environmental assessments.



The City of Newport Beach has initiated a task force on green development that provides information to residents on how to reduce their footprint on the environment. The City of Newport Beach has indicated that it lacks sufficient information to establish formal, permanent thresholds by which to classify projects with relatively small, incremental contributions to the state's total GHG emissions as cumulatively considerable or not. The city has used an interim approach where it would consider projects emitting 1,600 metric tons of CO<sub>2</sub>E per year or less to be less than significant and no further analysis is required. As analyzed in Section 4.6.4, the proposed project would not generate a change in operational GHG emissions; therefore, this interim approach and standards in complying with the California Environmental Quality Act (CEQA) with respect to global climate change impact assessments would not be applicable to the proposed project.

To date, the City of Costa Mesa has not adopted a climate action plan and has not prescribed thresholds of significance or a particular methodology for performing an impact analysis under CEQA that would be applicable to the proposed project.

## **4.6.2 Existing Conditions**

### **The Greenhouse Effect and GHGs**

Gases that trap heat in the atmosphere are often called GHGs. The greenhouse effect traps heat in the troposphere through a threefold process as follows: (1) short-wave radiation emitted by the Sun is absorbed by the Earth; (2) the Earth emits a portion of this energy in the form of long-wave radiation; and (3) GHGs in the upper atmosphere absorb this long-wave radiation and emit it into space and toward the Earth. This “trapping” of the long-wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect. Principal GHGs include CO<sub>2</sub>, methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), ozone (O<sub>3</sub>), and water vapor (H<sub>2</sub>O). Some GHGs, such as CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO<sub>2</sub> and CH<sub>4</sub> are emitted in the greatest quantities from human activities. Emissions of CO<sub>2</sub> are largely byproducts of fossil fuel combustion, whereas CH<sub>4</sub> results mostly from off-gassing associated with agricultural practices and landfills. Man-made GHGs, which have a much greater heat-absorption potential than CO<sub>2</sub>, include fluorinated gases such as hydrofluorocarbons (HFCs), PFCs, SF<sub>6</sub>, and nitrogen trifluoride (NF<sub>3</sub>), which are associated with certain industrial products and processes (CAT 2006).

The greenhouse effect is a natural process that contributes to regulating the earth's temperature. Without it, the temperature of the Earth would be about 0 degrees Fahrenheit (°F) (or –18 degrees Celsius (°C)) instead of its present 57°F (14°C). Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect (National Climatic Data Center 2009).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP). GWP varies between GHGs; for example, the GWP of CH<sub>4</sub> is 21, and the GWP of N<sub>2</sub>O is 310. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of CO<sub>2</sub>. Thus, GHG gas emissions are typically measured in terms of pounds or tons of CO<sub>2</sub> equivalent (CO<sub>2</sub>E).<sup>1</sup>

Globally, climate change has the potential to impact numerous environmental resources though uncertain impacts related to future air temperatures and precipitation patterns. In California, climate change impacts have the potential to affect sea-level rise, agriculture, snowpack and water supply, forestry, wildfire risk, public health, and electricity demand and supply (CCCC 2006). The primary effect of global climate change has been a rise in average global tropospheric temperature of 0.2°C per decade, determined from meteorological measurements worldwide between 1990 and 2005. Scientific modeling predicts that continued emissions of GHGs at or above current rates would induce more extreme climate changes during the twenty-first century than were observed during the twentieth century. A warming of about 0.2°C (0.36°F) per decade is projected, and there are identifiable signs that global warming could be taking place, including substantial ice loss in the Arctic (IPCC 2007).

Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. Climate change is already affecting California: average temperatures have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (CAT 2010). These climate-driven changes affect resources critical to the health and prosperity of California. Climate change modeling using emission rates from the year 2000 shows that further warming would occur, which would induce further changes in the global climate system during the current century. Changes to the global climate system and ecosystems and to California would include, but would not be limited to, the following:

- The loss of sea ice and mountain snowpack, resulting in higher sea levels and higher sea surface evaporation rates, with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures (IPCC 2007)
- A rise in global average sea level, primarily due to thermal expansion and melting of glaciers and ice caps and the Greenland and Antarctic ice sheets (IPCC 2007)

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<sup>1</sup> The CO<sub>2</sub> equivalent for a gas is derived by multiplying the mass of the gas by the associated GWP, such that MTCO<sub>2</sub>E = (metric tons of a GHG) × (GWP of the GHG). For example, the GWP for CH<sub>4</sub> is 21. This means that emissions of 1 metric ton of methane are equivalent to emissions of 21 metric tons of CO<sub>2</sub>.

- Changes in weather that include widespread changes in precipitation, ocean salinity, and wind patterns; and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones (IPCC 2007)
- A decline of the Sierra snowpack, which accounts for approximately half the surface water storage in California, by 30% to as much as 90% over the next 100 years (CAT 2006)
- An increase in the number of days conducive to O<sub>3</sub> formation by 25% to 85% (depending on the future temperature scenario) in high-O<sub>3</sub> areas of Los Angeles and the San Joaquin Valley by the end of the twenty-first century (CAT 2006)
- A high potential for erosion of California's coastlines and seawater intrusion into the Delta and levee systems due to the rise in sea level (CAT 2006).

### Contributions to GHG Emissions

In 2011, the United States produced 6,702 million metric tons (MMT) of CO<sub>2</sub>E (EPA 2013). The primary GHG emitted by human activities in the United States was CO<sub>2</sub>, representing approximately 84% of total GHG emissions. The largest source of CO<sub>2</sub>, and of overall GHG emissions, was fossil fuel combustion, which accounted for approximately 94% of the CO<sub>2</sub> emissions and 79% of overall GHG emissions.

According to the 2010 GHG inventory data compiled by CARB for the California Greenhouse Gas Inventory for 2000–2010 (CARB 2013), California emitted 452 MMT CO<sub>2</sub>E of GHGs, including emissions resulting from out-of-state electrical generation. The primary contributors to GHG emissions in California are transportation, electric power production from both in-state and out-of-state sources, industry, agriculture and forestry, and other sources, which include commercial and residential activities. These primary contributors to California's GHG emissions and their relative contributions in 2010 are presented in Table 4.6-1, GHG Sources in California.

**Table 4.6-1**  
**GHG Sources in California**

Source Category	Annual GHG Emissions (MMT CO <sub>2</sub> E)	% of Total
Agriculture	32.45	7.19
Commercial uses	43.89	9.72
Electricity generation	93.30 <sup>a</sup>	20.66
Forestry (excluding sinks)	0.19	0.04
Industrial uses	85.96	19.03
Recycling and waste	6.98	1.55
Transportation	173.18	38.35

**Table 4.6-1**  
**GHG Sources in California**

Source Category	Annual GHG Emissions (MMT CO <sub>2</sub> E)	% of Total
High GWP substances	15.66	3.47
<b>Totals</b>	<b>451.60</b>	<b>100.00</b>

Source: CARB 2013.

Note: Totals may not sum due to rounding.

<sup>a</sup> Includes emissions associated with imported electricity, which account for 43.49 MMT CO<sub>2</sub>E annually.

### 4.6.3 Thresholds of Significance

The following significance criteria are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential GHG emission impacts. Impacts to GHG emissions would be significant if the proposed project would:

- GHG-1:** Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- GHG-2:** Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Neither the State of California nor the South Coast Air Quality Management District (SCAQMD) has adopted emission-based thresholds for GHG emissions under CEQA. The Governor’s Office of Planning and Research’s (OPR’s) technical advisory titled *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review* states that “public agencies are encouraged but not required to adopt thresholds of significance for environmental impacts. Even in the absence of clearly defined thresholds for GHG emissions, the law requires that such emissions from CEQA projects must be disclosed and mitigated to the extent feasible whenever the lead agency determines that the project contributes to a significant, cumulative climate change impact” (OPR 2008). Furthermore, the advisory document indicates that “in the absence of regulatory standards for GHG emissions or other scientific data to clearly define what constitutes a ‘significant impact,’ individual lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice.”

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. Thus, GHG impacts are recognized as exclusively cumulative impacts: there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA 2008). This approach is consistent with that recommended by the California Natural Resource Agency, which noted in its public notice for the proposed CEQA amendments that the evidence before it indicates

that in most cases, the impact of GHG emissions should be considered in the context of a cumulative impact, rather than a project-level impact (CNRA 2009a). Similarly, the Final Statement of Reasons for Regulatory Action for amendments to the CEQA Guidelines confirms that an environmental impact report (EIR) or other environmental document must analyze the incremental contribution of a project to GHG levels and determine whether those emissions are cumulatively considerable (CNRA 2009b).

While the proposed project would result in emissions of GHGs during construction, there are currently no established thresholds for assessing whether the GHG emissions of a project in the SCAQMD, such as the proposed project, would be considered a cumulatively considerable contribution to global climate change; however, all reasonable efforts should be made to minimize a project's contribution to global climate change. Estimated project-generated GHG emissions and their impact on global climate are addressed below.

#### **4.6.4 Impact Discussion**

***GHG-1: Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?***

##### **Construction GHG Emissions**

Construction of the proposed project would result in GHG emissions that are primarily associated with use of off-road construction equipment and on-road construction vehicles (e.g., haul trucks and vendor/delivery trucks) and worker vehicles. The California Emissions Estimator Model (CalEEMod) Version 2011.1.1, available online ([www.caleemod.com](http://www.caleemod.com)), was used to calculate the annual GHG emissions, expressed in units of CO<sub>2</sub>E, based on the construction scenario described in Section 4.2, Air Quality.

The proposed project would install sewer pipelines in a linear fashion, with open trench construction contractors completing approximately 60 feet of pipeline per day and horizontal directional drilling (HDD) contractors completing approximately 30 feet per day. It was assumed that trenching and grading for pipe installation and pump station removal activities would occur 5 days a week for approximately 12 months, assuming continuous construction. Construction would likely occur intermittently over a 24-month period; however, continuous construction starting in June 2016 was conservatively assumed. It is anticipated that open trench pipeline installation would involve the use of one crane, one forklift, one water truck (off-highway truck), and one tractor/loader/backhoe in operation from 4 to 8 hours per day, 5 days per week (22 days per month). For HDD pipeline installation, the same equipment would be used as with open trench activities, with the addition of a directional boring unit (bore/drill rig). Pump station abandonment is anticipated to involve use of one bore/drill rig, one excavator, one water truck, and one tractor/loader/backhoe. Pipeline installation and pump station removal phasing details

are described in Section 4.2, Air Quality. Proposed construction methods are described in Chapter 3, Project Description.

Estimates presented in Table 4.6-2 include emissions from on-site (off-road equipment) and off-site (on-road haul trucks, delivery trucks, and worker vehicles) sources during construction in 2016 and 2017.

**Table 4.6-2**  
**Estimated Annual Construction GHG Emissions**

	MT CO <sub>2</sub>	MT CH <sub>4</sub>	MT N <sub>2</sub> O	MT CO <sub>2</sub> E
Year 2016	315	0.02	0.00	315
Year 2017	128	0.01	0.00	128
<b>Total</b>	<b>443</b>	<b>0.03</b>	<b>0.00</b>	<b>443</b>

**Note:** See Appendix B for complete results.

MT = metric tons; CO<sub>2</sub> = carbon dioxide; CH<sub>4</sub> = methane; N<sub>2</sub>O = nitrous oxide; CO<sub>2</sub>E = carbon dioxide equivalent

As shown in Table 4.6-2, the estimated total GHG emissions during construction would be 315 metric tons CO<sub>2</sub>E in 2016 and 128 metric tons CO<sub>2</sub>E in 2017. Additional details regarding these calculations are found in Appendix B. Construction-related GHG emissions would occur intermittently over a 24-month period and would not represent a long-term source of GHG emissions. Accordingly, the proposed project would not generate an increase in construction GHG emissions that would have a significant impact on the environment; therefore, impacts would be **less than significant**.

### **Operational GHG Emissions**

As discussed in Section 4.2, Air Quality, the proposed project would not involve an increase in long-term operational activities. The purpose of the proposed project is to consolidate facilities and reduce the reliance on pump station infrastructure, with the benefit of reducing overall risks associated with facility failure and the reduction of long-term operational, maintenance, and replacement costs associated with pump station infrastructure. In addition, the proposed project would successfully divert flows from the Fairview Road Trunk Sewer, which is expected to eliminate the need for upsizing of the Fairview Road Trunk Sewer to accommodate ultimate system flows.

Once the new sewer pipelines are installed, no additional routine daily operational activities that would generate GHG emissions are anticipated to occur. Operational vehicle trips associated with inspection, maintenance, and repair of the sewer mains and laterals would periodically occur; however, inspection and maintenance activities are already occurring under existing conditions as performed by existing staff. In the event that repair of the pipelines would be required, the construction activity described above may occur on a localized portion of the sewer

system. However, repair activity would likely result in fewer emissions compared to the analyzed construction scenario, which assumes simultaneous pipeline construction of larger portions of Orange County Sanitation District (OCSD) and Costa Mesa Sanitary District (CMSD)/Newport Beach pipelines, in addition to emissions associated with truck trips. These potential repair activities would be temporary and would not be a source of long-term operational GHG emissions. Accordingly, the proposed project would not generate an increase in operational GHG emissions that would have a significant impact on the environment; therefore, impacts would be **less than significant**.

**GHG-2:**      *Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

The Scoping Plan approved by CARB on December 12, 2008, provides an outline for actions to reduce California's GHG emissions. The Scoping Plan requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. There are several federal and state regulatory measures aimed at the identification and reduction of GHG emissions; most of these measures focus on area source emissions (e.g., energy usage) and changes to the vehicle fleet (hybrid, electric, and more fuel-efficient vehicles). While federal and state legislation will ultimately reduce GHG emissions associated with the project, no specific plan, policy, or regulation would be directly applicable to the project.

At this time, the City of Costa Mesa, the City of Huntington Beach, the City of Newport Beach, local jurisdictions, and the SCAQMD have not adopted a GHG reduction plan, as specified in Section 15183.5(b) of the CEQA Guidelines, which would apply to the GHG emissions associated with the proposed project. Accordingly, no mandatory GHG regulations or finalized agency guidelines would apply to implementation of this project, and no conflict would occur. Therefore, this impact would be **less than significant**.

#### **4.6.5 Mitigation Measures**

Implementation of the proposed project would not result in significant impacts that would require mitigation. The project must adhere to SCAQMD Rules during construction-related activities, which could assist in minimizing less-than-significant GHG emissions generated during construction.

#### **4.6.6 Level of Significance After Mitigation**

No mitigation would be required and potential GHG impacts associated with project implementation would be less than significant.

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## **4.7 HAZARDS AND HAZARDOUS MATERIALS**

This section describes the existing hazards and hazardous materials setting of the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project) and analyzes the proposed project's impacts related to hazards and hazardous materials. Mitigation measures are identified as necessary to reduce or avoid significant impacts of the proposed project. Information presented in the discussion and subsequent analysis is based on the Hazards Assessment by Dudek (Appendix F).

### **4.7.1 Regulatory Setting**

#### **Federal**

##### ***Federal Toxic Substances Control Act and Resource Conservation and Recovery Act***

The federal Toxic Substances Control Act of 1976 (15 U.S.C. 2601–2697) and the Resource Conservation and Recovery Act (RCRA) of 1976 (42 U.S.C. 6901–6992) established a program administered by the U.S. Environmental Protection Agency (EPA) for regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (PL 98-616), which affirmed and extended the “cradle-to-grave” system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the Hazardous and Solid Waste Act. Under the authority of RCRA, the regulatory framework for managing hazardous waste, including requirements for entities that generate, store, transport, treat, and dispose of hazardous waste is found in 40 CFR, Parts 260–299.

##### ***Hazardous Materials Transportation Act***

The U.S. Department of Transportation regulates hazardous materials transportation under Title 49 of the United States Code (USC). State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and the California Department of Transportation. These agencies also govern permitting for hazardous materials transportation. Title 49 CFR reflects laws passed by Congress as of January 2, 2006.

##### ***Comprehensive Environmental Response, Compensation, and Liability Act***

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA; 42 U.S.C. 9601–9675), commonly known as “Superfund,” was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites, provided for liability of persons responsible for releases of hazardous waste at these sites, and established a trust fund to provide for cleanup when no responsible party could be

identified. CERCLA also enabled the revision of the National Contingency Plan. The National Contingency Plan provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

### ***International Fire Code***

The International Fire Code (IFC; ICC 2012), created by the International Code Council (ICC), is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The IFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The IFC and the International Building Code (IBC) use a hazard classification system to determine what protective measures are required to protect life safety in relation to fire. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the IFC employs a permit system based on hazard classification. The IFC is updated every 3 years.

### ***Federal Aviation Administration Functions***

The Federal Aviation Administration (FAA) has primary responsibility for the safety of civil aviation. The FAA's major functions regarding hazards include the following: (1) developing and operating a common system of air traffic control and navigation for both civil and military aircraft, (2) developing and implementing programs to control aircraft noise and other environmental effects of civil aviation, (3) regulating U.S. commercial space transportation, and (4) conducting reviews to determine that the safety of persons and property on the ground are protected.

### ***Federal Response Plan***

The Federal Response Plan of 1999 (FEMA 1999) is a signed agreement among 27 federal departments and agencies, including the American Red Cross, that (1) provides the mechanism for coordinating delivery of federal assistance and resources to augment efforts of state and local governments overwhelmed by a major disaster or emergency; (2) supports implementation of the Robert T. Stafford Disaster Relief and Emergency Act, as well as individual agency statutory authorities; and (3) supplements other federal emergency operations plans developed to address specific hazards. The Federal Response Plan is implemented in anticipation of a significant event likely to result in a need for federal assistance or in response to an actual event requiring federal assistance under a presidential declaration of a major disaster or emergency.

## **State**

### ***California Occupational Safety and Health Administration***

The California Occupational Safety and Health Administration (OSHA) is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. OSHA standards are generally more stringent than federal regulations. The employer is required to

monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR 330 et seq.). The regulations specify requirements for employee training, availability of safety equipment, accident prevention programs, and hazardous substance exposure warnings.

### ***California Hazardous Waste Control Act***

The Department of Toxic Substances Control is responsible for the enforcement of the Hazardous Waste Control Act (California Health and Safety Code, Section 25100 et seq.), which creates the framework under which hazardous wastes are managed in California. The law provides for the development of a state hazardous waste program that administers and implements the provisions of the federal RCRA cradle-to-grave waste management system in California. It also provides for the designation of California-only hazardous waste and development of standards that are equal to or, in some cases, more stringent than federal requirements. While the Hazardous Waste Control Act is generally more stringent than RCRA, until the EPA approves the California hazardous waste control program (which is charged with regulating the generation, treatment, storage, and disposal of hazardous waste), both the state and federal laws apply in California. The Hazardous Waste Control Act lists 791 chemicals and approximately 300 common materials that may be hazardous; establishes criteria for identifying, packaging, and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal, and transportation; and identifies some wastes that cannot be disposed of in landfills.

According to 22 CCR 66001 et seq., substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous waste. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated, or are being stored prior to proper disposal.

Toxic substances may cause short-term or long-lasting health effects ranging from temporary effects to permanent disability or death. For example, toxic substances can cause eye or skin irritation, disorientation, headache, nausea, allergic reactions, acute poisoning, chronic illness, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substance involved). Carcinogens (substances known to cause cancer) are a special class of toxic substances. Examples of toxic substances include most heavy metals, pesticides, and benzene (a carcinogenic component of gasoline). Ignitable substances (e.g., gasoline, hexane, and natural gas) are hazardous because of their flammable properties. Corrosive substances (e.g., strong acids and bases such as sulfuric (battery) acid or lye) are chemically active and can damage other materials or cause severe burns upon contact. Reactive substances (e.g., explosives, pressurized canisters, and pure sodium metal, which react violently with water) may cause explosions or generate gases or fumes.

Other types of hazardous materials include radioactive and biohazardous materials. Radioactive materials and wastes contain radioisotopes, which are atoms with unstable nuclei that emit ionizing

radiation to increase their stability. Radioactive waste mixed with chemical hazardous waste is referred to as “mixed wastes.” Biohazardous materials and wastes include anything derived from living organisms. They may be contaminated with disease-causing agents, such as bacteria or viruses (22 CCR 66261.1 et seq.).

### ***California Accidental Release Prevention Program***

Similar to the EPA Risk Management Program, the California Accidental Release Prevention (CalARP) Program (19 CCR 2735.1 et seq.) regulates facilities that use or store regulated substances, such as toxic or flammable chemicals, in quantities that exceed established thresholds. The overall purpose of CalARP is to prevent accidental releases of regulated substances and reduce the severity of releases that may occur. The CalARP Program meets the requirements of the EPA Risk Management Program, which was established pursuant to the Clean Air Act Amendments.

### ***California Health and Safety Code***

In California, the handling and storage of hazardous materials is regulated by Division 20, Chapter 6.95, of the California Health and Safety Code (Section 25500 et seq.). Under Sections 25500–25543.3, facilities handling hazardous materials are required to prepare a hazardous materials business plan. Hazardous materials business plans contain basic information about the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of in the state.

Chapter 6.95 of the Health and Safety Code establishes minimum statewide standards for Hazardous Materials Business Plans. Each business shall prepare a Hazardous Materials Business Plan if that business uses, handles, or stores a hazardous material (including hazardous waste) or an extremely hazardous material in disclosable quantities greater than or equal to the following:

- 500 pounds of a solid substance
- 55 gallons of a liquid
- 200 cubic feet of compressed gas
- A hazardous compressed gas in any amount (highly toxic with a Threshold Limit Value of 10 parts per million or less)
- Extremely hazardous substances in threshold planning quantities (California Health and Safety Code, Section 25503.5).

In addition, in the event that a facility stores quantities of specific acutely hazardous materials above the thresholds set forth by California code, facilities are also required to prepare a risk management plan and California accidental release prevention plan. The risk management plan

and accidental release prevention plan provide information about the potential impact zone of a worst-case release and require plans and programs designed to minimize the probability of a release and mitigate potential impacts.

### ***California Fire Code***

The California Fire Code (CFC) is Chapter 9 of Title 24 of the CCR. It was created by the California Building Standards Commission, and it is based on the IFC created by the ICC. It is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage of any substance that may pose a threat to public health and safety. The CFC regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect fire and life safety. These measures may include construction standards, separations from property lines, and specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

### ***California Emergency Services Act***

Under the Emergency Services Act (California Government Code, Section 8550 et seq.), the State of California developed an emergency response plan to coordinate emergency services provided by federal, state, and local agencies. Rapid response to incidents involving hazardous materials or hazardous waste is an integral part of the plan, which is administered by the Governor's Office of Emergency Services. The Office of Emergency Services coordinates the responses of other agencies, including the EPA, California Highway Patrol, Regional Water Quality Control Boards (RWQCBs), air quality management districts, and county disaster response offices.

## **Local**

### ***Integrated Emergency Response Program***

In accordance with OSHA regulations, the Orange County Sanitation District (OCSd) has implemented an integrated emergency response program (IERP) to cover worker safety, spill prevention, emergency response, and hazardous materials management. The IERP provides structural design specifications for storage tanks, including over-glow alarms and secondary containment volumes; visual monitoring schedules for aboveground storage tanks; underground storage tank tightness testing schedules; emergency response procedures; and reporting requirements. The IERP also includes safety procedures for operations and maintenance workers that include worker safety training, hazard communications, personal protective equipment, site

security, and departmental organization. Furthermore, the IERP includes training in and implementation of the Incident Command System during crisis situations.

### **4.7.2 Existing Conditions**

California Government Code Section 65962.5 requires the California Environmental Protection Agency to prepare an annual hazardous waste and substances list, commonly referred to as the Cortese List. A review of federal, state, and local Cortese List databases identified a number of known and potentially contaminated sites within the project area.

#### **Hazardous Materials**

Existing and past land use activities are potential indicators of hazardous material storage and use. For example, many industrial sites, historical and current, are known to have soil or groundwater contamination by hazardous substances. Other hazardous materials sources include leaking underground storage tanks, surface runoff from contaminated sites, and migration of contaminated groundwater plumes. A records review of federal, state, and local regulatory agency databases was used to evaluate environmental conditions of potential concern in the project area.

#### ***Regulatory Database Review***

##### EDR

An environmental database search performed by Environmental Data Resources (EDR 2013) listed 49 sites within the American Society for Testing and Materials (ASTM) 1527-05 standard search radius of the project area. Five of the sites were listed in regulatory databases associated with permitting. None of the 5 sites had an unauthorized release reported for the site. Three additional sites were plotted incorrectly by EDR and are located more than 1 mile from the project area; therefore, they are unlikely to have impacted the environmental conditions in the project area. The remaining 41 sites are discussed below.

Twenty-nine sites were listed as historical auto stations/historical cleaners or were listed in a database where a case documenting a release to soil and/or groundwater was closed by the lead regulatory agency. Given that these cases are closed and considering their distance from the project area, it is unlikely that these sites have impacted the environmental conditions in the project area. See Appendix F for additional information regarding these closed cases.

Twelve sites had reported unauthorized releases to soil and/or groundwater. However, due to the direction of groundwater flow, contaminant plume delineation, and distance of plume from the project area, it is unlikely that 11 of the sites with reported releases have impacted

the environmental conditions in the project area. See Appendix F for additional information on these open release sites. The remaining open release site, Newport Terrace Landfill, is discussed below.

The former Newport Terrace Landfill, located northeast of the intersection of 19th Street and Balboa Avenue, operated from 1953 until 1967. Activities at the site reportedly included disposal of construction and demolition debris, as well as domestic waste including paper, cardboard, metal, glass, and yard trimmings, in a small canyon. The RWQCB issued closure for the landfill in 1972. The former Newport Terrace Landfill (SWIS No. 30-AB-0168) is approximately 43 acres and is the only portion of the project area within the City of Newport Beach. An apartment/condominium complex and Canyon Park are currently located over portions of the previous landfill site (see Figures 4.7-1 and 4.7-2). As presented in Figure 4.7-2, the gravity sewer, Costa Mesa Sanitary District (CMSD) 18-inch pipeline, and CMSD existing pipeline are located adjacent to the western and northern landfill property boundaries (Figure 4.7-2). The proposed CMSD 12-inch pipeline along 19<sup>th</sup> Street is located within the southwestern portion of the former landfill property boundary .

The EDR report identified 21 sites in the surrounding area that were not mapped due to limited address information. None of the unmapped sites located within 1 mile of the project area appear to have impacted the environmental conditions of the project area.

#### DOGGR

Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) records were reviewed for the project area. The review of DOGGR records revealed five wells located within 100 feet of portions of the project area (Figure 4.7-1). The wells are described as inactive and plugged. However, drilling activities (e.g., the use of discharge pits, heavy machinery, drilling fluids) during installation of these wells may have impacted the project area. Stained soil and miscellaneous oil field debris may exist in the vicinity of these wells.

#### CalRecycle

A California Department of Resources Recycling and Recovery (CalRecycle) review on May 23, 2012, revealed that the former Newport Terrace Landfill consisted of three fill areas: engineered fill, rubble fill, and landfill area. A 15-foot-deep vent trench filled with sand was constructed around the landfill areas, and gas extraction wells were installed within the perimeter trench to prevent migration of landfill gas from the landfill. A notice and order was issued for the landfill due to the migration of landfill gas from the landfill toward adjacent residential properties. By 2009, the Orange County Health Care Agency (OCHCA) terminated the notice and order based on upgrades to the landfill gas remediation system. Along with the notification that the notice and order was terminated in 2009, the OCHCA required that all the landfill gas compliance

probes be monitored on a monthly basis and results be reported in monthly landfill gas monitoring reports. In addition, the OCHCA required that the landfill gas remediation system continue to be operated and maintained per industry standards. In 2012, the OCHCA approved a request by the City of Newport Beach to abandon monthly monitoring of the non-compliance (landfill gas) probes. Landfill gas analytical data (post 2009) was not available for review in the Cal-Recycle file.

#### OCHCA

A file review at OCHCA on July 2, 2013, revealed that an upgraded landfill gas remediation system was operating in May 2008. Prior to the installation of the landfill gas remediation system, methane was detected at concentrations greater than 5% in samples collected from probes located in the northwestern corner of the former landfill footprint (north of Walkabout Circle and west of Discovery Circle). The majority of the samples collected during monthly monitoring since June 2008 have complied with the state minimum standards for landfill gas control; however, samples collected in December 2011 exceeded the 5% methane by volume threshold. The detected methane was found in samples collected from probes located in the northwestern corner of the landfill footprint and was less than 10% methane by volume. According to the records reviewed, monthly monitoring data has complied with the landfill gas control standards.

#### RWQCB

A file review at the RWQCB on June 11, 2013, revealed that no current groundwater quality reports were available. Furthermore, according to the documents reviewed, no groundwater monitoring wells are associated with the landfill. The most recent file available for review was the *Report of Findings on the Investigation and Assessment of the Newport Terrace Landfill Gas Collection System* (Landfill Gas Report) dated March 19, 2004, prepared by SCS Engineers. The 2004 Landfill Gas Report indicated that methane was detected at concentrations greater than 5% in three of the southern property boundary probes, resulting in the site being out of compliance. No additional pertinent information was available in the RWQCB file.

#### ***Historical Aerial Photography Review***

In addition to the EDR report (EDR 2013.), a review of historical aerial photographs and Sanborn fire insurance maps was completed to determine whether evidence of recognized environmental conditions exists in the project area. A total of 28 photographs from 1927 to 2012 were reviewed, with scales ranging from 1:500 to 1:1,000 feet. The aerial photographs show the Santa Ana River, vacant land, agricultural land, and residential and industrial buildings in the vicinity of the project area. The aerial photographs did not indicate evidence of recognized



environmental conditions in the project area. Sanborn map coverage does not extend into the project area; therefore, no Sanborn maps were available for review.

### ***Fire Hazards***

The Orange County Fire Authority (OCFA), the Costa Mesa Fire Department, the Newport Beach Fire Department, and the Huntington Beach Fire Department provide fire protection services to the project area. OCFA is a regional fire service agency that serves 25 cities in Orange County and all unincorporated areas (OCFA 2013). The Costa Mesa Fire Department provides fire protection services through an automatic aid agreement to the Newport Terrace residential community located north of 19th Street in the City of Newport Beach jurisdiction. The Newport Beach Fire Department is a participant in Metro Net, a multi-city dispatch center covering the Cities of Huntington Beach, Newport Beach, and Fountain Valley in south Orange County and multiple cities in north Orange County. The City of Newport Beach has individual automatic aid agreements with the Cities of Costa Mesa and Huntington Beach and with OCFA. Together, all fire agencies provide personnel to any emergency. Regardless of jurisdictional boundaries, the closest emergency response unit is dispatched to the emergency for any fire or large emergency response with multiple units.

### ***Airports***

The closest airport to the project area is John Wayne International Airport, located approximately 7.5 miles northeast of the project area, at 18800 MacArthur Boulevard in the City of Santa Ana.

## **Emergency Action Plans**

### ***Orange County EOC***

The Orange County Emergency Operations Center (EOC) functions as the communication and coordination center for both the county and operational area emergency response organization and disaster preparedness, providing a central point for coordinating operational, administrative, and support needs of the county and operational area members. It also assists in coordination and communication between mutual aid coordinators and the state Office of Emergency Services during countywide and statewide emergency response and recovery operations. In addition, the EOC may become responsible for managing the tactical operations of regional resources designed to more efficiently use the pooled resources of operational area members or external resources to benefit the operational area as a whole.

### ***City of Costa Mesa EOP***

The City of Costa Mesa General Plan Safety Element outlines the city's Emergency Operations Plan, (EOP; City of Costa Mesa 2000) which is in place to provide guidance during emergency situations associated with natural disasters, technological incidents, and nuclear defense

operations. Aid during these unique emergency situations is available within the local government structure and associated agencies. The EOP identifies key personnel and groups in the Costa Mesa Emergency Management Organization that are organized to protect life and property in the community. The EOP specifies operations during an emergency, organization and assignment of responsibilities, coordinating instructions, an explanation of how the plan is to be administered, procedures to identify responsible personnel, and methods to request aid/support from other local communities (City of Costa Mesa 2000).

#### ***City of Huntington Beach EMHS Program***

The City of Huntington Beach Emergency Management and Homeland Security (EMHS) Program is in place to prepare for and respond effectively to major emergencies. The EMHS program was created by Municipal Ordinance 8.60, which designates the city manager as the director of emergency services and the fire chief as the deputy director. The EMHS staff works under the direction of the Fire Department. The EMHS establishes and maintains an emergency management system that coordinates preparedness, response, and recovery phases for natural disasters and homeland security emergencies. It also works cooperatively with neighboring cities, the County of Orange Sheriffs Department Emergency Management Bureau, California Emergency Management Agency (CalEMA), FEMA, and other government entities (City of Huntington Beach 2013).

#### ***City of Newport Beach Standardized Emergency Management System***

The City of Newport Beach is currently using the Standardized Emergency Management System for emergency response, where depending on the type of incident, several different agencies and disciplines may be called upon to assist with emergency response. The City of Newport Beach General Plan, Safety Element (City of Newport Beach 2006), outlines the city's Emergency Management Plan and describes the different levels of emergencies, the local emergency management organization, and the specific responsibilities of each participating agency, government office, and city staff. The City of Newport Beach also has an EOC that provides training for residents through the Community Emergency Response Team program (City of Newport Beach 2006).

### **4.7.3 Thresholds of Significance**

The following significance criteria are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential hazards and hazardous material impacts. Impacts to hazards and hazardous materials would be significant if the proposed project would:

- HAZ-1:** Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- HAZ-2:** 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.
- HAZ-3:** Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- HAZ-4:** 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 create a significant hazard to the public or the environment.
- HAZ-5:** 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, result in a safety hazard for people residing or working in the project area.
- HAZ-6:** For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
- HAZ-7:** Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- HAZ-8:** Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

#### **4.7.4 Impact Discussion**

- HAZ-1:** *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*

Construction of the proposed project would involve the use of relatively small amounts of commonly used hazardous substances, such as fossil fuels, lubricants, and solvents. Accident prevention and containment are the responsibility of the construction contractors. All hazardous materials would be handled in accordance with federal, state, and local laws, which ensure the safe transport, use, storage, and disposal of hazardous materials. In addition, as listed in Table 3-1 in Chapter 3, Project Description, a stormwater pollution prevention plan (SWPPP) and associated best management practices (BMPs) would be implemented during construction that would minimize the potential for hazardous materials release and ensure prompt cleanup in the event of such a release. The BMPs may include training of employees and contractors in proper hazardous materials storage and handling procedures, emergency response, and cleanup procedures. Operation of the sewer pipelines would not require the transport, use, or disposal of hazardous materials. Since OCSD, CMSD, and the City of Newport Beach would be required to comply with existing and future

hazardous materials laws and regulations for the transport, use, and disposal of hazardous materials, the impacts associated with the potential to create a significant hazard to the public or the environment would be **less than significant**.

**HAZ-2:**        *Would the project 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?*

The project area includes a number of areas with known hazardous materials and areas with the potential to contain hazardous materials in the surrounding area. Of the 49 sites identified in the EDR report, the former Newport Terrace Landfill was the only identified open release site that may have impacted the environmental conditions in the project area. Excavation for the pipelines proposed along 19th Street, the eastern border of Talbert Regional Park, and the northwest corner of the City of Newport Beach jurisdiction has the potential to result in undermining the landfill cover and unearthing refuse located at the former landfill. In addition, excavation within 100 feet of the wells identified in the DOGGR records search may also result in encountering petroleum-impacted soil. Therefore, during excavation for the proposed CMSD 12-inch sewer (19th Street), the proposed OCSD 24-inch gravity sewer (eastern border of Talbert Regional Park), and the proposed City of Newport Beach 18-inch sewer (northwest corner of the City of Newport Beach jurisdiction), there is a potential for encountering hazardous materials in the subsurface. The proposed project would adhere to federal, state, and local regulations and would implement BMPs to minimize the potential significant hazardous releases and prevent the release of hazardous materials. Spill response materials and spill kits would also be kept at the construction site. Operation of the sewer pipelines would not result in hazardous emissions. However, due to the potential to encounter refuse and other hazardous materials during installation of the three pipelines listed above, impacts would be **significant (Impact HAZ-1)**, and mitigation measures are provided.

For a discussion of the potential impacts resulting from uncontrolled discharges through fissures and fractures below the ground surface (frac-out), refer to Section 4.3.4 under BIO-1, and MM-BIO-5 in Section 4.3.5.

**HAZ-3:**        *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

The proposed project is located within a highly urbanized area of Orange County and there are a number of schools surrounding the project area:

- Victoria Elementary School, located approximately 0.14 mile east of the project area at 1025 Victoria Street, in Costa Mesa between Canyon Drive and National Avenue

- Waldorf School of Orange County, located approximately 0.21 mile north of the project area at 2350 Canyon Drive, in Costa Mesa between Fairview Park and Placentia Avenue
- Whittier Elementary School, located approximately 0.36 mile south of the project area at 1800 Whittier Avenue, in Costa Mesa between 19th Street and 18th Street
- Wilson Elementary School, located approximately 0.45 mile east of the project area at 801 West Wilson Street, in Costa Mesa between Placentia and Continental Avenue
- Resurrection Lutheran Preschool, located approximately 0.6 mile west of the project area at 9812 Hamilton Avenue, in Huntington Beach between Brookhurst Street and Bushard Street.

Construction of the proposed project would involve the use of relatively small amounts of commonly used hazardous substances, such as fossil fuels, lubricants, and solvents, within one-quarter mile of existing schools. Accident prevention and containment are the responsibility of the construction contractors. All hazardous materials would be handled in accordance with federal, state, and local laws, which ensure the safe transport, use, storage, and disposal of hazardous materials. Spill response materials and spill kits would also be kept at the construction site. Operation of the sewer pipelines would not result in the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste. However, due to the potential impacts discussed in Threshold HAZ-2 and the proximity of the project area to the schools listed above, potential impacts to schools would be **significant (Impact HAZ-2)** and mitigation measures are provided.

**HAZ-4:**      *Would the project 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?*

As discussed in response to Threshold HAZ-2, a records review of federal, state, and local regulatory agency databases was used to evaluate environmental conditions of potential concern with the project area; two potentially significant hazardous materials sites pursuant to Government Code Section 65962.5 were identified within the project area. The EDR report revealed one open release site, the former Newport Terrace Landfill, which has the potential to result in significant hazards to the public or the environment during excavation for the proposed pipelines. A portion of the proposed 12-inch sewer line is located within the landfill property boundary. Based on a map obtained from the agency file showing the landfill waste boundary on an aerial photograph, the proposed pipeline appears to be immediately adjacent to the waste boundary. A soil cover cap, 2-feet to 13-feet thick, is present over the waste fill at the landfill (SCS Engineers 2005). Since the soil cover cap cannot be compromised, no excavation may be performed within the waste fill. Although it appears that the pipeline will be located just outside of the waste boundary, a geophysical survey will be performed to evaluate the waste fill extents

within the landfill near the proposed pipeline prior to performing excavation activities. In addition, the DOGGR records search revealed a number of wells within 100 feet of the project area. Although these wells were found to be inactive and plugged, they may have affected the project area during installation. Therefore, during excavation for the proposed CMSD 12-inch sewer (19th Street), the proposed OCSD 24-inch gravity sewer (eastern border of Talbert Regional Park), and the proposed City of Newport Beach 18-inch sewer (northwest corner of the City of Newport Beach jurisdiction), potential impacts would be **significant (Impact HAZ-3)** and mitigation measures are provided.

**HAZ-5:**        *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 for people residing or working in the project area?*

There are no public airports within 2 miles of the project area, nor is the project area within an airport land use plan. The nearest public use airport is John Wayne International Airport, located approximately 7.5 miles northeast of the project area. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area; **no impact** would occur.

**HAZ-6:**        *For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?*

The project area is not within the vicinity of a private airstrip; the nearest public airport is John Wayne International Airport, located approximately 7.5 miles northeast of the project area. Therefore, **no impact** would occur as a result of the proposed project.

**HAZ-7:**        *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Construction of the proposed project is not anticipated to interfere with an adopted emergency response plan or evacuation plan, nor would it substantially impede public access or roadway circulation; however, there may be a temporary increase in traffic on these roadways due to increased truck loads or the transport of construction equipment to and from the project area during the construction period. The proposed project may also require temporary lane closures during construction of the proposed CMSD 12-inch sewer on 19th Street, the proposed CMSD 24-inch sewer on Canyon Drive, and the proposed OCSD connection to the Interplant Line in Brookhurst Street. None of these roadways are currently designated as part of a city emergency response or evacuation plan. The City of Costa Mesa General Plan Safety Element (City of Costa Mesa 2000) designates 19th Street as an emergency evacuation route because at the time the

General Plan was published in 2000, the city had plans to extend 19th Street across the Santa Ana River. However, the project was never undertaken and the map is no longer valid.

The temporary lane closures could affect emergency access in these areas; however, as listed in Table 3-1 in Chapter 3, Project Description, traffic control plans would be prepared to address construction traffic and road closures within the public rights-of-way of the Cities of Costa Mesa, Huntington Beach, and Newport Beach. The traffic control plans would include provisions for emergency vehicle access, signage, and flagmen to ensure that adequate emergency access is maintained throughout construction within public rights-of-way. Once completed, the roadways would be restored to their original condition and emergency evacuation would not be affected. Therefore, impacts to an emergency response plan or evacuation plan would be **less than significant**.

**HAZ-8:**        *Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?*

The project area is located between a highly urbanized portion of the county and the vast open space in Talbert Regional Park and Banning Ranch. The City of Newport Beach designates Banning Ranch as having moderate fire susceptibility. However, no aboveground structures would be built as part of the proposed project. Therefore, no people or structures would be impacted by wildfires as a result of the proposed project and impacts would be **less than significant**.

#### **4.7.5 Mitigation Measures**

**MM-HAZ-1:**        The contractors for the Orange County Sanitation District (OCSD), Costa Mesa Sanitary District (CMSD), and the City of Newport Beach shall each be responsible for all aspects of mobilization, set-up, operation, testing, and management; 24-hour trained personnel for monitoring and operation; pressure testing; spill containment at all points of suction, discharge, and ramp crossing connections; and spill management, including cleanup and replacement of damaged property and fines. In the event of an unauthorized spill associated with the routine transport, use, or disposal of hazardous materials, the contractors shall contact the California Emergency Management Agency and the National Response Center.

**MM-HAZ-2:**        Prior to performing work within or adjacent of the former landfill, contractors for OCSD, CMSD, and City of Newport Beach shall contact Orange County Health Care Agency (OCHCA), the Lead Enforcement Agency (LEA) for the landfill. A geophysical survey will be performed in the southwestern portion of the landfill to evaluate the subsurface

conditions and determine the waste fill extents to ensure that excavation will be not located within the waste fill areas of the landfill.

During construction of the proposed pipelines within or adjacent to the former Newport Terrace Landfill, the contractors for OCSD, CMSD, and City of Newport Beach shall monitor construction and excavation activities within their respective service areas, including air monitoring for dust, volatile organic compound (VOC) vapors, methane, and oxygen, and oversight to determine presence of potentially hazardous materials. If impacts are encountered, the contractors will follow the Hazardous Materials Contingency Plan (See MM-HAZ-4).

**MM-HAZ-3:** During construction within 100 feet of the identified Department of Conservation, Division of Oil, Gas, and Geothermal Resources (DOGGR) wells, OCSD shall conduct air monitoring every 15 minutes and visual observation. If contamination is encountered, the contractors shall follow the Hazardous Materials Contingency Plan (See MM-HAZ-4).

**MM-HAZ-4:** OCSD, CMSD, and the City of Newport Beach shall each prepare a hazardous materials contingency plan for their respective portions of the proposed project (see Figures 3-3 and 3-4) that includes the following:

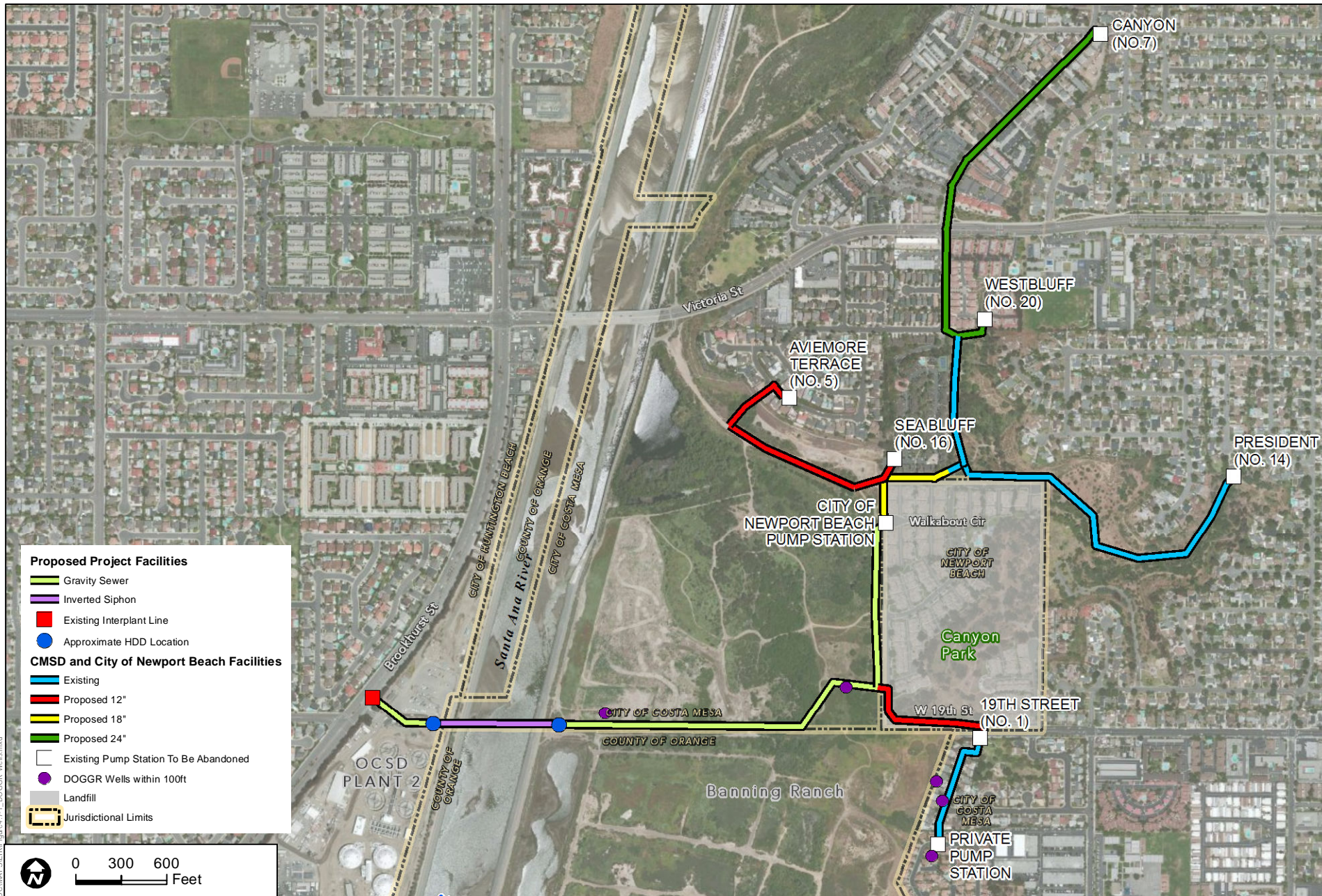
- Specific measures taken to protect worker and public health and safety (e.g. Personal protective equipment and monitoring air for dust, VOC vapors, methane and oxygen)
- Specific measures to be taken to manage refuse (if encountered) (e.g. Contact LEA; stop work)
- Procedures for limiting access to the contaminated area to properly trained personnel (e.g. Set-up traffic cones and caution tape)
- Procedures for notification and reporting, including internal management and local agencies (as needed) (e.g. Reference threshold quantities and contact LEA and National Response Center)
- A worker health and safety plan for excavation of potentially contaminated soil and/or refuse
- Procedures for characterization and management of excavated soils (e.g. Soil sampling and stockpile soil management)
- Procedures for certification and completion of remediation. (e.g. Collection of confirmation samples)



#### **4.7.6 Level of Significance After Mitigation**

With implementation of mitigation measures MM-HAZ-1, MM-HAZ-2, MM-HAZ-3, and MM-HAZ-4 the proposed project's impacts related to hazardous materials would be reduced to **less than significant**.

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**FIGURE 4.7-1**  
**DOGGR Wells**

**DUDEK**

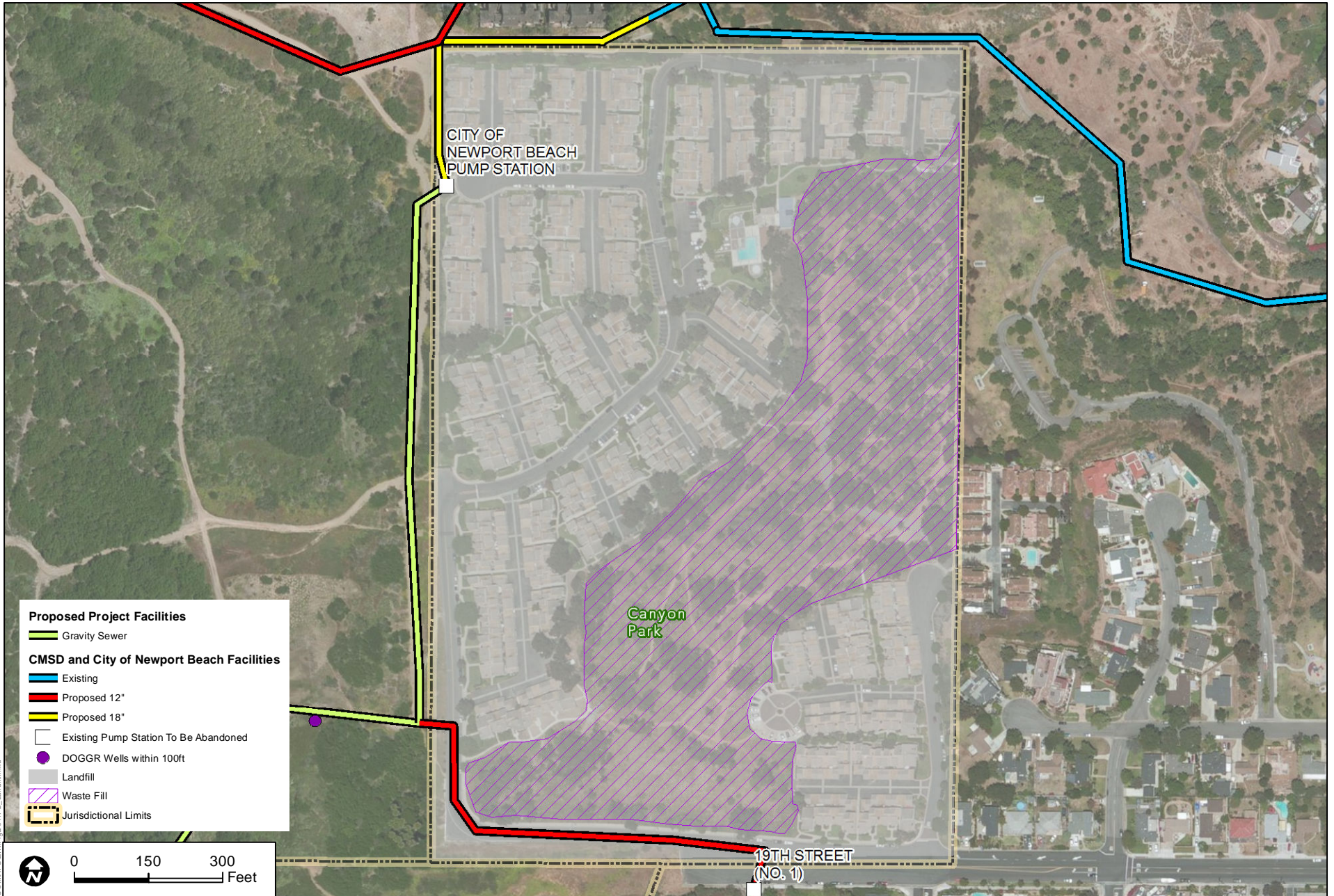
7193-02

AERIAL SOURCE: Bing Maps

Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

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**FIGURE 4.7-2**  
**Landfill and Waste Fill Area**

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## 4.8 HYDROLOGY AND WATER QUALITY

This section provides a summary of existing hydrology and water quality conditions, plans, and guidelines regulating water quality, and the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project) impacts to hydrology and water quality. Information presented in this section was obtained from the *Hydrology and Water Quality Technical Report for the Southwest Costa Mesa Trunk Sewer Project No. 6-19* provided in Appendix H of this Draft Environmental Impact Report (EIR).

### 4.8.1 Regulatory Setting

#### Federal

##### *Clean Water Act*

The U.S. Environmental Protection Agency (EPA) regulates water quality under the Clean Water Act (also known as the Federal Water Pollution Control Act). Enacted in 1972 and significantly amended in subsequent years, the Clean Water Act is designed to restore and maintain the chemical, physical, and biological integrity of waters of the United States. The Clean Water Act provides the legal framework for several water quality regulations, including the National Pollutant Discharge Elimination System (NPDES), effluent limitations, water quality standards, pretreatment standards, antidegradation policies, non-point source discharge regulations, and wetlands protection.

The Clean Water Act requires NPDES permits for the discharge of pollutants to waters of the United States from any point source. In 1987, the Clean Water Act was amended to require that the EPA establish regulations for permitting of municipal and industrial stormwater discharges under the NPDES permit program. The EPA published final regulations regarding stormwater discharges on November 16, 1990. The regulations require that municipal separate storm sewer system (MS4) discharges to surface waters be regulated by an NPDES permit.

The EPA has delegated its responsibility for administration of portions of the Clean Water Act to state and regional agencies. The Clean Water Act requires states to adopt water quality standards for receiving water bodies and to have those standards approved by the EPA. Water quality standards consist of designated beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply, fishing), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents, such as lead, suspended sediment, and fecal coliform bacteria, or narrative statements that represent the quality of water that supports a particular use.

### ***National and State Safe Drinking Water Acts***

The federal Safe Drinking Water Act, established in 1974, is administered by the EPA and sets drinking water standards throughout the country. The drinking water standards established in the act, as set forth in the Code of Federal Regulations (CFR), are referred to as the National Primary Drinking Water Regulations (Primary Standards; 40 CFR 141), and the National Secondary Drinking Water Regulations (Secondary Standards; 40 CFR 143). According to the EPA, the Primary Standards are legally enforceable standards that apply to public water systems. The Secondary Standards are non-enforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects in drinking water. The EPA recommends the Secondary Standards for water systems but does not require systems to comply. California passed its own Safe Drinking Water Act in 1986 that authorizes the state's Department of Health Services to protect the public from contaminants in drinking water by establishing maximum contaminant levels (as set forth in the California Code of Regulations (CCR), Title 22, Division 4, Chapter 15) that are at least as stringent as those developed by the EPA, as required by the federal Safe Drinking Water Act.

### ***Federal Antidegradation Policy***

The federal Antidegradation Policy (40 CFR 131.12) requires states to develop statewide antidegradation policies and identify methods for implementing them. Pursuant to this policy, state antidegradation policies and implementation methods shall, at a minimum, protect and maintain (1) existing in-stream water uses; (2) existing water quality where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource. State permitting actions must be consistent with the federal Antidegradation Policy.

### **State Regulations**

#### ***California Toxics Rule***

Because of gaps in California's regulations, the EPA promulgated the California Toxics Rule (40 CFR 131.38), which established numeric water quality criteria for certain toxic substances in California surface waters. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for water bodies that are designated by the Santa Ana Regional Water Quality Control Board (RWQCB) as having beneficial uses protective of aquatic life or human health. The California Toxics Rule criteria are applicable to the receiving waters from the project site.



### ***Porter-Cologne Water Quality Control Act***

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) established the principal California legal and regulatory framework for water quality control. The Porter-Cologne Act is embodied in the California Water Code. The California Water Code authorizes the State Water Resources Control Board (SWRCB) to implement the provisions of the Clean Water Act.

California is divided into nine regions governed by RWQCBs. The RWQCBs implement and enforce provisions of the California Water Code and the Clean Water Act under the oversight of the SWRCB. The project site is located in Region 8, also known as the Santa Ana Region, and is governed by the Santa Ana RWQCB.

Each RWQCB must formulate and adopt a water quality control plan for its region. The Santa Ana RWQCB has adopted and periodically amends a water quality control plan titled *Water Quality Control Plan for the Santa Ana River Basin* (Santa Ana Basin Plan; RWQCB 2008). The Santa Ana Basin Plan must conform to the policies set forth in the Porter-Cologne Act as established by the SWRCB in its state water policy. The Porter-Cologne Act also provides the RWQCBs with authority to include within their basin plans water discharge prohibitions applicable to particular conditions, areas, or types of waste.

### ***Section 303(d) – TMDLs***

The Clean Water Act requires states to publish, every 2 years, an updated list of streams and lakes that are not meeting their designated uses because of excess pollutants (i.e., impaired water bodies). The list, known as the Section 303(d) list, is based on violations of water quality standards. Once a water body has been deemed impaired, a total maximum daily load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (plus a margin of safety). Once established, the TMDL allocates the loads among current and future pollutant sources to the water body. Targets used in the TMDL do not establish new water quality objectives and are not enforceable against dischargers. Allocations made to point sources are implemented primarily through NPDES permits, particularly the MS4 permit, as well as the Industrial and Construction General Permits. Additionally, once a TMDL is developed and adopted into a basin plan, the water body is removed from the Section 303(d) list.

States are required to submit the Section 303(d) list and TMDL priorities to the EPA for approval. The 2010 Section 303(d) list was partially approved and subsequently revised by the EPA (final approval was granted in October 2011). The project site is located within the Lower Santa Ana River Basin and more specifically, the South Talbert area of Talbert Regional Park is located adjacent to Reach 1 of the Santa Ana River (Reach 1 extends from the tidal prism at the

Pacific Ocean to 17th Street in Santa Ana) (RWQCB 2008). A review of the 2010 Section 303(d) list from the Santa Ana RWQCB indicates that no listed receiving water bodies are located downstream of the project area (RWQCB 2011).

#### ***Section 402(p) – Construction General Permit***

Pursuant to the Porter-Cologne Act, Section 402(p), requiring regulations for permitting of certain stormwater discharges, the SWRCB has issued a statewide general NPDES permit and waste discharge requirements for stormwater discharges from construction sites (NPDES No. CAS000002): *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (CGP)*, effective July 1, 2010).

Under this Construction General Permit (CGP), discharges of stormwater from construction sites with a disturbed area of 1 acre or more are required to either obtain individual NPDES permits for stormwater discharges or be covered by the CGP. Coverage under the CGP is attained by completing and filing a Notice of Intent with the SWRCB. Each applicant under the CGP must ensure that a stormwater pollution prevention plan (SWPPP) is prepared prior to grading and implemented during construction. The primary objective of the SWPPP is to identify, construct, implement, and maintain best management practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site during construction. The CGP requires the control of pollutants to meet Best Available Technology Economically Achievable and Best Conventional Pollutant Control Technology standards. Compliance with the requirements of the CGP is used as one method to evaluate project construction-related impacts on surface water quality.

A revised CGP was recently adopted by the SWRCB on September 2, 2009, effective on July 1, 2010. It is assumed that this CGP would be in effect during construction of the project. Changes in the revised permit that are pertinent to the project include:

- **Technology-Based Numeric Action Levels** for pH and turbidity.
- **Technology-Based Numeric Effluent Limitations** (NELs) for pH during any construction phase where there is a high risk of pH discharge, and turbidity for all discharges.
- **Risk-Based Permitting Approach**, which establishes three levels of risk calculation: Risk Levels 1, 2, or 3 will be assigned to correspond with perceived low, medium, or high water quality risk.

The risk level is determined based on two factors: (1) the project sediment risk, which is based on an estimate of project-related bare-ground soil loss determined by the Revised Universal Soil Loss Equation, and (2) the receiving water risk, which is based on whether

there are established impairments or TMDLs for sediment or whether the receiving water is designated with beneficial uses for coldwater, spawning, or migratory habitats.

Based on the project location and receiving waters, the project is likely to have a low sediment risk and low receiving water risk. Consequently, it is likely that the project will fall into the low Risk Level 1 category, but could potentially fall into the Risk Level 2 category. A Risk Level 1 classification for the project would limit NELs and monitoring requirements. A Risk Level 2 designation would trigger some NELs and monitoring:

- *Minimum Requirements Specified.* Specifies more minimum BMPs and requirements that were previously only required as elements of the SWPPP or were suggested by guidance.
- *Effluent Monitoring and Reporting.* Requires effluent monitoring and reporting for pH and turbidity in stormwater discharges, depending on the risk level. Effluent monitoring would not be required by the project if it is classified at Risk Level 1.
- *Receiving Water Monitoring and Reporting.* Requires some Risk Level 3 discharges to monitor receiving waters. This requirement would not likely apply to the project.
- *Rain Event Action Plan (REAP).* Requires certain sites to develop and implement a REAP that must be designed to protect all exposed portions of the site within 48 hours prior to any likely precipitation event.
- *Annual Reporting.* Requires all projects that are enrolled for more than one continuous 3-month period to submit information and annually certify that their site is in compliance with these requirements.
- *Certification/Training Requirements for Key Project Personnel.* Requires that key personnel (e.g., SWPPP preparers, inspectors) have specific training or certifications to ensure that their level of knowledge and skills are adequate to design and evaluate project specifications that will comply with permit requirements.

## **Regional**

### ***Water Quality Control Plan for the Santa Ana River Basin***

The Santa Ana Basin Plan establishes water quality standards for all the groundwater and surface waters of the region and includes an implementation plan describing actions by the RWQCB and other that are necessary to achieve and maintain water quality standards (RWQCB 2008). Further, the Santa Ana Basin Plan regulates waste discharges to minimize and control their effects on regional groundwater and surface water quality. In addition, the Santa Ana RWQCB designates beneficial uses for inland surface waters and groundwater in the Santa Ana Basin Plan area under the California Water Code Section 13240. Beneficial uses are defined as the uses of

water necessary for the survival or well-being of humans, plants, and wildlife. The designated beneficial uses for the inland surface waters and groundwater near the proposed project are summarized in Table 4.8-1. Dischargers must comply with the water quality standards and beneficial uses identified in the Santa Ana Basin Plan.

**Table 4.8-1**  
**Summary of Beneficial Uses of Inland Surface Waters**

Inland Surface Waters	Beneficial Uses							
	<i>Municipal and Domestic Supply</i>	<i>Commercial and Sport Fishing</i>	<i>Marine Habitat</i>	<i>Contact Water Recreation</i>	<i>Non-Contact Water Recreation</i>	<i>Warm Freshwater Habitat</i>	<i>Wildlife Habitat</i>	<i>Threatened or Endangered Species</i>
Greenville Banning Channel	+			U	U	X	X	
Santa Ana River Reach 1	+			X	X	I	I	
Tidal Prism of Santa Ana River	+	X	X	X	X		X	X

Source: RWQCB 2008.

+ = excepted from MUN (State Board Resolution No. 88-63, Sources of Drinking Water Policy); X = existing beneficial use; I = intermittent beneficial use

Designated beneficial uses in inland surface waters and groundwater near the proposed project are defined in Table 4.8-2, as excerpted from the Santa Ana Basin Plan. The list of beneficial uses in Table 4.8-2 has been refined from that included in the Santa Ana Basin Plan to consider only those uses that appear in Table 4.8-1.

**Table 4.8-2**  
**Santa Ana Basin Plan List of Beneficial Uses**

Beneficial Use	Description
Municipal and domestic supply	Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
Commercial and sport fishing	Uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended to human consumption or bait process.
Marine habitat	Uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or other wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates, or wildlife water and food sources).
Contact water recreation	Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water skiing, skin and scuba diving, surfing, whitewater activities, fishing, and use of natural hot springs.
Non-contact water recreation	Uses of water for recreational activities involving proximity to water, but not normally involving contact with water where ingestion is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
Warm freshwater habitat	Uses of water that support warmwater ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or other wildlife, including invertebrates.

**Table 4.8-2**  
**Santa Ana Basin Plan List of Beneficial Uses**

Beneficial Use	Description
Wildlife habitat	Uses of water that support terrestrial ecosystems including, but not limited to, the preservation and enhancement of terrestrial habitats, vegetation, terrestrial wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
Threatened or endangered species	Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

Source: RWQCB 2008.

## **Local**

### ***County of Orange***

#### **Orange County Flood Control District**

Responsible for the design, construction, operation, and maintenance of regional flood control facilities, including the existing Santa Ana River flood control channel, the Orange County Flood Division (OC Flood) is staffed by a core group of Orange County Public Works (OC Public Works) flood control professionals including engineers, technicians, and real estate experts (OC Flood 2013a). Flood channels are maintained annually, and maintenance includes debris and vegetation removal. Within the project area the Santa Ana River Mainstem Project (SARP) was initiated in 1964, a survey report was completed by the U.S. Army Corps of Engineers in 1975, and construction was initiated in 1989 (OC Flood 2013b). The existing storm drainage channels constructed by the county were originally designed to accommodate 25-year flood events; however, the county now uses 100-year flood event standards for new storm drain construction and drainage improvements, and portions of their existing channels have been improved to accommodate up to a 100-year flood event (City of Huntington Beach 1996).

#### **Orange County Drainage Area Management Plan**

Section 402(p) of the Clean Water Act, as amended by the Water Quality Act of 1987, requires that municipal NPDES permits include requirements to (1) essentially prohibit non-stormwater discharges into municipal storm sewers and (2) control the discharge of pollutants from municipal storm drains to the maximum extent practicable. In response to this requirement, the Orange County Drainage Area Management Plan (DAMP) was developed in 1993, and has been updated several times in response to requirements associated with NPDES permit renewals (County of Orange et al. 2003). The DAMP is to be implemented by the County of Orange, OC Flood, and incorporated cities (NPDES permittees).

As stated in the DAMP, the main objectives of the plan are to present a plan that satisfies NPDES permit requirements and to evaluate impacts associated with urban storm water

discharges on receiving waters (County of Orange et al. 2003). DAMP elements include (1) the establishment of management strategies, interagency coordination, and public outreach and educational programs; (2) continuing participation in the regional research/monitoring program; (3) the evaluation and development of BMPs for the control of potentially polluting activities from non-fixed facility business not otherwise regulated by an agency; and (4) the improvement of water quality throughout the region (County of Orange et al. 2003).

#### County of Orange – Codified Ordinances

Title 9, Division 1 – Stormwater Management and Urban Runoff – Orange County Flood Control District Regulations, contains policies that address controls for water quality management. The policies contained in Section 9-1-50, New Development and Significant Redevelopment, mirror those included in Section 14.36.040 of the City of Newport Beach Municipal Code discussed in this subsection. In addition to controls for development, the County Codified Ordinances also addresses litter control.

#### County of Orange General Plan

Policies and programs associated with hydrology and water quality are discussed throughout the county's General Plan (County of Orange 2005), most prominently in Chapter 5, Public Services and Facilities, and Chapter 6, Resources. While Chapter 5 is primarily concerned with infrastructure, including water and wastewater pipelines and facilities and the county flood control system, Chapter 6 discusses water supply, water quality, and water quality management.

#### ***City of Costa Mesa***

#### City of Costa Mesa General Plan

Water resources and wastewater are two of eight focus topics covered in the City of Costa Mesa General Plan Conservation Element (City of Costa Mesa 2002). Key issues identified by the city for water and wastewater include provision of a potable water distribution system for all existing and future residents and business in the City and provision of a comprehensive wastewater collection and treatment system for all development (City of Costa Mesa 2002). Conservation Element policies are contained within Section 6.6, Goals, Objectives, and Policies, and those applicable to the proposed project are listed below:

- **Policy CON-1A.3:** Continue to comply with the National Pollutant Discharge Elimination System (NPDES) Program by participating in the Countywide Drainage Area Management Plan (DAMP), which stipulates water quality requirements for minimizing urban runoff and discharge from new development and requires the provision of applicable Best Management Practices (BMP).
- **Policy CON-1D.5:** Coordinate the development of plans, policies, and design standards for projects within the Coastal Zone with appropriate local, regional, state, and federal agencies.

- **Policy CON-1E.12:** Ensure that new development/significant redevelopment projects subject to the NPDES Stormwater Permit incorporate, to the maximum extent practicable, measures that reduce the quantity of storm flow and the discharge of pollutants in urban/stormwater runoff to protect water quality, biological habitats, and recreation uses of downstream receiving water bodies.
- **Policy CON-1E.13:** Ensure that future land development/redevelopment projects subject to the NPDES Stormwater Permit adhere to the design standards set forth in the current Drainage Area Management Plan (DAMP) and the City's Local Implementation Plan (City of Costa Mesa 2002, CON-44–CON-47).

#### City of Costa Mesa Municipal Code

Title 8, Chapter 3, Water Quality, of the City of Costa Mesa Municipal Code contains regulations regarding prohibited discharges (Section 8-31) and urban runoff controls (Section 8-32). Regulations established in Section 8-32 governing the control of urban runoff are the same as those included in both the County of Orange Codified Ordinances Section 9-1-50 and the City of Newport Beach Municipal Code Section 14.36.040, Control of Urban Runoff (see City of Newport Beach Municipal Code subsection for details). In addition to runoff controls, Section 8-35, Permits, contains discharge permit procedures for permits authorizing the release of non-stormwater discharges to the stormwater drainage system.

#### ***City of Huntington Beach***

#### City of Huntington Beach General Plan

Water and wastewater infrastructure and resources are discussed in both the Utilities Element and the Environmental Resources/Conservation Element of the City of Huntington Beach General Plan (City of Huntington Beach 1996). Section C, Storm Drainage, of the Utilities Element discusses the responsibilities of and infrastructure managed and maintained by OC Flood and the City of Huntington Beach Public Works Department. Applicable policies of the Utilities Element are listed below:

- **Policy U 1.2.1:** Require that new development, redevelopment, and existing development contain protective safeguards and mitigation measures preventing degradation.
- **Policy U 2.1.5:** Maintain, upgrade, and expand existing wastewater collection and treatment facilities.
- **Policy U 2.1.7:** Design and route wastewater treatment collection facilities to eliminate the need for pump stations where possible (City of Huntington Beach 1996, III-U-10–III-U-12).

Section C, Water Resources and Water Quality Management, of the Environmental Resources/Conservation Element discusses the beneficial uses of local receiving water and notes the effects to water quality associated with urban runoff and pollution. Applicable policies pertaining to water resources and water quality management as they relate to the proposed project are listed below:

- **Policy ERC 6.1.1:** Create and implement means to reduce the quantity and improve the quality of runoff and discharge of pollutants to the maximum extent practicable by integrating surface runoff controls and Best Management Practices into new development and redevelopment land use decisions.
- **Policy ERC 6.1.4:** Limit and minimize the disturbance and modifications of natural water bodies, drainage systems, and hydrology.
- **Policy ERC 6.1.5:** Require incorporation of controls in new development and redevelopment, including structural and non-structural Best Management Practices (BMPs), to mitigate the projected increases in pollutant loads and flows (City of Huntington Beach 1996, IV-ERC-26).

#### City of Huntington Beach Municipal Code

Title 14, Waters and Sewers, of the City of Huntington Beach Municipal Code contains regulations pertaining to water pollution (Section 14.24), stormwater and urban runoff management (Section 14.25), and drainage (Section 14.48). Regulations regarding storm drain and sewer usage (Section 14.24.035) are general and prohibit the discharge of a variety of harmful liquids, gases, substances, and wastes. Regulations regarding stormwater and urban runoff management include provisions for new development and significant redevelopment that mirror those included in the Orange County DAMP and the municipal codes of Costa Mesa and Newport Beach. Provisions applicable to drainage are focused primarily on drainage fees.

#### ***City of Newport Beach***

#### City of Newport Beach General Plan

The Natural Resources Element of the City of Newport Beach General Plan (City of Newport Beach 2006) addresses water supply (as a resource) and water quality as it pertains to bay and ocean waters and potable drinking water. Water quality policies applicable to the proposed project are listed below:

- **Policy NR 3.2:** Promote pollution prevention and elimination methods that minimize the introduction of pollutants into natural water bodies.
- **Policy NR 3.3:** Suspend activities and implement appropriate health and safety procedures in the event that previously unknown groundwater contamination is



encountered during construction. Where site contamination is identified, implement an appropriate remediation strategy that is approved by the City and the state agency with appropriate jurisdiction.

- **Policy NR 3.4:** 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.
- **Policy NR 3.5:** Require that development does not degrade natural water bodies.
- **Policy NR 3.10:** Implement and improve upon Best Management Practices (BMPs) for residences, businesses, development projects, and City operations.
- **Policy NR 3.11:** 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 (City of Newport Beach 2006, 10-19, 10-20).

#### City of Newport Beach Municipal Code

Title 14, Chapter 14.36, Water Quality, of the City of Newport Beach Municipal Code contains policies relevant to water quality management and more specifically, urban runoff control. For example, Section 14.36.040, Control of Urban Runoff, requires all new development and "significant" redevelopment with the city to comply with the requirements of the DAMP and any conditions or requirements established by the city related to the reduction or elimination of pollutants in stormwater runoff from the project site (City of Newport Beach 2013a). Chapter 14.36 also contains provisions for inspections and enforcement of urban runoff controls.

#### City of Newport Beach Local Implementation Plan

The city's Local Implementation Plan (LIP) provides a written account of completed activities, in-progress activities, and future activities of the city to meet the requirements of the 2002 Third Term NPDES Permit and make a meaningful improvement in urban water quality (City of Newport Beach 2013b). Intended to serve as the basis for city compliance during the 5-year life of the Third Term NPDES Permit, the LIP is subject to updating and modification as the city determines necessary or as directed by the RWQCB. The LIP contains 12 individual sections dedicated to program management, plan development, new development/significant redevelopment (Section A-7.0), and construction (Section A-8.0), among other issues. While LIP requirements remain relatively consistent during permit transitional periods, reissuance of the Fourth Term NPDES Permit (Order R8-2009-0030) in 2009 resulted in changes to the 2003 DAMP, the LIP, and the city's stormwater program. The Fourth Term NPDES Permit requires that new development and new significant redevelopment prepare a water quality management

plan (WQMP) for urban runoff; however, this requirement would not be applicable to the proposed project. According to the Fourth Term NPDES Permit, new development projects consist of those that create 10,000 square feet or more of impervious surface and other projects that result in an increase in impervious area (RWQCB 2009), and as the proposed project would not result in an increase in impervious area, it would not be subject to the city's WQMP requirement. The Fourth Term NPDES Permit also contains low-impact development considerations to control pollutants in urban runoff from new development/significant redevelopment; however, as discussed above for the city's WQMP requirements, the proposed project does not fall into the new development category as defined by the RWQCB.

## **4.8.2 Existing Conditions**

### **Surface Water**

The proposed project is within the East Coastal Plain Hydraulic Subarea of the Lower Santa Ana River Hydrologic Area (HA) of the Santa Ana Hydrologic Basin Planning Area (Santa Ana RWQCB). Cities within the HA include Costa Mesa, Huntington Beach, and Newport Beach. Receiving waters within the HA and downstream of the HA include the Greenville–Banning Channel, Santa Ana River, Santa Ana River Tidal Marsh, Santa Ana River Tidal Prism, and Pacific Ocean (Appendix H).

The Santa Ana River is the most prominent surface water body in the project area. The Santa Ana Basin Plan divides the Santa Ana River into six reaches; each reach is a hydrologic and water quality unit (RWQCB 2008). For example, Reach 2 carries all upstream flows downstream through Santa Ana Canyon to Orange County, where much of the water is recharged into the Orange County Groundwater Basin. The downstream end of Reach 2 is 17th Street in Santa Ana. Southwest of 17th Street, the Santa Ana River transitions into Reach 1, which is channelized and/or lined with riprap. Reach 1 passes through the project area and eventually empties into the Pacific Ocean. According to the RWQCB, Reach 1 is normally a dry flood-control channel (RWQCB 2008). Within the project area, surface water primarily consists of urban drainages flowing to the Santa Ana River.

### **Groundwater**

A groundwater basin is defined as a hydrogeologic unit containing one large aquifer and several connected and interrelated aquifers. The proposed project area is located within the Coastal Plain of Orange County Groundwater Basin (Coastal Plain Groundwater Basin; California Department of Water Resources 2013a). The Coastal Plain Groundwater Basin underlies a coastal alluvial plain in the northwestern portion of Orange County and is bounded by consolidated rocks of the Puente and Chino Hills to the north, the Santa Ana Mountains to the east, and the San Joaquin Hills to the south (the southwestern extent of the basin is bounded by

the Pacific Ocean) (California Department of Water Resources 2013b). Recharge to the basin is derived from percolation of flow from the Santa Ana River (the river contains natural flow, reclaimed water, and imported water), infiltration of precipitation, and injection into wells (California Department of Water Resources 2013b). The total groundwater storage capacity of the basin is approximately 38 million acre-feet; groundwater impairments included seawater intrusion near the coast (and increasing salinity), high nitrates, and methyl tertiary butyl ether (MTBE) (California Department of Water Resources 2013b).

Within the Orange County, groundwater accounts for approximately 60% of the water used for municipal, industrial, and agricultural uses (County of Orange 2005).

### **Flooding**

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps identify flood zones and areas that are susceptible to 100- and 500-year floods. The nearest high-risk areas (Zone A areas) to the project site include Victoria Pond along the northwestern boundary of the South Talbert area of Talbert Regional Park and the North Talbert area and low-lying portions of Fairview Park. According to FEMA Flood Insurance Rate Map Panel 06059C0264J, all proposed components of the project would be located in Zone X, which is assigned a low to moderate flood risk (FEMA 2013a, 2013b).

### **4.8.3 Thresholds of Significance**

The following significance criteria are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential hydrology and water quality impacts. Impacts to hydrology and water quality would be significant if the proposed project would:

- HYD-1:** Violate any water quality standard or waste discharge requirement.
- HYD-2:** Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- HYD-3:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site.

- HYD-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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site.
- HYD-5:** Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- HYD-6:** Otherwise substantially degrade water quality.
- HYD-7:** Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- HYD-8:** Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- HYD-9:** Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- HYD-10:** Be subjected to inundation by seiche, tsunami, or mudflow.

#### **4.8.4 Impact Discussion**

- HYD-1:** *Would the project violate any water quality standard or waste discharge requirement?*

##### **Construction Impacts**

With the exception of the proposed Orange County Sanitation District (OCSD) inverted sewer siphon beneath the Santa Ana River and the Costa Mesa Sanitary District (CMSD) 24-inch gravity sewer to be installed in Canyon Drive between Canyon Pump Station (CMSD No. 7) and West Bluff Pump Station (CMSD No. 20), proposed gravity sewer pipelines would be installed via open-cut trenching. Therefore, as shown in Figure 3-4, open-cut trenching would occur along existing dirt trails in Talbert Regional Park and Canyon Park as well as in 19th Street from the eastern boundary of Talbert Regional Park to the 19th Street Pump Station (CMSD No. 1). The SWRCB requires dischargers whose projects disturb 1 acre of soil or more to obtain coverage under the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (CGP; Water Quality Order 2009-0009-DWQ). Construction activity subject to this permit includes clearing, grading, and ground disturbances such as trenching, stockpiling, or excavation. Therefore, because the proposed

project would result in more than 1 acre of soil disturbance during construction, coverage under the NPDES CGP would be required and as stated in Chapter 3, Project Description, the CGP has been identified as a required permit/authorization. Further, as a condition of coverage under the CGP, the proposed project would be subject to requirements applicable to linear underground projects, including the requirement to prepare and implement a SWPPP. As stated in Section 3.5.4, Project Design Features and Construction Measures, preparation and implementation of a SWPPP is included for general water quality protection and erosion and sedimentation control during construction. Further, to comply with the SWPPP requirements of the construction activity permit as well as with applicable policies and regulations of regional and local plans, BMPs included in the SWPPP would be implemented during construction to prevent pollutants from contacting stormwater and entering municipal stormwater facilities and to control erosion and sedimentation. SWPPP BMPs may include physical stabilization (i.e., hydraulic or straw mulch, geotextiles), vegetation stabilization (i.e., hydroseeding), or wind-erosion control measures. With regard to sedimentation, control measures may include perimeter protection, storm drain inlet protection, and/or velocity reduction measures. Construction stormwater BMPs would also be consistent with those described in the Orange County DAMP for construction activities. Therefore, impacts would be **less than significant**.

Horizontal directional drilling (HDD) construction methods would be used to install an inverted gravity sewer siphon beneath the Santa Ana River and to install a 24-inch sewer in Canyon Drive. Due to the depth of the sewer, trenchless methods other than HDD may be used during installation of the 24-inch sewer in Canyon Drive. Although highly unlikely, uncontrolled discharges of drilling lubricants through fissures and fractures below the ground surface (frac-out) could occur during this process and could impact surface water quality of the Santa Ana River. Under this scenario, drilling lubricants could enter the Santa Ana River which would entail the illicit discharge of hazardous materials into nearby surface waters. To reduce potential impacts associated with frac-out, Mitigation Measure BIO-5 has been provided (see Section 4.3, Biological Resources) and would require OCSD and/or project contractors to prepare a frac-out contingency plan for distribution and approval by the ACOE, CDFW, RWQCB, CCC, and USFWS. Therefore, with implementation of an approved frac-out contingency plan, potential impacts associated with HDD construction methods would be **less than significant**.

### **Operational Impacts**

The proposed project would require a 30-foot-wide permanent easement along its entire length to allow for access to the sewer pipes. Additionally, a 20-foot wide temporary easement would be required along the southern boundary of Talbert Regional Park during construction to allow sewer maintenance trucks to access all project manholes and structures. The easement would also include a hammerhead-shaped vehicle turnaround at both ends of the new sewer facilities. Street

access to the permanent easement would be provided from Balboa Boulevard approximately 450 feet north of the intersection with the west end of 19th Street. The introduction of a permanent, all-weather crushed-rock access road would not substantially increase surface runoff volumes in the area (crushed rock is permeable and therefore infiltration potential would be maintained). In addition, the proposed project would not generate significant amounts of non-visible pollutants as the use of colorless sealants, adhesives, cleaning products or other materials during general maintenance activities would be limited. Although urban development projects in Southern California commonly result in the generation of pollutants once they have been constructed, the proposed project consists almost entirely of underground pipeline construction. Therefore, the potential for pollutant generation during operation of the proposed project is negligible; as such, impacts would be **less than significant**.

***HYD-2: Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?***

### **Construction**

During construction of the proposed project, groundwater may be encountered while excavating trenches for pipeline construction or during excavation activities associated with entry and exit pits for trenchless construction. Although groundwater may be encountered, it should be noted that groundwater resources would not be relied upon for water supply for dust suppression or any other construction-related need. However, should groundwater be encountered during trenching and dewatering be necessary during construction discharges would be directed through closed conduit piping systems to the nearest sanitary sewer manhole or existing sewer pipeline which would convey the discharge to OCSW wastewater treatment facilities. In the event that discharge is required in the Santa Ana River, a dewatering plan would be prepared and submitted by the contractor for review and approval. The dewatering plan would provide for surface discharge in accordance with the Santa Ana RWQCB requirements outlined in Order No. R8-2009-0003, General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (de minimus) Threat to Water Quality, including a list of appropriate BMPs to ensure that effluent limitations in the Reach 1 zone of the Santa Ana River are maintained.

In addition, as a condition of coverage under the RWQCB CGP (2009-0009-DWQ), construction activities would be required to comply with established discharge prohibitions, including prohibitions contained in basin plans and statewide water quality control plans, as well as effluent limitations necessary to meet applicable water quality standards for Reach 1 of the Santa Ana River. Non-stormwater discharges authorized by the CGP include dewatering, including uncontaminated groundwater from dewatering, and with preparation and implementation of a dewatering plan described above, the discharge of groundwater resulting

from dewatering activities during construction is anticipated to present a low risk to Santa Ana River water quality. Potential impacts associated with dewatering would be further reduced through the incorporation of waste management and materials pollution control BMPs and non-stormwater management BMPs included in the SWPPP (for a discussion of BMPs that may be included in the SWPPP please refer to HYD-1 above). Therefore, while construction of the proposed project is not anticipated to deplete groundwater supplies or substantially interfere with groundwater recharge, should dewatering be necessary the necessary RWQCB permit would be obtained and appropriate control measures and plans would be implemented. Impacts would be **less than significant**.

### **Operation**

Once the proposed sewer pipelines are installed underground, trenches are backfilled, and pump stations are abandoned, surface disturbances along the proposed alignments would only occur sporadically. Although maintenance of the siphons would occur on a monthly basis, it would not require surface disturbances. Under this scenario, maintenance of sewer facilities would not deplete groundwater supplies and the presence of sewer facilities would not substantially interfere with groundwater recharge. The proposed project includes access roads to allow maintenance personnel to access project manholes and structures. However, the road would consist of permeable materials (i.e., crushed rock) and would not interfere with groundwater recharge. As such, impacts would be **less than significant**.

***HYD-3: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?***

### **Construction**

The existing drainage pattern along the proposed alignments would be temporarily altered as a result of open-cut trenching. As stated in Chapter 3, Project Description, the Orange County Sanitation District (OCSD) estimates that construction of the OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed OCSD facilities would primarily be located in existing dirt trails in Talbert Regional Park) would begin in June 2016 and would be completed in May 2018, for a total duration of approximately 24 months. The CMSD and City of Newport Beach project components are anticipated to start during the same period. While surface disturbances associated with open-cut trenching and installation of the proposed sewer pipelines would alter existing drainage patterns, a SWPPP would be prepared as a project design feature and BMPs would be implemented during project construction to prevent pollutants from contacting stormwater and to reduce the potential for on- and off-site erosion and sedimentation. Consistent with the Orange County DAMP standards for construction stormwater BMPs, BMPs included in the SWPPP could

include physical stabilization (i.e., hydraulic or straw mulch, geotextiles), vegetation stabilization (i.e., hydroseeding), or wind-erosion control measures. With regard to sedimentation, control measures could include perimeter protection, storm drain inlet protection, and/or velocity reduction measures. Therefore, with implementation of BMPs identified in the SWPPP, construction impacts associated with substantial on- or off-site erosion or sedimentation would be **less than significant**.

### **Operation**

No net increase in impervious surface area is proposed for the project, and once the proposed sewer pipelines are installed, the disturbed areas would be returned to pre-project conditions. Therefore, the project would have a minimal impact on existing drainage patterns that could potentially result in substantial on- or off-site erosion or siltation. Therefore, impacts would be **less than significant**.

**HYD-4:** *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?*

### **Construction**

As stated previously, open-cut trenching along the proposed sewer pipeline alignments would temporarily alter existing drainage patterns. While surface disturbance associated with construction of the proposed project is not anticipated to increase the rate or amount of surface runoff, a SWPPP would be prepared as a project design feature (see Chapter 3, Project Description, Table 3-1) and erosion- and sedimentation-control BMPs would be implemented that would reduce the potential for on- or off-site flooding. Also, once the proposed pipelines are installed, trenches and other disturbed areas would be returned to pre-project conditions and existing drainage patterns would be restored. Therefore, impacts associated with surface runoff and on- or off-site flooding during construction would be **less than significant**.

### **Operation**

Because the proposed sewer pipelines would be installed underground and disturbed areas would be returned to pre-project conditions, no net increase in impervious surface area is anticipated for the proposed project. Because disturbed areas would be restored to pre-project conditions, the proposed project would have minimal impact on existing drainage patterns and would not increase surface runoff rates that could in turn result in on- or off-site flooding. As such, impacts would be **less than significant**.



**HYD-5:**        *Would the project create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*

No net increase in impervious surface area is planned for the project and the disturbed areas would be returned to pre-project conditions. Therefore, the project will have **no impact** on existing or proposed stormwater drainage systems.

**HYD-6:**        *Would the project otherwise substantially degrade water quality?*

See responses to Thresholds HYD-1 through HYD-5 above.

**HYD-7:**        *Would the project place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?*

No housing is proposed as part of the proposed project; therefore, **no impact** would occur.

**HYD-8:**        *Would the project place within a 100-year flood hazard area structures which would impede or redirect flood flows?*

The proposed project is not located within a 100-year floodplain and the proposed sewer pipelines would be installed underground. Since the project does not propose any surface features or facilities, the project would not impede or redirect surface water flows. Therefore, **no impact** would occur.

**HYD-9:**        *Would the project expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?*

The proposed project is not located within a 100-year floodplain or a known Dam Inundation Zone. While the project proposes the installation of an inverted sewer siphon beneath the Santa Ana River and adjacent riprap levees, the elevation of the proposed inverted sewer siphon would be determined during final design. It is conceptually proposed at a depth of approximately 25 feet under the current Santa Ana River channel invert and approximately 10 feet under the toe of the levee riprap. Given the proposed depth of the inverted siphon, no damage to the Santa Ana River levees is anticipated. Therefore, impacts associated with the exposure of structures to hazards associated with the failure of a levee would be **less than significant**.

***HYD-10: Would the project be subjected to inundation by seiche, tsunami, or mudflow?***

Although the project is located adjacent to the Santa Ana River and near the coastline, the project consists of underground pipeline improvements; therefore, any surface inundation by seiche, tsunami, or mudflow would pose minimal risk to the proposed improvements. As such, impacts associated with inundation by seiche, tsunami, or mudflow would be **less than significant**.

#### **4.8.5 Mitigation Measures**

No significant impacts to hydrology and water quality have been identified and therefore no mitigation measures are required.

#### **4.8.6 Level of Significance After Mitigation**

Potential hydrology and water quality impacts would be less than significant.

## 4.9 LAND USE AND PLANNING

This section provides an overview of the land uses within the project area and surrounding region, the regulatory framework, an analysis of potential conflicts with existing land use plans that would result from implementation of the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project), and identification of mitigation measures. The land use analysis is based on field observations and review of relevant planning documents and legally recorded easements. This section addresses the relationship of the proposed project with existing land uses and allowable uses.

Impacts associated with environmental issues (including but not limited to noise, aesthetics, traffic, recreation, and biological resources) are addressed in their respective sections of this Draft Environmental Impact Report (EIR). These environmental issues are discussed in this section only to the extent that they would influence land use compatibility.

### 4.9.1 Regulatory Setting

#### State

##### *California Coastal Commission*

The California Coastal Commission (CCC) was established by the State Legislature through adoption of the California Coastal Act of 1976 (PRC, Section 30000 et seq.). The intent of the California Coastal Act is to protect, maintain, and where feasible enhance and restore the overall quality of the Coastal Zone environment and its natural and artificial resources. The CCC regulates land and water use in the Coastal Zone, which is defined as follows:

*That land and water area of the State of California from the Oregon border to the border of the Republic of Mexico, specified on the maps identified and set forth in Section 17 of that chapter of the Statutes of the 1975–76 Regular Session enacting this division, extending seaward to the state’s outer limit of jurisdiction, including all offshore islands, and extending inland generally 1,000 yards from the mean high tide line of the sea. In significant coastal estuarine, habitat, and recreational areas it extends inland to the first major ridgeline paralleling the sea or five miles from the mean high tide line of the sea, whichever is less, and in developed urban areas the zone generally extends inland less than 1,000 yards (PRC, Section 30103(a)).*

The California Coastal Act includes specific policies that address issues such as shoreline and upland public access and recreation, terrestrial and marine habitat protection, visual resources, water quality, public works, and land/water uses.

### Local Coastal Programs

Implementation of California Coastal Act policies is accomplished primarily through requiring local governments to prepare a Local Coastal Program (LCP). An LCP typically consists of a Coastal Land Use Plan (CLUP) and a Local Implementation Plan (LIP). The CLUP indicates the types, location, and intensity of land uses, the applicable resource protection and development policies, and, where necessary, a listing of implementing actions. The LIP consists of the zoning ordinances, zoning district maps, and other legal instruments necessary to implement the CLUP. Completed LCPs must be submitted to the CCC for review and approval.

After certification of an LCP, the authority to issue coastal development permits (CDPs) is delegated to the appropriate local government. The CCC retains original permit jurisdiction over certain specific lands, such as submerged lands, tidelands, and public trust lands, and has appellate authority over development approved by the local government in specified geographic areas and for major public works projects and major energy facilities. A CDP is generally required for development activities including construction of buildings, division of land, and activities that change the intensity of land use or public access to coastal waters. In issuing CDPs, the local government must make the finding that the development conforms to the certified LCP, and in some cases, the public access policies of the California Coastal Act, as applicable.

### Environmentally Sensitive Habitat Areas Definition and Guidelines

The California Coastal Act protects important coastal biological resources, including wetlands, riparian habitats, and other areas defined as environmentally sensitive habitat areas by the CCC. Section 30107.5 of the California Coastal Act defines an environmentally sensitive habitat area as “any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.” The CCC determines whether a property contains an environmentally sensitive habitat area.

### ***California State Lands Commission***

The California State Lands Commission (CSLC) was created by the California Legislature in 1938 as an independent body composed of three members: the lieutenant governor, the state controller, and the director of finance. The CSLC was given the authority and responsibility to manage and protect the important natural and cultural resources on certain public lands within the state, as well as the public’s rights to access these lands. The public lands under CSLC jurisdiction include sovereign land and school land. Sovereign land includes the beds of

California’s naturally navigable rivers, lakes, and streams, as well as the tidal and submerged lands along the state’s coastline, extending from the shoreline out to 3 miles offshore.

The Public Trust Doctrine governs allowed uses of sovereign lands held in trust by the CSLC for purposes of water-related commerce, navigation, fisheries, recreation, and ecological preservation. Additionally, the California Supreme Court has determined that the public trust includes (1) the right of the public to use the “navigable waters of the state” for bathing, swimming, boating, and general recreational purposes and (2) the preservation of the lands in their natural state for scientific study, as open space, and as wildlife habitat. The CSLC is responsible for implementing the Public Trust Doctrine and ensuring that public trust lands are used to promote public, rather than exclusively private, purposes.

## **Local**

### ***County of Orange***

While the County of Orange does not have land use jurisdiction over the proposed project, several proposed sewer pipelines would be installed in Talbert Regional Park. Located within the jurisdictional boundary of the City of Costa Mesa, Talbert Regional Park was acquired by the County of Orange in the 1970s but remains under the city’s land use jurisdiction. Therefore, while the County of Orange does not have land use jurisdiction over proposed project components in Talbert Regional Park, the county’s General Plan is discussed below for informational purposes to determine general consistency with county policies and regulations.

#### **County of Orange General Plan**

The County of Orange General Plan (County of Orange 2011) consists of an introductory chapter, a demographics chapter, and nine elements: Land Use, Transportation, Public Services and Facilities, Resources, Recreation, Noise, Safety, Housing, and Growth Management. The Land Use Element (Chapter 3) of the General Plan contains official county policies regarding the location and character of land uses necessary for orderly growth and development. The county employs six primary land use designations for unincorporated lands in its sphere of influence: residential, commercial, employment, public facilities, open space, and urban activity center. Major policies of the Land Use Element address balanced land uses, phased development, housing densities, and land use/transportation integration. Chapter 5, Public Services and Facilities, and Chapter 6, Resources, address the planning/provision of public services necessary for orderly growth and the development, management, preservation, and conservation of resources necessary to meet Orange County’s existing and future demands. Both chapters/elements include policies and programs that form an implementation plan to meet established city goals. Chapter 7, Recreation, contains official policies associated with the acquisition, development, operation, maintenance, and financing of the county’s recreation facilities,

including Talbert Regional Park. Policies relevant to the proposed project pertain to the protection of regional facilities from deterioration due to overuse and the periodic monitoring of natural areas to ensure that they are used properly. The Recreation Element is further discussed in Section 4.11, Recreation, of this Draft EIR.

### ***City of Costa Mesa***

#### **City of Costa Mesa General Plan**

The City of Costa Mesa 2000 General Plan, adopted in January 2002, serves as the primary source of long-range planning and policy direction intended to guide growth and preserve the quality of life in the city. The General Plan consists of the following 10 elements: Land Use, Circulation/Transportation, Housing, Conservation, Noise, Safety, Open Space and Recreation, Growth Management, Community Design, and Historic and Cultural Resources.

The Land Use Element of the General Plan is the long-range planning guide for development in the city, which indicates the location and extent of development allowed. Land use policies and land use designations are intended to maintain the quality of life for residents and facilitate a thriving local economy.

The portions of the project area that fall within the City of Costa Mesa's jurisdiction include city streets and rights-of-way, as well as areas designated Public/Institutional, Low-Density Residential, and Medium-Density Residential. The Public/Institutional designation is intended for both publicly and privately owned land that provides recreation, open space, health, and educational opportunities, as well as uses that provide a service to the public. Low-Density Residential areas are intended to accommodate single-family residences on their own parcels. The Medium-Density Residential designation is intended for single- and multifamily developments with a density of up to 12 units per acre.

#### **City of Costa Mesa Local Coastal Program**

The Coastal Zone in the City of Costa Mesa is confined to a relatively small portion of the city that includes approximately 125 acres within the Santa Ana River lowlands south of Victoria Street and a majority of the city's Canyon Park. Most of this area is vacant or developed as passive park space.

The City of Costa Mesa does not have a certified LCP and is not currently working on an LCP. Regardless, the General Plan describes the city's initial steps in the development of an LCP. The first step requires the city to (1) determine the policies of the California Coastal Act that apply to Costa Mesa, (2) determine the extent to which existing local plans are adequate to meet

California Coastal Act requirements, and (3) delineate any potential conflicts between existing plans and development proposals and the policies of the California Coastal Act.

#### City of Costa Mesa Planning, Zoning, and Development Code

The City of Costa Mesa Planning, Zoning, and Development Code (Title 13 of the Municipal Code; City of Costa Mesa n.d.) is intended “to promote the public health, safety, general welfare and preserve and enhance the aesthetic quality of the city by providing regulations to ensure that an appropriate mix of land uses occur in an orderly manner.” The portions of the project area that fall within the City of Costa Mesa’s jurisdiction include city streets and rights-of-way, as well as areas zoned Institutional & Recreational, Single-Family Residential, and Multiple-Family Residential (Medium Density).

#### ***City of Huntington Beach***

##### City of Huntington Beach General Plan

The City of Huntington Beach General Plan (City of Huntington Beach 1996) is a policy document that provides a framework for the management and use of the city’s physical, economic, and human resources. It guides decision makers in decisions regarding land use, design and/or character of buildings and open spaces, conservation of existing housing and provision of new dwelling units, provision of supporting infrastructure and public services, protection of environmental resources, allocation of fiscal resources, and protection of residents from natural and human-caused hazards.

The existing City of Huntington Beach General Plan land use designation for the portion of the project area within the City of Huntington Beach (i.e., Orange County Sanitation District (OCSD) Treatment Plant No. 2 (Plant No. 2)) is Public. “Public” is defined in the Land Use Element as “Governmental administrative and related facilities, such as public utilities, schools, public parking lots, infrastructure, religious, and similar uses.”

##### City of Huntington Beach Local Coastal Program

The city’s LCP is divided into two components: (1) a coastal element and (2) an implementation program.

##### *Coastal Element*

The Coastal Element of the City of Huntington Beach LCP, found in the General Plan, was originally adopted by City Council in 1999, certified by the CCC in 2001, and has since been amended several times (City of Huntington Beach 2011, as amended through 2011). The purpose of the Coastal Element is to meet the requirements of the California Coastal Act and guide civic

decisions regarding growth, development, enhancement, and preservation of the city's Coastal Zone and its resources. The Coastal Element includes a CLUP and policies to be used by decision makers when reviewing coastal-related issues and proposed development within the Coastal Zone boundary.

A portion of the proposed project is located in Zone 5 of the LCP, which extends from Beach Boulevard to the Santa Ana River. The portion of the proposed project located within the LCP of Huntington Beach is designated 4G–Edison Plant (permitted uses, public and open space conservation) for activities at Plant No. 2. A CDP from the CCC is required for development activities that extend within tidelands, submerged lands, or on public trust lands, whether filled or unfilled, lying within the Coastal Zone. The proposed project must comply with California Coastal Act policies and permitting requirements for any portion of the proposed project that may extend within CCC jurisdiction.

#### *Implementation Program*

The implementation program includes the zoning ordinances, zoning district maps, specific plans, and other implementing actions that must comply with the LCP; the actions can also carry out the goals and policies of the certified Coastal Element. The City of Huntington Beach Zoning Code, Chapter 216, Coastal Conservation District of the Zoning Code, implements the General Plan and the LCP. Chapter 216 also provides policies for the protection, maintenance, restoration, and enhancement of wetlands and environmentally sensitive habitat areas located in the Coastal Zone.

#### *City of Huntington Beach Zoning Code*

Proposed project facilities under the jurisdiction of the City of Huntington Beach would be located on land zoned Industrial Limited and Industrial General. This designation provides sites for moderate- to low-intensity industrial uses, commercial services, and light manufacturing.

Chapter 216, CC Coastal Conservation District, of the Zoning Code contains the LCP implementation program and includes the zoning ordinances, zoning district maps, specific plans, and other implementation actions needed to carry out the goals and policies of the Coastal Element. The CC Coastal Conservation District implements the General Plan and LCP land use designation of Open Space: Conservation and also provides guidance for the protection, maintenance, restoration, and enhancement of wetlands and environmentally sensitive habitat areas located in the Coastal Zone. The CZ Coastal Overlay District provides supplementary provisions and specific permitted uses within the city's Coastal Zone.



Chapter 221, CZ Coastal Zone Overlay District, establishes provisions and specific permitted uses within the city's Coastal Zone in accordance with the California Coastal Act, the General Plan, and the LCP.

### ***City of Newport Beach***

#### City of Newport Beach General Plan

The City of Newport Beach General Plan (2006) is the long-range guide for growth and development in the city. On July 25, 2006, the General Plan was adopted and the Final EIR was certified by the Newport Beach City Council. At the general municipal election held on November 7, 2006, the city electorate approved the land use plan of the General Plan, pursuant to City Charter Section 423.

A general plan functions as a guide for the type of community that is desired for the future and provides the means to achieve it. The City of Newport Beach General Plan contains the following 10 elements: Land Use, Harbor and Bay, Housing, Historical Resources, Circulation, Recreation, Arts and Cultural, Natural Resources, Safety, and Noise.

The Land Use Element presents goals and policies pertaining to how existing development is to be maintained and enhanced and how new development is to be implemented. The portion of the project area that falls within the City of Newport Beach is designated Parks and Recreation and Multiple-Unit Residential. The Parks and Recreation designation applies to land used or proposed for active public or private recreational use. Permitted uses include parks (both active and passive), golf courses, marina support facilities, aquatic facilities, tennis clubs and courts, private recreation, and similar facilities. The Multiple-Unit Residential designation is intended to provide primarily for multifamily residential development containing attached or detached dwelling units.

#### City of Newport Beach Coastal Land Use Plan

A local government may submit its LCP to the CCC for certification either at one time or in two phases, in which case the CLUP component must be submitted first followed by an implementation plan component. The City of Newport Beach has elected to submit its LCP in two phases.

The Newport Beach CLUP was approved by the CCC on October 13, 2005, and adopted by the city on December 13, 2005 (Resolution No. 2005-64); it was subsequently amended by the CCC on February 5, 2009, and adopted by the city on July 14, 2009 (Resolution No. 2009-53). The CLUP establishes goals, objectives, and policies that govern the use of land and water in the Coastal Zone within the City of Newport Beach and its sphere of influence, with the exception of

Newport Coast and Newport Banning Ranch. Newport Coast is governed by the previously certified and currently effective Newport Coast segment of the Orange County LCP. Newport Banning Ranch is designated as a Deferred Certification Area due to unresolved issues relating to land use, public access, and the protection of coastal resources.

The portion of the project area that falls within the Newport Beach CLUP is designated Multiple-Unit Residential, which allows 10–19.9 dwelling units per acre.

The City of Newport Beach is currently in the process of preparing an implementation plan for its CLUP and will submit it to the CCC in the future. Because the city does not have a fully certified LCP, it does not have the ability to issue CDPs; therefore, all CDPs for new development in the city are processed by the CCC. The city reviews pending development projects for consistency with the General Plan, zoning regulations, and the CLUP before an applicant may file for a CDP with the CCC (City of Newport Beach 2012).

#### City of Newport Beach Zoning Code

The portion of the project area that falls within the City of Newport Beach is zoned Planned Community District 16 (PC-16) and is covered by the PC-16 Regulations. The City of Newport Beach Zoning Code permits a Planning Community (PC) Development Plan to address land use designations and regulations in planned communities. The purpose of the PC Zoning District, as stated in Chapter 20.26.010 of the Newport Beach Zoning Code, is to “provide for areas appropriate for the development of coordinated, comprehensive projects that result in a superior environment; to allow diversification of land uses as they relate to each other in a physical and environmental arrangement while maintaining the spirit and intent of this Zoning Code; and to include a variety of land uses, consistent with the General Plan, through the adoption of a development plan and related text that provides land use relationships and associated development standards.”

The PC-16 regulations were adopted by the city on August 17, 1972, allowing the development of a 284-unit condominium project and a 15-acre open space area to be used for a public or private golf course or park on an approximately 40-acre site (City of Newport Beach 1972). The site has since been developed with 281 units and a 15-acre park in the City of Costa Mesa.

### **4.9.2 Existing Conditions**

The general plan land use designation, zoning designation, and applicable land use jurisdiction for the proposed sewer and siphon facilities are summarized in Table 4.9-1. Additional detail regarding proposed sewer pipeline and siphon facilities, including surrounding land uses, is discussed following Table 4.9-1 and existing conditions information for pump stations associated with the proposed project is presented in Table 4.9-2.

**Table 4.9-1**  
**Proposed Sewer and Siphon Components: Existing Conditions**

Project Components	Jurisdiction	General Plan Land Use Designation	Zoning
<i>OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19</i>			
24-inch gravity sewer (Talbert Regional Park)	City of Costa Mesa	Public/Institutional	Institutional & Recreational
14-inch inverted sewer siphon (Santa Ana River and OCSD Plant No. 2)	City of Costa Mesa	Public/Institutional	Institutional & Recreational
	City of Huntington Beach	Public	Industrial Limited
24-inch gravity sewer (OCSD Plant No. 2)	City of Huntington Beach	Public	Industrial Limited and Industrial General
<i>CMSD and City of Newport Beach Components</i>			
24-inch gravity sewer <sup>a</sup> (Canyon Drive)	City of Costa Mesa	Public/Institutional	Institutional & Recreational
12-inch gravity sewer (Aviemoore Terrace and Talbert Regional Park)	City of Costa Mesa	Low- and Medium-Density Residential	Single-Family Residential and Multiple-Family Residential (Medium Density)
12-inch gravity sewer <sup>b</sup> (19th Street)	City of Newport Beach	—	—
18-inch gravity sewer (northwestern boundary of Newport Terrace)	City of Newport Beach	Multiple-Unit Residential	PC-16 (Newport Terrace)

<sup>a</sup> While the majority of the 24-inch gravity sewer alignment is located in Canyon Drive and general plan and zoning designations are not applied to roads (transportation use is assumed), a short segment of the sewer alignment is located in Canyon Park, which is designated Public/Institutional and zoned Institutional & Recreational by the City of Costa Mesa.

<sup>b</sup> The proposed 12-inch gravity sewer would be located entirely within the right-of-way limits of 19th Street, and land use and zoning designations are not applied to streets.

### **OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19**

The OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 component of the proposed project would be located primarily within Talbert Regional Park, a County of Orange nature preserve and park in the City of Costa Mesa. Land use jurisdictional boundaries and Coastal Zone jurisdictional boundaries as they relate to the project area are depicted in Figure 4.9-1. As shown on Figure 4.9-2, General Plan Land Use, a proposed 24-inch-diameter gravity sewer would be installed west of Balboa Boulevard between the City of Newport Beach Pump Station at the west end of Walkabout Circle and the eastern bank of the Santa Ana River within lands designated Public/Institutional by the City of Costa Mesa General Plan. From this point east, a 14-inch-barrel inverted sewer siphon would be installed beneath the Santa Ana River (also designated Public/Institutional by the City of Costa Mesa), and west of the river the siphon would exit City of Costa Mesa jurisdiction. The entirety of the OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 within the jurisdictional boundary of the City of Costa Mesa is within the Coastal Zone boundary as depicted in the Conservation Element of the City of Costa

Mesa General Plan (City of Costa Mesa 2002). Because the City of Costa Mesa does not have a certified LCP for the project area, project-related development activities within the City of Costa Mesa require coastal permit authorization from the CCC (2012). The remaining portion of the proposed OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 would be within the jurisdictional boundary of the City of Huntington Beach and would consist of a 24-inch gravity sewer that would be installed primarily within the OCSD Plant No. 2 boundary, which is designated Public by the City of Huntington Beach General Plan. The proposed sewer line would interconnect with an existing Interplant Line located in Brookhurst Street. Both OCSD Plant No. 2 and the proposed 24-inch gravity sewer alignment to the existing Interplant Line are within the City of Huntington Beach Coastal Zone (Zone 5) (City of Huntington Beach 2001), and because the city has a certified LCP, development activities would require coastal permit authorization from the city (CCC 2012). However, since the proposed project contains project components in the jurisdiction of both the CCC (within the Cities of Costa Mesa and Newport Beach) and the City of Huntington Beach, a consolidated permit may be processed.

As shown on Figure 4.9-3, Zoning, components of the proposed OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 would traverse lands zoned Institutional & Recreational by the City of Costa Mesa (this zone corresponds to Talbert Regional Park and the Santa Ana River) and lands zoned Industrial Limited and Industrial General by the City of Huntington Beach.

Existing land uses near the components of the proposed project are identified on Figure 4.9-4. As shown on the figure, residential land uses, including a 281-unit condominium development (Newport Terrace) located east of Balboa Boulevard in the City of Newport Beach and single-family homes in the City of Costa Mesa, border the northern and eastern boundary of Talbert Regional Park. In addition, several parks, including Canyon Park and Marina View Park, are interspersed between residential development located east and southeast of the proposed sewer alignment through Talbert Regional Park.

As stated previously, the proposed sewer alignment is located primarily within Talbert Regional Park and, more specifically, within the 88.5-acre South Talbert area (the North and South Talbert areas are separated by Victoria Street) and along South Talbert Trail D, which is used for foot traffic and restricted vehicular access. Banning Ranch, an approximately 400-acre active oil field with surface and subsurface production facilities, is located immediately south of the South Talbert area and South Talbert Trail D on County of Orange jurisdictional lands. East of Talbert Regional Park, the proposed inverted sewer siphon would be installed beneath the Santa Ana River Trail & Parkway, which in the vicinity of the proposed project consists of a 10-foot-wide striped and paved parkway and adjacent unpaved right-of-way.

West of the trail and parkway, the proposed sewer alignment would be located within OCSD Plant No. 2, and would eventually terminate at an existing line located in Brookhurst Street.

Land uses located west of Brookhurst Street near the proposed interconnection point generally consist of single-family residential.

Lastly, elementary schools within the Newport–Mesa Unified School District and the City of Costa Mesa are also located in the general vicinity of the proposed project. Whittier Elementary School, at 1800 Whittier Avenue, and Victoria Elementary School, at 1025 Victoria Street, are located approximately 0.30 mile northeast of the existing City of Newport Beach Pump Station at Walkabout Circle and 0.30 mile southeast of the southeastern corner of Talbert Regional Park, respectively.

Directly south of the proposed project site, a proposed mixed-use development plan (i.e., the Newport Banning Ranch Project) that would include oil field remediation, residential, commercial, resort, park, and open space uses has been approved by the City of Newport Beach and submitted to the CCC for CDP review. As of July 2013, the development plan and Final EIR were the subject of a lawsuit filed against the City of Newport Beach, and the CDP application for the project was deemed incomplete by the CCC in March 2013 (CCC 2013).

### **CMSD and City of Newport Beach Facilities**

With the exception of the proposed CMSD 12-inch gravity sewer to be constructed between the existing Sea Bluff (CMSD No. 16) and Aviemore Terrace (CMSD No. 5) Pump Stations, the CMSD and City of Newport Beach facilities associated with the proposed project would be located primarily within paved residential streets. For example, the proposed 24-inch gravity sewer from the service areas of the Canyon Pump Station (CMSD No. 7) and West Bluff Pump Station (CMSD No. 20) to the existing sewer in Canyon Park would be primarily located within Canyon Drive (an approximately 300-foot segment of the proposed sewer alignment would be located in Canyon Park). While general plan and zoning regulations are not applied to roads because they are dedicated to transportation uses, Canyon Park is designated Public/Institutional and zoned Institutional & Recreational by the City of Costa Mesa (see Figures 4.9-1 and 4.9-2). Further, the proposed CMSD 12-inch gravity sewer from the Aviemore Terrace Pump Station (CMSD No. 5) and Sea Bluff Pump Station (CMSD No. 16) would originate in Aviemore Terrace and would then travel in a southwesterly direction through an existing easement across private residential property to Talbert Regional Park, where it would traverse footpaths and undeveloped land prior to traveling in an easterly and northerly direction along South Talbert Trail A. As shown on Figures 4.9-1 and 4.9-2, the proposed CMSD 12-inch gravity sewer would traverse lands designated Low- and Medium-Density Residential and zoned Single-Family Residential and Multiple-Family Residential (Medium Density) by the City of Costa Mesa. The proposed alignment of the CMSD 12-inch gravity sewer is also within the City of Costa Mesa Coastal Zone and as such, construction activities would require coastal permit authorization from the CCC.

The proposed City of Newport Beach 12-inch sewer from the service area of the 19th Street Pump Station (CMSD No. 1) west to the new OCSD Southwest Costa Mesa Trunk Sewer in Talbert Regional Park would be located within 19th Street, and the proposed 18-inch sewer along the northwestern boundary of the planned Newport Terrace community (identified as PC-16 by the City of Newport Beach zoning map) would be located primarily on lands designated Multiple-Unit Residential. Also, the proposed sewer pipelines under City of Newport Beach jurisdiction would be located in the Coastal Zone and development would therefore require CDP authorization. Because the city does not have a fully certified LCP, it does not have the ability to issue CDPs, and all CDPs for new development in the city are processed by the CCC.

As the proposed CMSD and City of Newport Beach facilities would be located primarily within residential streets, surrounding land uses generally consist of residential uses and, more specifically, single-family residences. For example, between the Canyon Pump Station (CMSD No. 7) and the West Bluff Pump Station (CMSD No. 20), land uses adjacent to the proposed 24-inch alignment include single-family residences, multifamily residences at the northwest corner of the Victoria Street/Canyon Drive intersection, a short row of commercial businesses and an automotive repair shop immediately south of the intersection, and apartment complexes. The Waldorf School of Orange County and Estancia High School are approximately 0.2 mile northeast of Canyon Pump Station (CMSD No. 7) and Victoria Elementary School is approximately 300 feet east of West Bluff Pump Station (CMSD No. 20). As shown on Figure 4.9-4, existing land uses in the vicinity of the proposed CMSD 12-inch sewer between Aviemore Terrace (CMSD No. 5) and Sea Bluff (CMSD No. 16) Pump Stations consist of single-family residences and recreation. Similar existing land uses are also adjacent to the City of Newport Beach proposed 18-inch and 12-inch sewer lines (the eastern extent of the proposed 12-inch sewer alignment within 19th Street) and the 19th Street (CMSD No. 1) Pump Station are adjacent to Marina View Park and approximately 1,000 feet northwest of Whittier Elementary School.

As previously discussed, after the proposed CMSD and City of Newport Beach pipelines are constructed and the Southwest Costa Mesa Trunk Sewer Project No. 6-19 is installed, several existing pump stations in the vicinity would be abandoned. Table 4.9-2 lists (by jurisdiction) existing pump stations to be abandoned and identifies the applicable underlying land use and zoning designations. In addition, land uses surrounding the pump stations are briefly discussed.

**Table 4.9-2**  
**Existing Pump Stations to be Abandoned: Existing Conditions**

Pump Station <sup>a</sup>	General Plan Land Use Designation	Zoning	Surrounding Land Uses <sup>b</sup>
President (CMSD No. 14)	Public/Institutional	Institutional & Recreational	Canyon Park; Single-Family Residences
West Bluff (CMSD No. 20)	Medium-Density Residential	Multiple-Family Residential (Medium Density)	Canyon Park; Single/Multi-Family Residences; Commercial; Victoria Elementary School
Canyon (CMSD No. 7)	Medium-Density Residential	Single-Family Residential	Single-/Multifamily Residences; Waldorf School of Orange County; Estancia High School; Religious Facility; Talbert Regional Park (Talbert North)
Aviemoire Terrace (CMSD No. 5)	Low-Density Residential	Single-Family Residential	Single-Family Residences; Talbert Regional Park (Talbert South); Religious Facility; Commercial Businesses
Sea Bluff (CMSD No. 16)	Medium-Density Residential	Multiple-Family Residential (Medium Density)	Single-/Multifamily Residences; Talbert Regional Park (Talbert South); Canyon Park
19th Street (CMSD No. 1)	Low-Density Residential	Institutional & Recreational	Marina View Park; Single-/Multifamily Residences; Canyon Park; Talbert Regional Park (Talbert South)
West 18th Street (Private)	Multiple-Unit Residential	Multiple-Family Residential (Medium Density)	Single-Family Residences; Talbert Regional Park (Talbert South); Commercial Businesses
City of Newport Beach (at Walkabout Circle)	Multiple-Unit Residential	Specific Plan Area (PC-16: Newport Terrace)	Multi-/Single-Family Residences; Talbert Regional Park (Talbert South); Canyon Park

<sup>a</sup> CMSD and West 18th Street Pump Stations are under City of Costa Mesa land use jurisdiction.

<sup>b</sup> Land uses listed encompass those located within approximately 500 feet of the identified pump station.

### 4.9.3 Thresholds of Significance

The following significance criteria are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential land use impacts. Impacts to land use and planning would be significant if the proposed project would:

**LUP-1:** Physically divide an established community.

**LUP-2:** Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

**LUP-3:** Conflict with any applicable habitat conservation plan or natural community conservation plan.

#### 4.9.4 Impact Discussion

*LUP-1: Would the project physically divide an established community?*

##### **OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19**

###### *Construction Impacts*

As discussed in Chapter 3, Project Description, of this Draft EIR, the beginning and ending segments of the 24-inch-diameter gravity sewer proposed west of Balboa Boulevard and within the existing Southern California Edison easement along the southern boundary of Talbert Regional Park would be installed by open-trench construction methods. Similar construction methods would also be employed during the installation of the 24-inch gravity sewer proposed west of the Santa Ana River to the existing OCSD Interplant Line in Brookhurst Street. Both open-trench and horizontal directional drilling (HDD) methods would be used during installation of the proposed inverted siphon. As proposed, construction staging areas would be located along the proposed sewer alignments and within OCSD Plant No. 2, and construction vehicles would access work areas via existing and temporary construction easements and dirt trails within Talbert Regional Park. A total duration of 24 months is anticipated for construction of the OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19.

Construction activities associated with the OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 component would occur along the eastern and southern boundary of Talbert Regional Park, at the eastern and western banks of the Santa Ana River, and within the boundary of OCSD Plant No. 2. Further, construction activities would be located west of established residential neighborhoods in the City of Newport Beach and east of established residential neighborhoods in the City of Huntington Beach, and as such would not result in the division of an established community. Although construction would result in surface disturbance and increased activity along the proposed alignment along existing dirt trails within Talbert Regional Park for approximately 24 months, the presence of construction vehicles, equipment, and personnel would not hinder travel between local communities. Access between the Cities of Newport Beach and Huntington Beach along the proposed alignment (i.e., through Talbert Regional Park) is not currently available as the Santa Ana River effectively limits east–west mobility through the area. Therefore, construction activities would not physically divide an established community and **no impacts** would occur.

###### *Operational Impacts*

Once constructed, the proposed sewer pipelines would be located underground and no additional aboveground structures would be necessary. Since the proposed project would not introduce any aboveground structures that would physically divide an established community and underground pipelines would not be divisive features in the landscape, there would be **no impact** during operation of the project.



## **CMSD and City of Newport Beach Facilities**

### ***Construction Impacts***

With the exception of the 24-inch sewer in Canyon Drive that would be constructed using HDD or another trenchless method, the proposed CMSD and City of Newport Beach pipelines would be installed by open-trench construction methods. Use of HDD or other trenchless methods for installation of the proposed OCSD 24-inch sewer in Canyon Drive would avoid open-trench construction through residential streets and would thus minimize potential use conflicts with surrounding residences and local businesses. Further, while installation of the proposed CMSD 12-inch gravity sewer from the existing Aviemore Terrace Pump Station (CMSD No. 5) to the Sea Bluff Pump Station (CMSD No. 16) would occur within a residential side yard on the south side of Aviemore Terrace and may be considered a temporary nuisance by local residents, the sewer would be installed within an existing CMSD easement and would not result in the physical division of an established community. Similarly, the presence of construction vehicles, equipment, and workers in Talbert Regional Park (for the proposed CMSD 12-inch gravity sewer) and along the eastern boundary of the park (for the proposed City of Newport Beach 18-inch gravity sewer) may be considered a temporary nuisance by residents and recreationists, but activities would be temporary, would not substantially hinder movement through the park, and would not divide an established community. Open-trench construction methods within 19th Street necessary for the installation of the proposed 12-inch gravity sewer may result in temporary and sporadic lane closures that could affect residents of the Newport Terrace condominium development (19th Street is the sole access route for residents into the development); however, with implementation of a standard traffic control plan (see Section 4.12, Traffic and Circulation), impacts to traffic movement through the construction area would remain below a level of significance. Further, as temporary impacts to vehicular movement would not physically divide communities, **no impacts** to land use would occur.

Construction activities associated with pump station abandonment would include equipment and partial structure removal and restoration of the surface area to match the surrounding environment; force main abandonment would involve cutting pipe ends and partially or completely filling pipes with air-blown sand/cement slurry. During construction, residents and recreationists would likely notice an increased presence of construction vehicles, equipment, and personnel near pump station locations. However, because construction activities would be concentrated within the developed footprints of the individual pump stations and because measures to maintain mobility around construction areas would be provided (see Section 4.12, Traffic and Circulation), the physical division of an established community would not occur. As such, there would be **no impact**.

### *Operational Impacts*

Once constructed, the proposed pipelines would be located underground and no additional aboveground structures would be necessary. Since the proposed project would not introduce any aboveground structures that would physically divide an established community, there would be **no impact** during operation of the project.

***LUP-2: Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?***

In addition to the general plans and zoning ordinances of the Cities of Costa Mesa and Newport Beach (both cities would have permitting authority over various components of the proposed project), other federal, state, and local land use plans, policies, or regulations would also be applicable to the proposed project. Applicable land use plans or regulations of agencies with land use jurisdiction over the proposed project are identified in Table 4.9-3. Table 4.9-3 also identifies the applicability of identified plans, policies, or regulations to the various project components.

**Table 4.9-3**  
**Applicable Land Use Plans, Policies, or Regulations by Jurisdiction**

Agency	Land Use Plans and Regulations	Applicable Project Components
California Coastal Commission	California Coastal Act	OCSD, CMSD, and City of Newport Beach components
City of Costa Mesa	General Plan Planning, Zoning, and Development Code	OCSD and CMSD components
City of Huntington Beach	General Plan Local Coastal Program (Coastal Element of the General Plan) Zoning Code	Portion of 14-inch sewer siphon 24-inch gravity sewer from OCSD Plant No. 2 to Brookhurst Street
City of Newport Beach	General Plan Coastal Land Use Plan Zoning Code	City of Newport Beach Pump Station 12-inch gravity sewer (19th Street) 18-inch gravity sewer along eastern boundary of Talbert Regional Park

Tables 4.9-4 through 4.9-7 list the individual policies of plans determined to be applicable to the various components of the proposed project. A consistency determination is also provided for each applicable policy and regulation.

**Table 4.9-4**  
**California Coastal Commission: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

California Coastal Act			
<i>Section</i>	<i>Policy</i>	<i>Analysis</i>	<i>Consistency</i>
30210	Maximum access and recreational opportunities shall be provided for all people, consistent with public safety needs and the need to protect public rights, private property owner rights, and natural resource areas from overuse.	Construction activities occurring within the boundaries of Talbert Regional Park, and more specifically, South Talbert, would temporarily limit recreational use of Trail A and Trail D during trenching and installation of proposed gravity sewers. Prior to the beginning of construction, signage would be posted in the park at the information kiosk located at the junction of Trails A and D and at public access points, including along Balboa Boulevard, to notify users of the duration of trail closures and construction activities. Trails within the park (i.e., Trails B, C, E, and F) are not likely to be subject to closure during construction and connectivity to the Santa Ana River Trail & Parkway will be maintained during the duration of construction activities. From the Santa Ana River Trail & Parkway users are able to access beaches and water recreation opportunities along the coast.	Consistent
30211	Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.	While direct access to the sea is not available through Talbert Regional Park, trails within the park provide access to the Santa Ana River Trail & Parkway. As stated above, construction activities would temporarily limit recreational use of Trails A and D (both of which provide access to the Santa Ana River Trail & Parkway); however, interior trails (including Trail C, which provides connectivity to the trail and parkway) are not likely to be affected by trail closures during construction activities. Therefore, indirect access to the sea through Talbert Regional Park via the Santa Ana River Trail & Parkway would be maintained during the duration of construction activities.  In addition, as discussed in Section 4.12, Traffic and Circulation, the proposed project may require temporary lane closures during construction of the proposed City of Newport Beach 12-inch sewer in 19th Street, the proposed CMSD 24-inch sewer in Canyon Drive, and the proposed OCSD connection to the Interplant Line in Brookhurst Street, which may increase congestion on these streets during peak travel times. Construction vehicles traveling to and from the project area may also cause a slight increase in traffic volumes during the 2-year construction period. Any potential lane and driveway closures would be coordinated with area residents and businesses to provide proper access. As listed in Table 3-1 in Chapter 3, Project Description, traffic-control plans would be prepared to address construction traffic and road closures within the public rights-of-way of the Cities of Costa Mesa, Huntington Beach, and Newport Beach. The traffic-control plans would include provisions for construction times and for allowance of bicyclist, pedestrian, and bus access throughout construction. There would also be provisions for emergency vehicle access, signage, and flagmen to ensure that traffic flow is not substantially impacted.	Consistent

**Table 4.9-4**  
**California Coastal Commission: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

California Coastal Act			
<i>Section</i>	<i>Policy</i>	<i>Analysis</i>	<i>Consistency</i>
30213	Lower-cost visitor and recreational facilities shall be protected, encouraged, and provided where feasible; public recreational opportunities are preferred.	In addition to distinct plant groupings that reflect the changing conditions found along the Santa Ana River, Talbert Regional Park provides a trail system that allows for the observation of natural resources and connectivity to area parks and the coast. Use of the trail system is not subject to user fees. As proposed, several OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 components would be located in the 88.5-acre South Talbert area of the park, which offers approximately 2.87 miles of trails. Construction activities would temporary limit use of trails located along the northern, eastern, and southern boundaries of South Talbert (proposed sewers would be installed within the existing Trails A and D); however, access to interior trails would be maintained and visitor use of these trails would not be restricted.	Consistent
30223	Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.	As described above, construction activities would temporary limit use of trails located along the northern, eastern, and southern boundaries of South Talbert; however, access to interior trails would be maintained and visitor use of these trails would not be restricted. Following construction, access to all recreational trails in Talbert Regional Park would be restored.	Consistent
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.	As stated in Section 4.3, Biological Resources, construction of the proposed project would result in temporary and permanent impacts to jurisdictional waters and wetlands. Temporary impacts would be mitigated through on- or off-site habitat enhancement or through acquisition of approved mitigation credits. Mitigation site/credit acceptability will be determined by the U.S. Army Corps of Engineers (ACOE), California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and CCC. Permanent impacts to wetlands are not considered to be significant (see Section 4.3, Biological Resources, for additional detail).  As discussed in Section 4.8, Hydrology and Water Quality, the applicant would prepare a stormwater pollution prevention plan (SWPPP) that specifies best management practices (BMPs) to be implemented during project construction to prevent pollutants from contacting stormwater and to control erosion and sedimentation. The SWPPP (included as a project design feature) would be prepared and submitted to the RWQCB for review and approval prior to the start of construction. In addition, to reduce potential impacts associated with frac-out during HDD operations, Mitigation Measure BIO-5 has been provided (see Section 4.3, Biological Resources) and would require OCSD and/or project contractors to prepare a frac-out contingency plan for distribution and approval by the ACOE, CDFW, RWQCB, CCC, and USFWS.	Consistent with mitigation

**Table 4.9-4**  
**California Coastal Commission: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

California Coastal Act			
<i>Section</i>	<i>Policy</i>	<i>Analysis</i>	<i>Consistency</i>
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 wastewater discharges and entrainment, controlling runoff, preventing depletion of groundwater supplies and substantial interference with surface waterflow, encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.	As described in Section 4.3, Biological Resources, the proposed project would be designed to be consistent with requirements of the Orange County Central and Coastal Natural Community Conservation Planning and Habitat Conservation Plan (Central/Coastal NCCP/HCP) (i.e., the approved regional NCCP/HCP for the project area). The OCSO Southwest Costa Mesa Trunk Sewer Project No. 6-19 is not expected to substantially change the composition of the local ecosystem or result in the substantial loss of wildlife habitat. While the planning area contains sensitive habitat, permanent impacts would be minimized through the installation of sewer facilities in existing and cleared dirt trails. Further, with the implementation of required mitigation measures, construction of the proposed project would not conflict with the provisions of the Central/Coastal NCCP/HCP and would reduce temporary impacts to upland and wetland/riparian vegetation to below a level of significance.	Consistent with mitigation
30232	Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.	As discussed in Section 4.7, Hazards and Hazardous Materials, of this Draft EIR, the implementation of mitigation measures during construction of the proposed project would reduce significant hazardous materials impacts to below a level of significance. Mitigation measures proposed to address potential impacts from spillage of hazardous materials include monitoring construction and excavation activities associated with the installation of the proposed 24-inch gravity sewer in Talbert Regional Park, preparation and implementation of a hazardous materials contingency plan that will include refuse management measures and a worker health and safety plan for excavation of potential contaminated soil and/or refuse, and spill management and containment measures to implemented by the contractor. All construction waste, including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials will be removed to a permitted hazardous waste facility for treatment, storage, or disposal. Containment is required for all trash to prevent unnecessary spillage. Furthermore, as discussed in Chapter 3, Project Description, the proposed project will prepare and implement a hazardous substance management, handling, storage, disposal, and emergency response plan during construction to ensure adherence to the construction specifications and applicable regulations regarding hazardous materials and hazardous waste, including	Consistent with mitigation

**Table 4.9-4**  
**California Coastal Commission: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

California Coastal Act			
<i>Section</i>	<i>Policy</i>	<i>Analysis</i>	<i>Consistency</i>
		disposal, and to ensure that construction of the project would not create a significant hazard to the public or the environment. Spill response materials and spill kits would also be kept at the construction site.	
<b>30233</b>	The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects.	The proposed project involves the construction of sewer pipelines within and near wetlands, which is permitted under Subsection (4) of this policy as an "Incidental public service purpose, including but not limited to, burying cables and pipes of inspection of piers and maintenance of existing intake and outfall lines". The proposed project would consolidate existing flows that are currently conveyed through the CMSD, City of Newport Beach, and private pump stations and would not increase capacity over what has already been approved. As stated in Section 4.3, Biological Resources, construction of the proposed project would result in temporary and permanent impacts to jurisdictional waters and wetlands. Approximately 1-acre of temporary impacts would be mitigated through on- or off-site habitat enhancement or through acquisition of approved mitigation credits. Mitigation site/credit acceptability will be determined by ACOE, CDFW, RWQCB, and CCC. The 0.002 acres of permanent impacts to wetlands are not considered to be significant (see Section 4.3, Biological Resources, for additional detail). As described in Chapter 3, Project Description, of this Draft EIR, the proposed alignment for the OCSD sewer pipeline was selected following an extensive evaluation of 11 different alignments, which included an assessment of impacts to sensitive habitats, including wetlands. All of the alignments involved some level of impacts to sensitive habitats. The proposed alignment was further refined to reduce impacts to the wetlands in the southeast corner of Talbert Regional Park by primarily following the existing dirt trails and access roads.	<b>Consistent with mitigation</b>
<b>30236</b>	Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood-control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.	As proposed, 800 linear feet of dual 14-inch-barrel inverted siphon would be installed beneath the Santa Ana River via HDD methods. It is anticipated that the top of the pipe crossing the Santa Ana River would be 25 feet below the existing riverbed ground surface and 10 feet below the existing buried riprap levee toes. Therefore, although the proposed project would involve construction beneath the Santa Ana River, no alteration of the river would occur as a result of the proposed project.	<b>Consistent</b>

**Table 4.9-4**  
**California Coastal Commission: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

California Coastal Act			
<i>Section</i>	<i>Policy</i>	<i>Analysis</i>	<i>Consistency</i>
30240	<p>(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.</p> <p>(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts that would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.</p>	<p>As stated in Section 4.3, Biological Resources, the study area supports sensitive upland and wetland/riparian vegetation. Permanent impacts to sensitive vegetation communities will be minimized by locating proposed sewer infrastructure within existing and cleared dirt trails within Talbert Regional Park. Less than 1 acre of temporary impacts to sensitive vegetation communities would occur during construction, and impacts would be mitigated to below a level of significance through habitat enhancement on site or at an acceptable off-site location, or through acquisition of approved mitigation credits. Mitigation site/credit acceptability will be determined by the ACOE, CDFW, RWQCB, and CCC. As described in Chapter 3, Project Description, of this Draft EIR, the proposed alignment for the OCSD sewer pipeline was selected following an extensive evaluation of 11 different alignments, which included an assessment of impacts to sensitive habitats and biological resources. All of the alignments involved some level of impacts to sensitive habitats. The proposed alignment was further refined to reduce impacts to sensitive habitat in the southeast corner of Talbert Regional Park by primarily following the existing dirt trails and access roads.</p> <p>As described previously, construction activities would temporarily limit use of trails located along the northern, eastern, and southern boundaries of South Talbert; however, access to interior trails would be maintained and visitor use of these trails would not be restricted. Following construction, access to all recreational trails in Talbert Regional Park would be restored.</p>	Consistent with mitigation
30244	Requires that reasonable mitigation be provided for development that would adversely impact archaeological or paleontological resources identified by the state historic preservation office.	As stated in Section 4.4, Cultural Resources, impacts to archaeological and paleontological resources during construction were determined to be potentially significant and therefore mitigation has been provided. As proposed mitigation would include requirements that all earth disturbances be monitored by a qualified archaeologists and a local Native American representative and measures to ensure that if unexpected, potentially significant paleontological materials are encountered during construction, ground-disturbing activities shall be temporarily redirected or suspended until a qualified paleontologist is retained to evaluate the fossils' potential significance.	Consistent
30251	Scenic and visual qualities of coastal areas shall be considered and protected. To protect such resources, development shall minimize the alteration of natural landforms, be visually compatible with the character of surrounding	Construction activities would be concentrated within existing and cleared dirt paths within Talbert Regional Park. Impacts to vegetation would be minimized through the installation of sewer facilities within existing trails (upland and wetland/riparian vegetation strongly contribute to the scenic and visual character of the South Talbert area) and once sewer facilities are installed, trail surfaces would be restored to preconstruction conditions. Therefore, upon completion of construction and	Consistent with mitigation

**Table 4.9-4**  
**California Coastal Commission: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

California Coastal Act			
<i>Section</i>	<i>Policy</i>	<i>Analysis</i>	<i>Consistency</i>
	areas, and, where feasible, restore and enhance visual quality in visually degraded areas.	implementation of mitigation and restoration, the scenic and visual qualities of the South Talbert area would largely resemble existing conditions.	
<b>30253</b>	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 as to each particular development; (d) minimize energy consumption and vehicle miles traveled; and (e) where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.	<p>Geologic and seismic issues are described in Section 4.5, Geology and Soils, of this Draft EIR; air quality issues are discussed in Section 4.2, Air Quality.</p> <p>Although the project site is potentially liquefiable, these impacts would be avoided through proper geotechnical design and engineering, as described in Section 4.5, including conducting subsurface evaluations prior to the commencement of construction activities to evaluate on-site soil and geologic conditions and developing detailed design criteria for proposed sewer infrastructure. Also, the project area is located in a seismically active area of Southern California and the closest known active fault is the Newport–Inglewood (Los Angeles Basin) Fault, located approximately 0.4 mile from the project area. The proposed project would be constructed in accordance with all applicable design and construction regulations and requirements, and impacts would be less than significant.</p> <p>The project would not conflict with or propose to change existing land uses or applicable policies as designated in the City of Costa Mesa or City of Newport Beach General Plan; thus, the project would not conflict with the 2012 Southern California Air Quality Management District Air Quality Management Plan, which is the current applicable air quality plan. The project entails installation of sewer facilities and would neither increase population nor require additional employment.</p> <p>The project is not a traditional development in that, once constructed, it would not consume energy (sewer flows would proceed via gravity) and would not require additional employment (existing public works personnel of the Cities of Costa Mesa and Newport Beach would be able to respond to the maintenance needs of the proposed facilities in Talbert Regional Park and along Balboa Boulevard). As stated in Chapter 3, Project Description, the proposed project would provide a reliable conveyance system for projected 2030 wastewater flows and would provide infrastructure that may be efficiently maintained and easily accessed.</p>	<b>Consistent</b>
<b>30254</b>	New or expanded public works shall be designed and limited to accommodating needs generated by development that is consistent with the division.	As stated in Chapter 3, Project Description, the proposed project would provide a reliable conveyance system for projected 2030 wastewater flows and would provide infrastructure that may be efficiently maintained and easily accessed. In addition, the proposed project would reduce the risk of spills in local agency wastewater collection systems due to system failure and would avoid several operational risks associated with pump stations in the wastewater collection system.	<b>Consistent</b>



**Table 4.9-5**  
**City of Costa Mesa: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Costa Mesa 2000 General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
<b>Land Use Element, Policy LU-2A.10:</b> Ensure that appropriate watershed protection activities are applied to all new development and significant redevelopment projects that are subject to the NPDES Stormwater Permit, during the planning, project review, and permitting processes.	As discussed in Section 4.8, Hydrology and Water Quality, the applicant would prepare a SWPPP that specifies BMPs to be implemented during project construction to prevent pollutants from contacting stormwater and control erosion and sedimentation. The SWPPP (included as a project design feature) would be prepared and submitted to the RWQCB for review and approval prior to the start of construction. In addition, to reduce potential impacts associated with frac-out during HDD operations, Mitigation Measure BIO-5 has been provided (see Section 4.3, Biological Resources) and would require OCSD and/or project contractors to prepare a frac-out contingency plan for distribution and approval by the ACOE, CDFW, RWQCB, CCC, and USFWS.	<b>Consistent</b>
<b>Land Use Element, Policy LU-2A.13:</b> Promote site development that limits impacts on and protects the natural integrity of topography, drainage systems, and water bodies.	Construction of proposed facilities within the jurisdiction of the City of Costa Mesa would primarily occur within existing dirt trails (i.e., within Talbert Regional Park) or within existing paved roadways, including Canyon Drive and Avimore Terrace. Further, construction activities would involve open-trench or HDD methods for the installation of proposed sewer infrastructure and once construction activities are completed, trail and roadway surfaces would be restored to preconstruction conditions. During construction, drainage systems and water bodies would be protected through the implementation of a SWPPP and through implementation of a hazardous materials contingency plan (see Section 4.7, Hazards and Hazardous Materials, for plan details). In addition, to reduce potential impacts associated with frac-out during HDD operations, Mitigation Measure BIO-5 has been provided (see Section 4.3, Biological Resources) and would require OCSD and/or project contractors to prepare a frac-out contingency plan for distribution and approval by the ACOE, CDFW, RWQCB, CCC, and USFWS.	<b>Consistent</b>
<b>Land Use Element, Policy LU-2A.14:</b> Promote integration of stormwater quality protection into construction and post-construction activities, as required by the NPDES Stormwater Permit and the City's Local Implementation Plan.	During construction, stormwater quality protection would be addressed via implementation of a required SWPPP that would include measures for general good site management (housekeeping), non-stormwater management for construction wastes, erosion and sediment controls, and inspection, maintenance and repairs.	<b>Consistent</b>
<b>Conservation Element, Policy CON-1A.1:</b> Ensure that all future development will be adequately reviewed with regard to possible adverse effects on plant and animal life and critical wildlife habitat	In addition to Section 4.3, Biological Resources, of this Draft EIR, a stand-alone Biological Technical Report has been prepared for the proposed project that analyzes potential effects to existing wildlife species and vegetation that could occur as a result of	<b>Consistent with mitigation</b>

**Table 4.9-5**  
**City of Costa Mesa: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Costa Mesa 2000 General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
and wetlands, and incorporate feasible mitigation measures into the project design to reduce such effects.	construction and operational activities. As stated in Section 4.3, construction of the proposed project would result in potentially significant impacts to biological resources; however, as directed by Policy CON-1A.1, feasible mitigation measures would be implemented (see Section 4.3.5 for mitigation measures) and impacts would be reduced to below a level of significance.	
<b>Conservation Element, Policy CON-1A.5:</b> Pursue the adoption of an off-site mitigation program for the loss of critical wildlife habitat and wetlands when on-site mitigation is determined to be infeasible. Off-site mitigation should occur within the City of Costa Mesa.	As stated in Section 4.3, Biological Resources, a conceptual restoration plan would be prepared that provides for restoration of temporary impacts of construction and implementation of required additional enhancement (or other restoration) activities either on site, at an acceptable off-site location, or through acquisition of approved mitigation credits. Further, mitigation site/credit acceptability would be determined by the ACOE, CDFW, RWQCB, and CCC.	<b>Consistent with mitigation</b>
<b>Conservation Element, Policy CON-1D.2:</b> Preserve and enhance existing wetlands areas.	Construction of the proposed project within the land use jurisdiction would result in temporary and permanent impacts to jurisdictional waters and wetlands. Temporary impacts would be mitigated through on- or off-site habitat enhancement or through acquisition of approved mitigation credits. Permanent impacts to wetlands are not considered to be significant (see Section 4.3, Biological Resources, for additional detail).	<b>Consistent with mitigation</b>
<b>Conservation Element, Policy CON-1D.5:</b> Coordinate the development of plans, policies, and design standards for projects within the Coastal Zone with appropriate local, regional, state, and federal agencies.	For project components within the jurisdiction of the City of Costa Mesa, a CDP would be processed through the CCC because the city does not have an adopted LCP. Therefore, the development and review of the proposed project would be coordinated with the appropriate federal agency.	<b>Consistent</b>
<b>Noise Element, Policy N-1A.1:</b> Require, as a part of the environmental review process, that full consideration be given to the existing and projected noise environment.	Both the existing and projected noise environment in the project area are discussed in Section 4.10, Noise, of this Draft EIR. Further, where construction of the proposed project would result in a potentially significant noise impact, mitigation has been proposed to reduce the impact to below a level of significance.	<b>Consistent</b>
<b>Noise Element, Policy N-1A.2:</b> The maximum acceptable exterior noise levels for residential areas is 65 CNEL.	As stated in Section 4.10, Noise, short-term construction noise levels at residences along the proposed CMSD gravity sewer alignment within and south of Aviemore Terrace may be in excess of the 65 CNEL standard established by the City of Costa Mesa. Therefore, to reduce temporary noise impacts during construction, mitigation including, but not limited to,	<b>Consistent with mitigation</b>

**Table 4.9-5**  
**City of Costa Mesa: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Costa Mesa 2000 General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
	limitations on construction hours, use of sound mufflers on internal-combustion-engine equipment, and use of electrically powered equipment (as opposed to pneumatic or internal-combustion-powered equipment) would be implemented. With implementation of mitigation, construction noise levels would be reduced and impacts would be less than significant.	
<b>Safety Element, Policy SAF-1A.7:</b> Require all proposed development projects to be designed to minimize both the volume and velocity of surface runoff and permit no adverse downstream impacts due to increased runoff through the proper design of subsurface drains, appropriate grading, on-site retention basins, landscape programs, or other appropriate measures.	Because all unpaved trail and paved roadway surfaces would be restored to preexisting conditions following the completion of construction activities, surface runoff along the alignments after construction should be similar to preconstruction surface runoff. In addition, because sewer facilities would be installed underground, facilities would not result in increased impervious area that could affect existing surface runoff rates. As such, retention basins and landscape programs would not be required.	<b>Consistent</b>
Title 13, Chapter 2 (Zoning Districts Established), Section 13-20, Zoning Districts, establishes that the Single-Family Residential District is intended to promote the development of single-family detached units and the Multiple-Family Residential District, Medium Density is intended to promote the development of multifamily rental and ownership properties.  Title 13, Chapter 2 (Zoning Districts Established), Section 13-20, Zoning Districts, establishes that the Institutional & Recreational District is intended to allow land uses that provide recreation, open space, health, and public service uses.	While the Multiple-Unit Residential land use category is intended for multifamily residential development and the Institutional & Recreational category is intended for recreation, open space, and public service, basic public works infrastructure such as sewerage is an appropriate and fundamental accessory use for these land use categories. The project area is currently served by wastewater infrastructure; therefore, upgrading and expanding the existing wastewater system would not conflict with the permitted uses associated with the underlying land use category. In addition, wastewater infrastructure supports usage of the surrounding area through the provision of a modern essential service.	<b>Consistent</b>
Title 13, Chapter 8 (Noise Control), Section 13-279, Exceptions for Construction, establishes that permitted hours for construction activities include 7:00 a.m. through 7:00 p.m. Mondays through Fridays and 9:00 a.m. through 6:00 p.m. Saturday (construction is prohibited on Sundays and federal holidays).	Construction of proposed project components under the land use jurisdiction of the City of Costa Mesa would adhere to the construction time limitations established by the Planning, Zoning, and Development Code.	<b>Consistent</b>
Title 13, Chapter 8 (Noise Control), Section 13-280, Exterior Noise	As stated previously, implementation of proposed mitigation would reduce construction	<b>Consistent</b>

**Table 4.9-5**  
**City of Costa Mesa: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Costa Mesa 2000 General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
Standards, establishes exterior noise standards of 55 dBA and 50 dBA for residential land uses from 7:00 a.m. to 11:00 p.m. and from 11:00 p.m. to 7:00 a.m., respectively.	noise levels near residential neighborhoods to below a level of significance. As such, Section 4.10, Noise, of this Draft EIR determined that construction noise would have a less than significant impact on ambient noise levels with mitigation.	<b>with mitigation</b>
Title 13, Chapter 8 (Noise Control), Section 13-281, Interior Noise Standards, establishes interior noise standards of 55 dBA and 45 dBA for residential land uses from 7:00 a.m. to 11:00 p.m. and from 11:00 p.m. to 7:00 a.m., respectively.	Interior noise standards would not be applicable to the proposed project because construction noise is exempt from the cities' noise ordinances provided that construction activities occur within the hours permitted by the noise ordinances. Operation of underground sewer facilities would generate substantial noise that would cause interior noise levels to exceed levels established by noise ordinances.	<b>Consistent</b>
Title 15, Public Works, Section 15-25, Permit Required, establishes that a "Public Right-of-Way Excavation and Construction Permit" is required for excavation or boring in or under the surface of any street to construct, erect, place, or repair any facility (Section 1525-2, Class B permits, establishes that a Class B permit is required for all work performed in the public right-of-way and Section 15-40, Resurfacing Specifications, establishes specifications for resurfacing or repairs to street surfaces).	As stated in Chapter 3, the proposed project intends to obtain discretionary permits from multiple agencies, including the City of Costa Mesa. As the City of Costa Mesa has permitting authority over the proposed project, all necessary permits would be obtained prior to construction activities or prior to dates specified by the city.	<b>Consistent</b>

**Table 4.9-6**  
**City of Huntington Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Huntington Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
<b>Land Use Element, Policy LU 5.1.1:</b> Require that development protect environmental resources by consideration of the policies and standards contained in the Environmental Resources/Conservation Elements of the General Plan and federal (NEPA) and state (CEQA) regulations.	Applicable policies and standards contained in the Environmental Resources/Conservation Element of the City of Huntington Beach General Plan have been identified and consistency between the proposed project and identified policies and standards is analyzed in this table. In addition, this Draft EIR, as well as technical studies and correspondence/consultation and processing of necessary permits and authorizations with applicable regulatory agencies including (but not limited to) the City of Huntington Beach, the County of Orange, the CCC, the United States Fish and Wildlife Service (USFWS), and the U.S. Army Corps of Engineers (ACOE), constitutes consideration of applicable federal and state environmental regulations.	<b>Consistent</b>
<b>Land Use Element, Policy LU 5.1.7:</b> Promote integration of water quality protection measures into construction and postconstruction activities at all development and redevelopment sites.	During construction of the proposed project, water quality protection measures would be integrated into activities through implementation of a SWPPP. In addition to good site management (good housekeeping practices that would be implemented at the site to reduce potential issues associated with construction materials, equipment, and refuse), the SWPPP (included as a project design feature) would include measures that would address non-stormwater management for construction wastes, erosion and sediment controls, and inspection, maintenance, and repairs. In addition, as stated in in Section 4.5, Geology and Soils, the proposed project would be constructed in accordance with OCSD Design and Construction Requirements for Sanitary Sewers and OCSD Sewer System Management Plan (SSMP) Standard Plans and Specifications for the Construction of Sanitary Sewers, which would reduce the potential for infrastructure integrity issues during operation of the proposed project.	<b>Consistent</b>
<b>Land Use Element Table LU-2a, Land Use Schedule,</b> establishes that government administrative and related facilities such as public facilities and infrastructure are permitted uses within the Public (P) land use category	Construction and operation of the project components within the City of Huntington Beach, including the proposed dual 14-inch-barrel inverted sewer siphon beneath the Santa Ana River (a portion of the siphon would be located within the OCSD Plant No. 2 boundary) and the proposed 24-inch-diameter gravity sewer from the west end of the inverted sewer siphon to the existing OCSD Interplant Line in Brookhurst Street, is permitted within the Public land use category.	<b>Consistent</b>
<b>Land Use Element, Policy LU 13.1.8:</b> Ensure that the city's public building site and infrastructure improvements are designed to be compatible in scale, mass, character, and architecture with existing buildings and pertinent design characteristics prescribed by this General Plan for	Project components located in the City of Huntington Beach would be installed underground within an existing OCSD facility and within Brookhurst Street. Therefore, the proposed project would not include surface facilities that would contribute to the visual character of the immediate area in which they are located.	<b>Consistent</b>

**Table 4.9-6**  
**City of Huntington Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Huntington Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
the district or neighborhood in which they are located, and work with non-City public agencies to encourage compliance.		
<b>Table LU-4, Community District and Subarea Schedule</b> , establishes that proposed City of Newport Beach facilities within the boundary of OCSD Plant No. 2 would be located in Planning Subarea 4G (Edison Plant) and permitted uses within the Public (P) land use category consist solely of “utility uses.”	Construction and operation of project components within the City of Huntington Beach, including the proposed dual 14-inch-barrel inverted sewer siphon and the proposed 24-inch-diameter gravity sewer from the west end of the inverted sewer siphon to the existing OCSD Interplant Line in Brookhurst Street, would be considered permitted uses within the Public land use category.	<b>Consistent</b>
<b>Utilities Element, Policy U 2.1.5:</b> Maintain, upgrade, and expand existing wastewater collection and treatment facilities.	As stated in Chapter 3, Project Description, the proposed project would provide a reliable conveyance system for projected 2030 wastewater flows and would provide infrastructure that could be efficiently maintained and easily accessed. In addition, the proposed project would upgrade the existing system such that several pump stations located in the City of Costa Mesa would be abandoned as they would no longer be necessary.	<b>Consistent</b>
<b>Utilities Element, Policy U 2.1.7:</b> Design and route wastewater treatment collection facilities to eliminate the need for pump stations where possible.	After the proposed CMSD and City of Newport Beach pipelines are completed and the Southwest Costa Mesa Trunk Sewer Project No. 6-19 is completed, six CMSD pump stations, a private pump station at 18th Street, and a City of Newport Beach pump station located east of the Santa River and east of Talbert Regional Park would no longer be required to convey flow in the local wastewater system and would therefore be abandoned.	<b>Consistent</b>
<b>Environmental Resources/Conservation Element, Policy ERC 4.1.6:</b> Require that future development be designed and sited to maintain the natural topographic characteristics of the City including the minimization of the area and height of the cut and fills.	Within the City of Huntington Beach, project components would be installed within the boundary of an existing OCSD treatment plant and within Brookhurst Street. Construction activities including open-cut trenching would be used for the installation of proposed facilities and as the alignments would be located within existing impervious areas (disturbed areas would be restored following construction), the proposed project would maintain existing topographic characteristics.	<b>Consistent</b>
<b>Environmental Resources/Conservation Element, Policy ERC 6.1.1:</b> Create and implement means to reduce the quantity and improve the quality of runoff and discharge of pollutants to the maximum extent practicable	As stated in Section 4.8, Hydrology and Water Quality, a SWPPP would be implemented during construction and would include measures for general good site management (housekeeping), non-stormwater management for construction wastes, erosion and sediment controls, and inspection, maintenance, and repairs. Once installed, the proposed sewer facilities would be located	<b>Consistent</b>

**Table 4.9-6**  
**City of Huntington Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Huntington Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
by integrating surface runoff controls and Best Management Practices into new development and redevelopment land use decisions.	underground and the surface environment would be returned to preconstruction conditions; therefore, future runoff rates would likely be consistent with existing runoff rates.	
<b>Environmental Resources/Conservation Element, Policy ERC 6.1.4:</b> Limit and minimize the disturbance and modifications of natural water bodies, drainage systems, and hydrology.	Proposed sewer facilities in the City of Huntington Beach would be located within the boundary of OCSD Plant No. 2 and would tie into an existing interplant sewer line in Brookhurst Street. During construction activities, a SWPPP would be implemented to minimize potential impacts to nearby water bodies and once sewer facilities are installed, trenches would be backfilled and the surface environment along the proposed alignments would be restored to preconstruction conditions, which would minimize permanent disturbances to drainage systems and hydrology.	<b>Consistent</b>
<b>Environmental Resources/Conservation Element, Policy ERC 6.1.5:</b> Require incorporation of controls in new development and redevelopment, including structural and non-structural Best Management Practices (BMPs), to mitigate the projected increases in pollutant loads and flows.	As stated in Section 4.8, Hydrology and Water Quality, construction and operational BMPs will be included in a SWPPP that will be implemented during construction as a project design feature. Construction BMPs would consist primarily of non-structural measures, including erosion- and sediment-control practices, and operational BMPs would include pollution-prevention measures and preventive and corrective maintenance measures. Structural BMPs would not be necessary, as the proposed sewer facilities would be installed underground and as such would not result in an increase in impervious area or site runoff volume.	<b>Consistent with mitigation</b>
<b>Coastal Element, Policy C 1.1.1:</b> With the exception of hazardous industrial development, new development shall be encouraged to be located within, contiguous 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.	City of Huntington Beach project components would be located within OCSD Plant No. 2 and would tie into existing sewer infrastructure in Brookhurst Street. As such, project components would be located within existing developed areas and would not result in significant adverse effects on coastal resources.	<b>Consistent</b>
<b>Coastal Element, Policy C 1.1.9:</b> New development shall be designed to assure stability and structural integrity, and neither create nor contribute significantly to	As stated in Section 4.5, Geology and Soils, the proposed project would be constructed in accordance with OCSD Design and Construction Requirements for Sanitary Sewers and the OCSD SSMP, which would assure stability and structural integrity and would reduce the potential for risks	<b>Consistent</b>

**Table 4.9-6**  
**City of Huntington Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Huntington Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of a protective device.	related to seismic events. In addition, subsurface evaluations would be performed prior to commencement of construction activities to evaluate soil and geologic conditions and develop detailed design criteria for the pipelines and associated improvements.	
<b>Coastal Element, Policy C 2.2.1:</b> Encourage the utilization of easements and/or rights-of-way along flood control channel, public utilities, railroads, and streets, wherever practical, for the use of bicycles and pedestrians.	In the project area, the Santa Ana River Trail & Parkway is located adjacent to the Santa Ana River. The proposed 800 linear feet of dual 14-inch-barrel inverted siphon would be installed beneath the Santa Ana River and beneath the paved surface of the Santa Ana River Trail & Parkway (in the project area the trail and parkway consists of two asphalt-surfaced, striped lanes on the eastern and western banks of the river). Therefore, because the proposed inverted siphon would be installed via HDD methods, the Santa Ana River Trail & Parkway would not be affected and construction activities would not conflict with use of easements or right-of-way along the river for the use of bicycles and pedestrians.	<b>Consistent</b>
<b>Coastal Element, Policy C 3.2.1:</b> Encourage, where feasible, facilities, programs, and services that increase and enhance public recreational opportunities in the Coastal Zone.	Proposed project components in the City of Huntington Beach would be located in the boundary of OCSD Plant No. 2 and would tie into existing sewer facilities in Brookhurst Street. Because OCSD Plant No. 2 is not open to the public and the segment of Brookhurst Street affected by the proposed project does not directly support public recreational opportunities in the Coastal Zone, these facilities would not impact existing recreational opportunities. The eastern extent of the proposed inverted siphon to be installed via HDD beneath the Santa Ana River would be under City of Huntington Beach land use jurisdiction. While the proposed alignment for the inverted siphon would be installed beneath the Santa Ana River Trail & Parkway and use of the trail and parkway would not be affected, trail and parkway facilities are located outside of City of Huntington Beach jurisdiction and therefore public recreational opportunities in the city's Coastal Zone would not be affected by construction of the proposed project.	<b>Consistent</b>
<b>Coastal Element, Policy C 3.2.2:</b> Low cost visitor and recreational facilities shall be protected, encouraged, and where feasible, provided.	As stated above, construction and operation of proposed project components on City of Huntington Beach lands would not affect existing visitor and recreational facilities. The provision of additional recreational facilities along the proposed sewer alignments would not be feasible, as both the proposed 14-inch inverted siphon and the 24-inch gravity sewer would be primarily located within the fenced boundary of OCSD Plant No. 2 (access to the plant is restricted to plant personnel and OCSD employees).	<b>Consistent</b>



**Table 4.9-6**  
**City of Huntington Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Huntington Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
<b>Coastal Element, Policy C 4.1.1:</b> The scenic and visual qualities of coastal area shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect public views to and along the ocean and scenic coastal areas.	Project components in the City of Huntington Beach would be installed within the fenced boundary of OCSD Plant No. 2 and would tie into an existing sewer facility/pipeline located in Brookhurst Street. In addition, because proposed sewer facilities would be installed underground, sewer facilities would not obstruct or impair the scenic and visual qualities of coastal areas.	<b>Consistent</b>
<b>Coastal Element, Policy C 4.2.2:</b> Require that the massing, height, and orientation of new development be designed to protect public coastal views.	Proposed sewer facilities would be installed underground and therefore would not obstruct or impair existing public coastal views.	<b>Consistent</b>
<b>Coastal Element, Policy C 4.7.2:</b> Continue to locate new and relocated utilities underground when possible. All others shall be placed and screened to minimize public views.	As proposed, the 14-inch inverted siphon and the 24-inch gravity sewer on City of Huntington Beach jurisdictional land would be installed underground via HDD and open-cut trenching methods, respectively.	<b>Consistent</b>
<b>Coastal Element, Policy C 5.1.2:</b> Where new development would adversely impact archaeological or paleontological resources within the Coastal Zone, reasonable mitigation measures to minimize impacts shall be required.	Although adverse impacts to archaeological or paleontological resources are not anticipated during construction of project components on City of Huntington Beach jurisdictional lands (both OCSD Plant No. 2 and Brookhurst Street are developed areas that have been previously disturbed), mitigation would be implemented if previously unknown human remains are found or if unexpected, potentially significant paleontological materials are encountered during ground-disturbing activities.	<b>Consistent</b>
<b>Coastal Element, Policy C 5.1.3,</b> establishes that if any Native American remains are uncovered, the county coroner, the Native American Heritage Commission, and the Most Likely Descendants shall be notified.	As stated in Section 4.4, Cultural Resources, Mitigation Measure (MM) CUL-3 would be implemented if human remains are found during open-cut trenching or any other ground-disturbing activities. Further, if human remains are encountered, MM-CUL-3 entails that no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the county coroner has determined the appropriate treatment and disposition of the human remains. If the county coroner determines that the remains are, or are believed to be, Native American, then the Native American Heritage Commission and the Most Likely Descendant would be notified.	<b>Consistent with mitigation</b>
<b>Coastal Element, Policy C 5.1.4,</b> establishes that a completed archaeological research design shall be submitted along with any application for a coastal	While a South Central Coastal Information Center records search conducted for the proposed project indicated that a total of 35 previous cultural resources surveys have been performed and three archaeological sites have been identified within 0.5 mile of the project area (CA-ORA-839,	<b>Consistent with mitigation</b>

**Table 4.9-6**  
**City of Huntington Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Huntington Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
development permit for development within any areas containing archaeological or paleontological resources.	CA-ORA-845, and CA-ORA-906), no prehistoric archaeological sites are recorded within the area of potential effect (i.e., the area likely to be affected by construction activities). Also, the project area is not designated as a general area of sensitivity for paleontological resources (per the Orange County General Plan Historic and Cultural Resources Element) and the proposed project does not anticipate destroying or indirectly impacting a unique paleontological resource. Still, mitigation has been provided in Section 4.4, Cultural Resources, that would be implemented if previously unknown or unidentified human remains or paleontological resources are uncovered/encountered during construction activities.	
<b>Coastal Element, Policy C 5.1.5</b> , establishes that a County-certified pathologist/archaeologist shall monitor all grading operations where there is a potential to affect cultural or paleontological resources based on the required research design.	As stated in Section 4.4, Cultural Resources, MM-CUL-1, "all earth disturbances shall be monitored by a qualified archaeologist and a local Native American representative." Therefore, with implementation of MM-CUL-1, the proposed project would be consistent with Policy C 5.1.5.	<b>Consistent with mitigation</b>
<b>Coastal Element, Policy C 6.1.2</b> : Require that new development include mitigation measures to enhance water quality, if feasible, and, at a minimum, prevent the degradation of water quality of groundwater basins, wetlands, and surface water.	During construction of the proposed sewer facilities, a SWPPP would be implemented to minimize potential impacts to nearby surface waters (i.e., the Santa Ana River) and once sewer facilities are installed, trenches would be backfilled and the surface environment along the proposed alignments would be restored to preconstruction conditions, which would minimize permanent disturbances to drainage systems and hydrology. As stated in Section 4.8, Hydrology and Water Quality, groundwater may be encountered while excavating trenches for pipeline construction, and potentially significant water quality impacts would occur if this pumped groundwater is not disposed of correctly. In order to mitigate for impacts and ensure that groundwater is disposed of in a safe and legal manner, mitigation measures have been provided (see Section 4.8, Hydrology and Water Quality). Lastly, as shown on Figure 4.3-2b of Section 4.3, Biological Resources, wetlands and wetland indicator vegetation would not be affected by construction of proposed sewer facilities on City of Huntington Beach jurisdictional lands.	<b>Consistent</b>

**Table 4.9-6**  
**City of Huntington Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Huntington Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
<b>Coastal Element, Policy C 6.1.3:</b> 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.	As shown on Figure 4.3-1a in Section 4.3, Biological Resources, construction activities within OCSD Plant No. 2 and to the existing Interplant Line in Brookhurst Street would result in temporary impacts to developed land and ornamental vegetation. Therefore, marine resources and species of special biological significance are not likely to be affected by construction activities on lands under City of Huntington Beach jurisdiction.	N/A
<b>Coastal Element, Policy C 6.1.5:</b> Require containment curtains around waterfront construction projects on inland waterways to avoid turbid waters drifting into the ocean.	Construction activities on City of Huntington Beach jurisdictional lands would not be located on the waterfront. Rather, construction activities would occur within the fenced boundary of OCSD Plant No. 2.	N/A
<b>Coastal Element, Policy C 6.1.6,</b> establishes that BMPs shall be implemented during construction to minimize the volume, velocity, and pollutant load of stormwater runoff prior to runoff discharge into stormwater conveyances systems, receiving waters, and/or other sensitive areas.	Standard BMPs would be included in the SWPPP (a project design feature) that would be implemented during construction activities associated with the proposed project. BMPs would include measures that would address general good site management (housekeeping), non-stormwater management for construction wastes, erosion and sediment controls, and inspection, maintenance, and repairs.	Consistent
<b>Coastal Element, Policy C 7.1.2:</b> Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. In the event that development is permitted in an ESHA area pursuant to other provisions of this LCP, a "no-net-loss" policy (at a minimum) shall be utilized.	As shown on Figure 4.3-1a in Section 4.3, Biological Resources, construction activities within OCSD Plant No. 2 and to the existing Interplant Line in Brookhurst Street would result in temporary impacts to developed land and ornamental vegetation. Therefore, within the land use jurisdiction of the City of Huntington Beach, sensitive habitat areas would not be affected.	N/A
<b>Coastal Element, Policy C 7.1.3:</b> Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.	Project components under City of Huntington Beach jurisdiction would not be located adjacent to environmentally sensitive habitat or parks. Rather, the proposed sewer facilities would be located within the fenced boundary of OCSD Plant No. 2 and would tie into an existing sewer interplant line in Brookhurst Street. Talbert Regional Park is located east of the Santa Ana River and approximately 700 feet east of the proposed inverted siphon on City of Huntington Beach lands. The proposed inverted siphon would be installed beneath the Santa Ana River and the adjacent Santa Ana River Trail & Parkway paths; however, facilities would be installed via HDD and impacts to trail usage are not anticipated.	Consistent

**Table 4.9-6**  
**City of Huntington Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Huntington Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
<b>Coastal Element, Policy C 7.1.4:</b> Require that new development contiguous to wetlands or environmentally sensitive habitat areas include buffer zones. Buffer zones shall be a minimum of one hundred feet setback from the landward edge of the wetland.	As shown on 4.3-1a in Section 4.3, Biological Resources, project components located in the City of Huntington Beach would not be contiguous to wetlands or environmentally sensitive areas.	N/A
<b>Coastal Element, Policy C 9.1.3:</b> New sewer systems and substantial improvements to existing sewer systems shall incorporate monitoring systems which verify the operational integrity of the sewer system to assure that coastal waters are protected.	As stated in Section 4.5, Geology and Soils, the proposed 14-inch inverted siphon and the 24-inch gravity sewer would be constructed in accordance with OCSD Design and Construction Requirements for Sanitary Sewers and the OCSD SSMP, which would ensure stability and structural integrity and would reduce the potential for risks related to seismic events.	Consistent
<b>Title 21, Chapter 212, Section 212.02, Industrial Districts Established,</b> establishes that the Industrial General district provides for a full range of manufacturing, industrial process, resource and energy production, general service, and distribution. In addition, the Industrial Limited district provides sites for moderate- to low-intensity industrial uses, commercial services, and light manufacturing.	Construction and operation of sewer facilities in the Industrial General and Industrial Limited land use districts would be appropriate given the character of surrounding development and the proximity of similar sewer infrastructure.	Consistent
<b>Title 21, Chapter 212, Section 212.04, IG and IL Districts: Land Use Controls,</b> establishes that minor utilities are permitted in the Industrial General (IG) and Industrial Limited (IL) zones (Chapter 204, Section 204.08, establishes that underground water and sewer lines are considered minor utilities).	Because underground sewer lines are considered a minor utility, they are an expressly permitted use in the underlying Industrial General and Industrial Limited zones.	Consistent

**Table 4.9-7**  
**City of Newport Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Newport Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
<b>Land Use Element, Policy LU 3.7:</b> Require that new development is located and designed to protect areas with high natural resource value and protect residents and visitors from threats to life or property.	Proposed project components in the City of Newport Beach would be located adjacent to the Newport Terrace condominium development and within 19th Street east of Talbert Regional Park. Because project components would be located within developed areas (i.e., existing single- and multifamily residences and a road), impacts to areas with high natural resource value would be minimized. Proposed sewer facilities would be installed underground and would be designed in accordance with City of Newport Beach Design Standards and Specifications. As such, residents and visitors alike would be protected from upset and accident conditions associated with the proposed sewer facilities.	<b>Consistent</b>
<b>Land Use Element, Table LU1, Land Use Plan Categories,</b> establishes that the Multiple Residential land use category is intended to provide primarily for multifamily residential development containing attached or detached dwelling units.	While the Multiple-Unit Residential land use category is intended for multi-family residential development, basic public works infrastructure such as sewerage is an appropriate and fundamental accessory use for the land use category. The project area is currently served by wastewater infrastructure; therefore, upgrading and expanding the existing wastewater system would not conflict with the permitted uses associated with the underlying land use category.	<b>Consistent</b>
<b>Natural Resources Element, Policy 3.5, Natural Water Bodies:</b> Require that development does not degrade natural water bodies.	While construction activities in the city of Newport Beach would occur within existing developed areas, a SWPPP would be implemented to protect water bodies from accidental spills and discharges. In the event of an accidental spill, appropriate response measures identified in the SWPPP would be implemented to minimize impacts to surrounding water bodies (see Section 4.8, Hydrology and Water Quality, for SWPPP details).	<b>Consistent</b>
<b>Natural Resources Element, Policy NR 3.10, Best Management Practices.</b> Implement and improve upon Best Management Practices (BMPs) for residences, businesses, development projects, and City operations.	During construction, BMPs identified in the SWPPP would be implemented to avoid and/or minimize temporary impacts to local waters resulting from open -cut trenching, sewer pipeline installation, and other construction activities. Once the proposed sewer facilities are installed and the surface environment along the proposed alignments is restored to preconstruction conditions, BMPs would not be necessary.	<b>Consistent</b>
<b>Natural Resources Element, Policy NR 3.11, Site Design and Source Control:</b> 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	As stated previously, BMPs identified in the SWPPP would be implemented during construction of the proposed project to avoid and/or minimize temporary impacts to local waters resulting from open-cut trenching, sewer pipeline installation, and other construction activities. Also, as stated in Section 4.8, Hydrology and Water Quality, BMPs would include a combination of erosion- and sedimentation-control measures.	<b>Consistent</b>

**Table 4.9-7**  
**City of Newport Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Newport Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
National Pollutant Discharge Elimination System (NPDES), structural treatment BMPs will be implemented along with site design and source control measures.		
<b>Natural Resources Element, Policy NR 3.16, New Development:</b> Require that development be located on the most suitable portion of the site and designed to ensure the protection and preservation of natural and sensitive site resources that provide important water quality benefits.	While project components in the City of Newport Beach would be located adjacent to the Newport Terrace condominium development and within 19th Street and primarily within developed areas, the proposed 18-inch sewer from the City of Newport Beach Pump Station at Walkabout Circle to existing sewer facilities in Canyon Park would traverse a small area of southern willow scrub determined to be ACOE/CDFW/RWQCB/CCC jurisdictional (see Section 4.3, Biological Resources, and Figure 4.3-2a). During construction, a SWPPP would be implemented in order to avoid/minimize temporary impacts to waters and as stated in Section 4.3, Biological Resources, mitigation in the form of in situ restoration, off-site restoration, or acquisition of approved mitigation credits would be provided to address temporary impacts during construction.	<b>Consistent</b>
<b>Natural Resources Element, Policy NR 10.3, Analysis of Environmental Study Areas:</b> Require a site-specific survey and analysis prepared by a qualified biologist as a filing requirement for any development permit applications where development would occur within or contiguous to areas identified as ESAs.	Talbert Regional Park is located north of and adjacent to the Banning Ranch property and the Seminuk Slough, both identified in the city's General Plan Natural Resource Element as Environmental Study Areas (ESAs). In addition to Section 4.3, Biological Resources, of this Draft EIR, a project-specific Biological Technical Report has been prepared and is included as Appendix C to this document.	<b>Consistent</b>
<b>Natural Resources Element, Policy NR 10.4, New Development Siting and Design:</b> Require that the siting and design of new development, including landscaping and public access, protect sensitive or rare resources against any significant disruption of habitat values.	Project components in the City of Newport Beach would be located adjacent to the Newport Terrace condominium development and within 19th Street. As stated previously, the proposed 18-inch sewer from the City of Newport Beach Pump Station at Walkabout Circle to existing sewer facilities in Canyon Park would traverse a small area (0.1 acre) of southern willow scrub determined to be ACOE/CDFW/RWQCB/CCC jurisdictional (see Section 4.3, Biological Resources, and Figure 4.3-2a of this report). To address impacts to jurisdictional wetlands, mitigation discussed in Section 4.3, Biological Resources, of this report would be implemented.	<b>Consistent with Mitigation</b>
<b>Natural Resources Element, Policy NR 10.5, Development in Areas Containing Significant or Rare Biological Resources:</b>	Proposed project components within the City of Newport Beach would be constructed and installed primarily within existing developed areas (i.e., an existing single- and multifamily development and 19th Street). However, as stated in Section 4.3, Biological Resources, a small segment of the	<b>Consistent</b>

**Table 4.9-7**  
**City of Newport Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Newport Beach General Plan		
Section and Policy	Analysis	Consistency
Limit uses within an area containing any significant or rare biological resources to only those uses that are dependent on such resources, except where application of such a limitation would result in a taking of private property. If application of this policy would likely constitute a taking of private property, then a non-resource-dependent use shall be allowed on the property, provided development is limited to the minimum amount necessary to avoid a taking and the development is consistent with all other applicable resource protection policies. Public access improvements and educational, interpretative, and research facilities are considered resource dependent uses.	proposed 18-inch sewer from the City of Newport Beach Pump Station at Walkabout Circle to existing sewer facilities in Canyon Park would traverse a relatively small area (less than 0.1 acre) of southern willow scrub determined to be ACOE/CDFW/RWQCB/CCC jurisdictional (see Figure 4.3-2a, Proposed Project Impacts and Jurisdictional Delineation). In addition, construction activities would also temporarily affect a 4-foot-wide concrete-lined channel within Canyon Park determined to be an ACOE/RWQCB/CDFW/CCC jurisdictional non-wetland ephemeral water. While sewer facilities would not be considered resource-dependent issues, the proximity of existing infrastructure in Canyon Park and the proposed infrastructure in Talbert Regional Park suggests that the proposed sewer alignment between the City of Newport Beach Pump Station and Canyon Park is place dependent and impacts to significant biological resources would be limited to a small area of southern willow scrub.	
<b>Natural Resources Element, Policy NR 10.6, Use of Buffers:</b> Maintain a buffer of sufficient size around significant or rare biological resources, if present, to ensure the protection of these resources. Require the use of native vegetation and prohibit invasive plant species within these buffer areas.	Policy NR 10.6 applies principally to new development, which should be designed with appropriate buffers to limit adverse edge effects on significant or rare biological resources. The proposed project consists of new infrastructure and abandonment of pump stations. The replacement of pump stations with pipelines results in an overall reduction of maintenance activities and therefore a reduction in the level of disturbance within these areas adjacent to biological resources. The new infrastructure is designed to utilize existing dirt roads to the maximum extent practicable in order to limit impacts to biological resources. Existing roads will be used for access to all proposed manholes, thus avoiding new encroachments into areas supporting biological resources. Impacts from construction would be mitigated through appropriate restoration in the area, resulting in impacts that are less than significant following mitigation.	Consistent with mitigation
<b>Natural Resources Element, Policy NR 13.1, Wetland Protection:</b> Recognize and protect wetlands for their commercial, recreational, water quality, and habitat value.	According to Section 4.3, Biological Resources, construction of project components in the City of Newport Beach would temporarily impact less than 0.1 acre of southern willow scrub determined to be an ACOE/CDFW/RWQCB/CCC jurisdictional wetland. To address temporary impacts to significant vegetation communities, mitigation in the form of a conceptual restoration plan would be developed and implemented. The conceptual restoration plan would provide for restoration of temporary impacts of construction and implementation of required additional enhancement (or other restoration) activities either on site, at an acceptable off-site location, or through acquisition of approved mitigation credits.	Consistent with mitigation

**Table 4.9-7**  
**City of Newport Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Newport Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
<b>Natural Resources Element, Policy NR 13.2, Wetland Delineation:</b> Require a survey and analysis with the delineation of all wetland areas when the initial site survey indicates the presence or potential for wetland species or indicators. Wetland delineations will be conducted in accordance with the definitions of wetland boundaries established by California Department of Fish and Game, and/or United States Fish and Wildlife Service.	A jurisdictional wetland delineation was prepared in support of the proposed project. Please refer to Section 4.3, Biological Resources, for additional detail.	<b>Consistent</b>
<b>Natural Resources Element, Policy NR 18.1, New Development:</b> 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 archeological and paleontological resources and require that the impact caused by any development be mitigated in accordance with CEQA.	As stated in Section 4.4, Cultural Resources, ground-disturbing activities during construction could result in potentially significant impacts to paleontological and archaeological resources (construction could impact previously unidentified resources). Therefore, mitigation measures have been provided and would consist of construction monitoring and protocols/measures to be implemented in the event that potential significant features/resources/sites are encountered.	<b>Consistent with mitigation</b>
<b>Natural Resources Element, Policy NR 18.13, Potential for New Development to Impact Resources:</b> 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.	While the Native American Heritage Commission (NAHC) indicated that no known Native American heritage resources are located within the project area, Native American monitoring has been requested during ground-disturbing activities. In addition, because construction activities could potentially affect previously unknown or unidentified resources, MM-CUL-1 has been provided and would entail construction monitoring by a qualified archaeologist and a local Native American representative.	<b>Consistent with mitigation</b>
<b>Coastal Land Use Plan (Map 1)</b> establishes that while the majority of the project components under the land use jurisdiction of the City of Newport Beach would be located within existing roads, a segment of the proposed 18-inch	While the RM-C land use category is intended to provide primarily for multifamily residential development, sewer infrastructure is a complementary and modern necessary accessory use for residential development in urban and suburban neighborhoods. In addition, public works such as sewer and water infrastructure support the intended development associated with the underlying	<b>Consistent</b>



**Table 4.9-7**  
**City of Newport Beach: Applicable Land Use Plans, Policies, and Regulations and Project Consistency**

City of Newport Beach General Plan		
<i>Section and Policy</i>	<i>Analysis</i>	<i>Consistency</i>
gravity sewer would traverse lands designated RM-C (Multiple Unit Residential) (10.0–19.9 DU/AC).	land use category; therefore, the development of sewer facilities within the RM-C category would not conflict with the permitted uses of the category.	
<b>Policy 2.2.2-1:</b> After certification of the LCP, require a coastal development permit for all development within the coastal zone, subject to exceptions provided for under the California Coastal Act as specified in the LCP.	The proposed project will process a CDP for project components located within the city's Coastal Zone.	<b>Consistent</b>
<b>Policy 2.8.1-4:</b> 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.	As stated in Section 4.5, Geology and Soils, the proposed 14-inch inverted siphon and the 24-inch gravity sewer would be constructed in accordance with OCSD Design and Construction Requirements for Sanitary Sewers and the OCSD SSMP, which would ensure stability and structural integrity and would reduce the potential for risks related to seismic events. Further, subsurface evaluations would be performed prior to the commencement of construction to evaluate the soil and geologic conditions and address excavation and dewatering characteristics. In addition, detailed design criteria for the pipelines and associated improvements would be developed and would address potential risks associated with erosion and geologic instability.	<b>Consistent</b>

## **OCSD Southwest Costa Mesa Trunk Sewer No. 6-19**

### ***Construction Impacts***

As analyzed in Tables 4.9-4, 4.9-5, and 4.9-6, the various components of the OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 would be either consistent or consistent with mitigation with applicable policies and regulations of the California Coastal Act, City of Costa Mesa, and City of Huntington Beach. Therefore, the construction of the proposed project components would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project and impacts would be **less than significant**.

### ***Operational Impacts***

Once constructed, the proposed pipelines would be located underground and no aboveground structures would be necessary. The areas impacted by construction would be restored to preconstruction conditions. The project would, however, require the establishment of a 30-foot-wide permanent easement (including the 20-foot access road) along the entire length of the OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 within Talbert Regional Park. This easement would not cause any conflict with applicable land use plans relative to Talbert Regional Park. Therefore, operation of the proposed project would result in a **less than significant impact** related to conflicts with an applicable land use plan, policy, or regulation.

## **CMSD and City of Newport Beach Facilities**

### ***Construction Impacts***

As analyzed in Tables 4.9-4, 4.9-5, and 4.9-7, the proposed CMSD and City of Newport Beach facilities analyzed in this Draft EIR would be either consistent or consistent with mitigation with applicable policies and regulations of the California Coastal Act, City of Costa Mesa, and City of Newport Beach. In addition, as the alignment of the proposed 18-inch gravity sewer between the existing City of Newport Beach Pump Station and existing sewer facilities in Canyon Park would traverse a small patch of southern willow scrub determined to be an ACOE/CDFW/RWQCB/CCC-jurisdictional wetland (construction activities would temporarily impact 0.1 acre of the jurisdictional wetland), construction activities would be designed to be consistent with relevant biological resources policies of the City of Newport Beach local CLUP. Therefore, the construction of proposed project components would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project and impacts would be **less than significant**.

### ***Operational Impacts***

As with operation of the proposed OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 sewer facilities, CMSD and City of Newport Beach sewer facilities would be located entirely underground and no aboveground structures would be necessary during operation. As such, the proposed sewer facilities would not conflict with applicable plans and regulations of the California Coastal Act, the City of Costa Mesa, or the City of Newport Beach and therefore **no impacts** to land use are anticipated.

***LUP-3:       Would the project conflict with any applicable habitat conservation plan or natural community conservation plan?***

As stated in Section 4.3, Biological Resources, compliance with the Orange County Central and Coastal Natural Community Conservation Planning and Habitat Conservation Plan (Central/Coastal NCCP/HCP) requires compliance with several siting, construction, and operations and maintenance policies and the proposed project has been designed to be consistent with applicable policies. As detailed in Section 4.3, Biological Resources (see Table 4.3-7, Compliance with NCCP/HCP Siting Criteria and Policies), the proposed project has been designed to be consistent with applicable criteria and policies of the Central/Coastal NCCP/HCP, and as such, the proposed project would not conflict with an applicable habitat conservation plan or natural community conservation plan and impacts would be **less than significant**.

### **4.9.5     Mitigation Measures**

Construction and operation of the proposed project would not result in significant land use impacts. As such, no mitigation measures would be required.

### **4.9.6     Level of Significance After Mitigation**

Because significant land use impacts have not been identified, mitigation measures are not required. As discussed in Section 4.9.4, Impact Discussion, land use impacts associated with construction and operation of the proposed OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19 and the proposed CMSD and City of Newport Beach sewer facilities would be less than significant.

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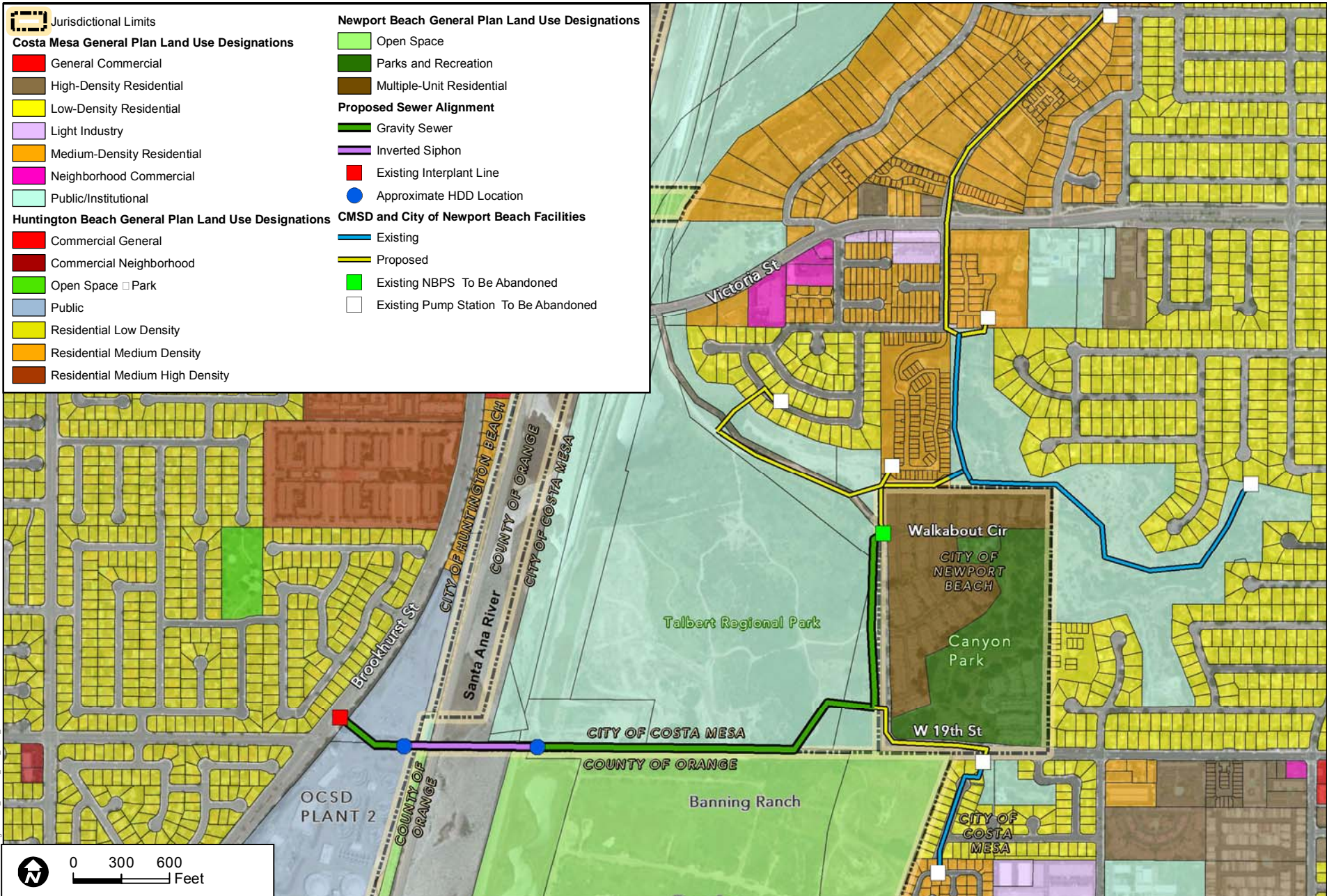
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Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

**FIGURE 4.9-1**  
**Jurisdictional Authority**

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**FIGURE 4.9-2**  
**General Plan Land Use Designations**

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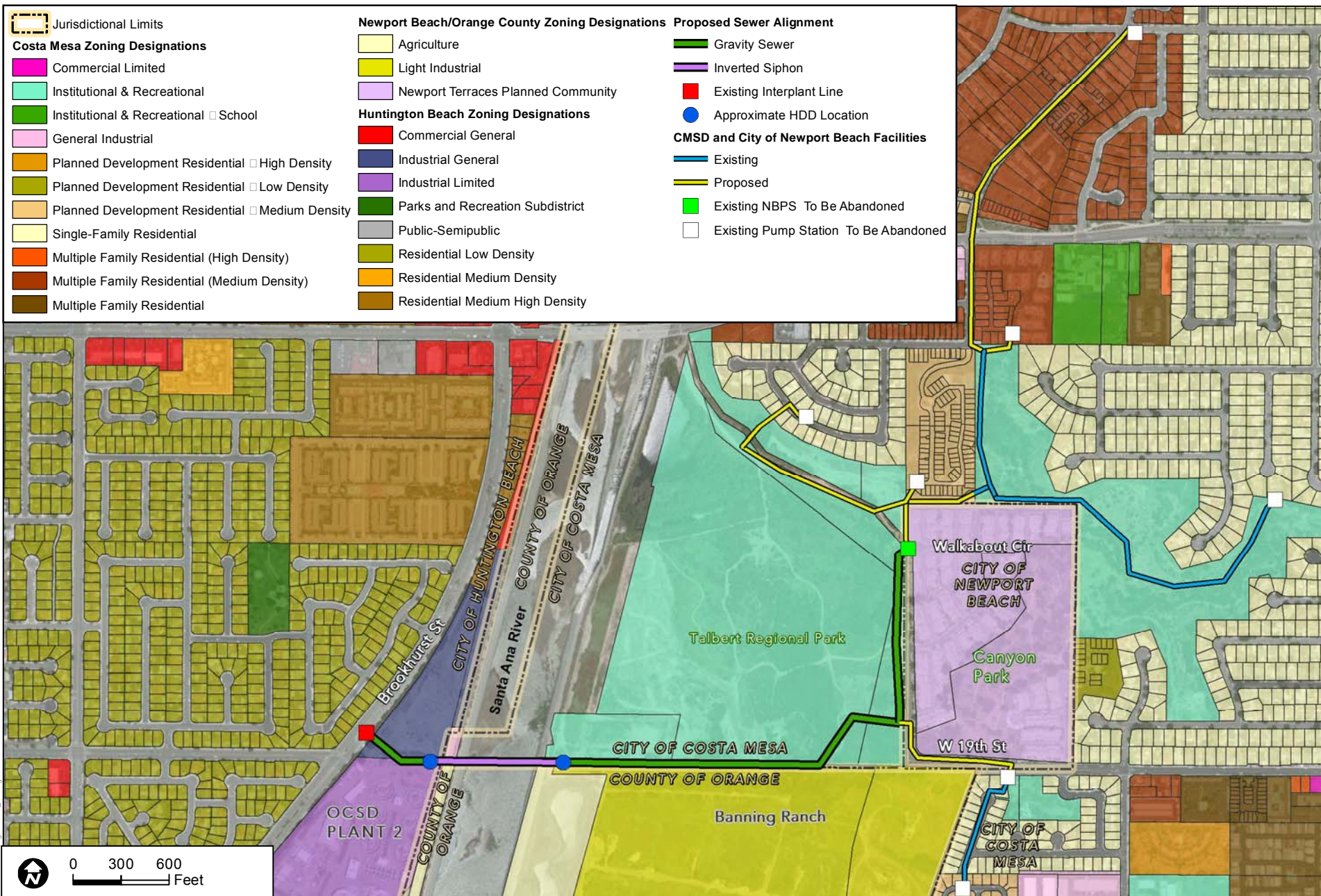
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AERIAL SOURCE: Bing Maps

Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

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**FIGURE 4.9-3**  
**Zoning Designations**

**DUDEK**

AERIAL SOURCE: Bing Maps

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**FIGURE 4.9-4**  
**Existing Land Uses**

**DUDEK**

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AERIAL SOURCE: Bing Maps

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## **4.10 NOISE**

This section evaluates the potential noise impacts from the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project) by describing the existing noise environment within the project area and identifying noise levels expected to be generated by construction and operation of the proposed project. Receptors that may potentially be affected by noise are identified, as well as the criteria used to evaluate the effects of project-generated noise on the existing noise environment. The discussion also describes the fundamentals of acoustics, the results of sound level measurements, acoustical calculations, and assessment of potential noise impacts from construction and operation of the proposed project.

### **4.10.1 Regulatory Setting**

#### **Federal**

##### ***Federal Noise Control Act***

The United States Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, the EPA Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972 (42 U.S.C. 4901 et seq.), establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, noise control guidelines and regulations contained in the EPA rulings in prior years remain in place for enforcement by designated federal agencies where relevant.

##### ***Federal Aviation Administration Standards***

Enforced by the Federal Aviation Administration (FAA), Title 14, Part 150 of the Code of Federal Regulations (14 CFR, Part 150) prescribes the procedures, standards, and methodology governing the development, submission, and review of airport noise exposure maps and airport noise compatibility programs, including the process for evaluating and approving or disapproving those programs.

##### ***Federal Highway Administration Standards***

The standards in 23 CFR, Part 772, sets procedures for the abatement of highway traffic noise and construction noise. Title 23 is implemented by the Department of Transportation (DOT) Federal Highway Administration (FHWA). The purpose of this regulation is to provide

procedures for noise studies and noise abatement measures to help protect the public health and welfare, to supply noise abatement criteria, and to establish requirements for information to be given to local officials for use in the planning and design of highways.

### ***Federal Transit Administration Standards and Federal Railroad Administration Standards***

As described in the Federal Transit Administration's (FTA's) *Transit Noise and Vibration Impact Assessment* (FTA 2006), ground-borne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility. Ground-borne vibration can cause buildings to shake and rumbling sounds to be heard.

### **State**

#### ***California Noise Control Act of 1973***

Sections 46000–46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, finds that excessive noise is a serious hazard to the public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in California's urban, suburban, and rural areas. The California Noise Control Act declares that the state has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the state to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

#### ***California Department of Transportation***

Because the local municipalities do not have regulatory standards for vibration sources, potential structural damage and human annoyance associated with vibration from construction activities were evaluated later in this section based on California Department of Transportation (Caltrans) vibration limits (see Table 4.10-1). A vibration level of 0.20 peak particle velocity inches per second (PPV IPS) was used to evaluate impacts on nearby receptors, since this level represents the threshold at which temporary vibrations typically become annoying and at which there is a risk of architectural damage to normal dwellings (e.g., plaster cracks).

**Table 4.10-1**  
**Reaction of People and Damage to Buildings at Various Continuous Vibration Levels**

Vibration Level (PPV IPS)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of “architectural” damage to normal buildings
0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibration)	Threshold at which there is a risk of “architectural” damage to normal dwelling-houses with plastered walls and ceilings; special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize “architectural” damage
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic but would cause “architectural” and possibly minor structural damage

Source: Caltrans 2004.

## **Local**

### ***City of Costa Mesa***

#### Municipal Code

The City of Costa Mesa noise control ordinance, Zoning Code Chapter 13, is in place to prohibit unnecessary, excessive, and annoying noises from all sources subject to its police power. At certain levels, noises are detrimental to the health, comfort, safety, peace, enjoyment, and welfare of the citizenry and in the public interest shall be regulated and systematically proscribed. Zoning Code Section 13-279 provides acceptable hours for construction activities: 7:00 a.m. to 7:00 p.m. Mondays through Fridays, 9:00 a.m to 6:00 p.m. on Saturdays, with all construction activities being prohibited on Sundays and specified federal holidays (City of Costa Mesa 2013).



### General Plan Noise Element

The City of Costa Mesa General Plan Noise Element (City of Costa Mesa 2000) describes existing noise levels and noise sources and attempts to limit the exposure of the community to excessive noise levels. The Noise Element details current and projected noise levels for existing and planned land uses and levels for freeways, airports, and railroads. The following goals and supporting policies related to the control of noise levels and the maintenance of a quiet environment are described below:

- **Goal N-1:** It is the goal of the City of Costa Mesa to protect its citizens and property from injury, damage, or destruction from noise hazards and to work towards improved noise abatement.
  - **Objective N-1A:** Control noise levels within the City for the protection of residential areas and other sensitive land uses from excessive and unhealthful noise.
    - **Policy N-1A.1:** Require, as a part of the environmental review process, that full consideration be given to the existing and projected noise environment.
    - **Policy N-1A.2:** The maximum acceptable exterior noise level for residential areas is 65 CNEL (City of Costa Mesa 2000).

### *City of Huntington Beach*

#### Municipal Code

The City of Huntington Beach noise control ordinance, Municipal Code Chapter 8.40, declares that certain noise levels are detrimental to the public health, welfare, and safety and contrary to public interest; therefore, creating, maintaining, or causing or allowing to create, maintain, or cause any noise in a manner prohibited by, or not in conformity with the provisions of the noise control ordinance, is a public nuisance and shall be punishable as such. Municipal Code Section 80.40.090(d) provides acceptable hours for construction activities: 7:00 a.m. to 8:00 p.m. Monday through Saturday, with all construction activities being prohibited on Sundays and federal holidays.

### General Plan Noise Element

The City of Huntington Beach General Plan Noise Element (City of Huntington Beach 1996) identifies and appraises noise problems in the community and applicable guidelines for appropriate noise levels. The primary noise source within the City of Huntington Beach is vehicular traffic. Secondary noise sources include aircraft operations, railroad operations, and construction and petroleum extraction activities. The following section presents the goals,



objectives, and policies relative to both ambient and stationary fixed-source noise conditions in the City of Huntington Beach:

- **Goal N-1:** Ensure that all necessary and appropriate actions are taken to protect Huntington Beach residents, employees, visitors, and noise sensitive uses from the adverse impacts created by excessive noise levels from stationary and ambient sources.
  - **Objective N-1.6:** Minimize the impacts of construction noise on adjacent uses.
    - **Policy N-1.6.1:** Ensure that construction activities be regulated to establish hours of operation, to prevent and/or mitigate the generation of excessive or adverse noise impacts through the implementation of the existing Noise Ordinance and/or any future revisions to the Noise Ordinance (City of Huntington Beach 1996).

### *City of Newport Beach*

#### Municipal Code

The City of Newport Beach noise control ordinance, Municipal Code Section 10.28.005, declares that making, allowing, creating, or maintaining loud and unreasonable, unnecessary, or unusual noises that are prolonged, unusual, annoying, disturbing, and/or unreasonable in their time, place, and use are a detriment to public health, comfort, convenience, safety, and general welfare, and the peace and quiet of the city and its inhabitants. Municipal Code Section 10.28.040 provides acceptable hours for construction activities: 7:00 a.m. to 6:30 p.m. Monday through Friday, 8:00 a.m. to 6:00 p.m. on Saturdays, with all construction activities being prohibited on Sundays and all federal holidays.

#### General Plan Noise Element

The City of Newport Beach General Plan Noise Element (City of Newport Beach 2006) is a tool for including noise control in the planning process in order to maintain compatible land use with environmental noise levels. This Noise Element identifies 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.

- **Goal N-1:** Minimize land use conflicts between various noise sources and other human activities.
  - **Policy N-1.5:** Allow a higher exterior noise level standard for infill projects in existing residential areas adjacent to major arterials if it can be shown that there are no feasible mechanisms to meet the exterior noise levels. The interior standard of 45 dBA CNEL shall be enforced for any new residential project.

- **Policy N-1.7:** Limit hours and/or require attenuation of commercial/entertainment operations adjacent to residential and other noise sensitive uses in order to minimize excessive noise to these receptors.
- **Goal N-5:** Minimize excessive construction-related noise.
  - **Policy N-5.1:** Enforce the limits on hours of construction activity (City of Newport Beach 2006).

## 4.10.2 Existing Conditions

### Noise Terminology

Sound may be described in terms of level or amplitude (measured in decibels), frequency or pitch (measured in Hertz or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the amplitude of sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against low and very high frequencies in a manner approximating the sensitivity of the human ear.

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech interference, sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, the State of California, and local agencies have established criteria to protect public health and safety, to prevent disruption of certain human activities, and to minimize annoyance.

Based upon independent studies of human perceptions to noise, a change of 3 dBA is just perceptible, while a 5 dBA change is considered clearly perceptible. Outside of carefully controlled conditions, a change of 1 dB is generally not perceptible. A change of 10 dBA would be perceived by the typical listener as a doubling of loudness.

Several descriptors of noise (noise metrics) exist to help predict average community reactions to the adverse effects of environmental noise, including traffic-generated noise, on a community. These descriptors include the equivalent noise level over a given period ( $L_{eq}$ ), the day-night average noise level ( $L_{dn}$ ), and the community noise equivalent level (CNEL). Each of these descriptors uses units of dBA.

$L_{eq}$  is a sound energy level averaged over a specified time period (usually 1 hour).  $L_{eq}$  is a single numerical value that represents the amount of variable sound energy received by a receptor during a time interval. For example, a 1-hour  $L_{eq}$  noise level measurement would represent the average amount of energy contained in all the noise that occurred in that 1 hour.  $L_{eq}$  is an effective noise descriptor because of its ability to assess the total time-varying effects of noise on

sensitive receptors.  $L_{min}$  is the lowest sound level measured during a designated time interval or event;  $L_{max}$  is the greatest sound level measured during a designated time interval or event.

Unlike the  $L_{eq}$  metric,  $L_{dn}$  and CNEL noise metrics always represent 24-hour periods, usually on an annualized basis.  $L_{dn}$  and CNEL also differ from  $L_{eq}$  because they apply a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when speech and sleep disturbance is of more concern). “Time weighted” refers to the fact that  $L_{dn}$  and CNEL penalize noise that occurs during certain sensitive periods. In the case of CNEL, noise occurring during the daytime (7:00 a.m. to 7:00 p.m.) receives no penalty. Noise during the evening (7:00 p.m. to 10:00 p.m.) is penalized by adding 5 dB, while nighttime (10:00 p.m. to 7:00 a.m.) noise is penalized by adding 10 dB.  $L_{dn}$  differs from CNEL in that the daytime period is from 7:00 a.m. to 10:00 p.m., thus eliminating the evening period.  $L_{dn}$  and CNEL are the predominant criteria used to measure roadway noise affecting residential receptors. These two metrics generally differ from one another by no more than 0.5 to 1 decibel.  $L_{eq}$  is generally used to measure noise affecting sensitive receptors where noise is not a concern during the evening and nighttime periods (e.g., schools, office buildings) or where the noise is only generated during daytime hours (e.g., construction).

### **Project Setting**

The project area is located within the boundaries of the Cities of Costa Mesa, Huntington Beach, and Newport Beach and extends from the City of Newport Beach Pump Station at the west end of Walkabout Circle along the eastern border of Talbert Regional Park and then west from the western terminus of 19th Street towards and beneath the Santa Ana River, to the existing Orange County Sanitation District (OCSD) Treatment Plant No. 2 (Plant No. 2) on Brookhurst Street. The current land use along the proposed pipeline alignment is primarily open space (i.e., Talbert Regional Park). Adjacent noise-sensitive land uses include residences on both the east and west sides of the proposed pipeline alignment, and sensitive biological habitat within Talbert Regional Park.

### **Methodology**

Noise measurements were conducted on June 13, 2013, to evaluate existing sound levels and assess potential project noise impacts on the surrounding area. Sound levels were measured on site and at existing noise-sensitive receptors in the project area, as shown on Figure 4.10-1. The noise measurements were conducted with a Rion NL-32 Sound Level Meter instrument categorized as a Type 1 (precision grade) device. Noise was measured at three representative locations along the proposed pipeline alignment, as shown on Figure 4.10-1. A noise measurement (M1) was taken at the residences that share the border with eastern Talbert Regional Park; another (M2) was taken on the hiking trail near the portion of the alignment where the pipeline would make a turn to the west terminus of the pipeline

alignment; and the third (M3) was taken at the residential area west of Brookhurst Street, near the eastern pipeline terminus.

During the field measurements, physical observations of the predominant noise sources were noted. The noise sources in the project area typically included local community noise such as landscaping noise, distant aircraft, and birds. At location M3, the dominant noise source was the traffic on Brookhurst Street. The results of the attended short-term sound level measurements are summarized in Table 4.10-2. As shown in Table 4.10-2, measured noise levels during daytime hours in and around the project area ranged from 47.8 dBA  $L_{eq}$  (at M1) to 58 dBA  $L_{eq}$  (at M3).

**Table 4.10-2  
Ambient Noise Measurement Results**

Site ID	Measurement Location	Date	Start Time	Duration (min:sec)	Noise Sources	$L_{eq}$ (dBA)	$L_{max}$ (dBA)	$L_{min}$ (dBA)
M1	No. 9 Surfside Court, Newport Beach	6/13/13	09:30	20:00	Birds, distant industrial/construction, distant trash truck	47.8	59.9	37.8
M2	Talbert Regional Park, near south of Aviemore Terrace, along proposed alignment	6/13/13	10:00	20:00	Birds, distant aircraft, rustling leaves	48.6	59.3	38.3
M3	9761 Melinda Circle, Huntington Beach	6/13/13	10:40	20:00	Traffic, distant barking dogs, birds, distant industrial	58	75.7	42.3

Source: Appendix G.

### 4.10.3 Thresholds of Significance

The following significance criteria are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential noise impacts. Impacts to noise would be significant if the proposed project would:

- NOI-1:** Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- NOI-2:** Expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.
- NOI-3:** Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- NOI-4:** Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

**NOI-5:** Expose people residing or working in the project area to excessive noise levels (for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport).

**NOI-6:** Expose people residing or working in the project area to excessive noise levels (for a project within the vicinity of a private airstrip).

#### **4.10.4 Impact Discussion**

**NOI-1:** *Would the project expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

#### **OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19**

**Construction Impacts** Construction of the proposed OCSD sewer pipeline has the potential to create noise impacts through construction equipment usage and vehicle trips generated by construction workers and supply trucks traveling to and from the project site. For a detailed description of the construction methods, please refer to Subsection 3.5.3 of the Project Description (Chapter 3). Briefly, the beginning and ending segments of the proposed OCSD 24-inch gravity sewer would be installed by open trench construction methods. An access road would also be constructed alongside the 24-inch gravity sewer. The middle segment of 800 feet of double-barrel, 14-inch-inside-diameter, inverted gravity sewer siphon (siphon) would be installed with horizontal directional drilling (HDD) methods. The proposed HDD operation would start on the west side of the Santa Ana River within the Plant No. 2 property. The bore path would be about 1,000 feet long, crossing under the Santa Ana River. The bore path would start and finish above ground without the need for deep pits. Potential noise impacts from the open trench and the HDD construction methods are analyzed separately.

The proposed OCSD sewer pipeline is a linear project, examples of which include power transmission lines, highways, railroad lines, and aqueducts. For these types of projects, the zone of potential noise impacts is continuously moving during the project's construction phase.

Construction noise would primarily result from the use of motorized construction equipment. Other short-term impacts from construction noise could result from construction traffic, including materials delivery. Noise impacts would be most noticeable in residential areas near project construction locations. Noise levels would vary depending on the type of equipment used, how it is operated, and how well it is maintained. Standard excavation and installation equipment, such as graders, backhoes, loaders, side-boom tractors, welders, and trucks, would be used for this work.

The range of maximum noise levels for various types of construction equipment at a distance of 50 feet is depicted in Table 4.10-3. The noise values represent maximum noise generation, or full-power operation of the equipment. As an example, two dozers and a loader, all operating at full power and relatively close together, would generate a maximum sound level of approximately 90 dB at 50 feet from their operations. As one increases the distance between equipment, or separation of areas with simultaneous construction activity, dispersion and distance attenuation reduce the effects of separate noise sources added together. Also, typical operating cycles may involve 2 minutes of full power operation, followed by 3 or 4 minutes at lower levels. The average noise level during construction activities is generally lower, since maximum noise generation may only occur up to 50% of the time.

**Table 4.10-3**  
**Construction Equipment Noise Emission Levels**

Equipment	Typical Sound Level (dBA) 50 Feet from Source
Air compressor	81
Backhoe	80
Compactor	82
Concrete mixer	85
Concrete pump	82
Concrete vibrator	76
Crane, mobile	83
Dozer	85
Generator	81
Grader	85
Impact wrench	85
Jackhammer	88
Loader	85
Paver	89
Pneumatic tool	85
Pump	76
Roller	74
Saw	76
Truck	88

Source: Federal Transit Administration 2006.

The nearest off-site sensitive receptors to the proposed OCSD 24-inch gravity sewer would be the residences located directly east of the alignment, on the eastern border of Talbert Regional Park. The nearest of these residences (located on and adjacent to Walkabout Circle) are located approximately 50 feet from the proposed OCSD 24-inch gravity sewer. The proposed OCSD 24-inch gravity sewer would expose these sensitive receptors to increased ambient exterior noise levels. As shown in Table 4.10-3, outdoor noise levels at noise-sensitive receptors 50 feet from the noise source could range

from 74 dBA to 89 dBA  $L_{eq}$ . The noise levels from construction operations decrease at a rate of approximately 6 dB per doubling of distance from the source. Therefore, at a distance of 120 feet (the approximate distance from the proposed project to the residences located along the eastern side of Balboa Boulevard, south of Discovery Drive), the noise levels would be about 8 dB lower than at the 50-foot reference distance (i.e., ranging from approximately 66 dBA to 81 dBA  $L_{eq}$ ). On the west side of the proposed OCSD 24-inch gravity sewer, residences are located on the west side of Brookhurst Street, with a solid masonry perimeter wall approximately 6 feet in height. The distance to the nearest construction work would be approximately 100 feet, and the wall is estimated to provide a minimum of 5 dB additional noise reduction. The maximum noise levels from construction are therefore estimated to range from approximately 63 to 78 dBA  $L_{eq}$ .

Noise levels from HDD construction methods would be typical of other heavy construction activities. Table 4.10-4 lists typical equipment for a large HDD operation (Transcontinental Gas Pipe Line Company 2011). As shown, the composite noise level at a distance of 50 feet is estimated to be approximately 89 dBA  $L_{eq}$ . At a distance of 500 feet (the distance to the nearest noise-sensitive land use, the residences on Brookhurst Street) the noise level would be approximately 69 dBA  $L_{eq}$ . The intervening residential perimeter wall would provide a minimum of 5 dB additional noise reduction; thus, the noise from HDD operations would be approximately 64 dBA  $L_{eq}$  at the nearest residences.

The anticipated construction noise levels in each city are above the thresholds for exterior noise in or near residential development. However, because construction during both open trench and HDD operations would conform to the cities' noise ordinance limits on the hours of operation, the impact would be **less than significant**.

**Table 4.10-4**  
**Horizontal Directional Drilling Sound Pressure Levels at Various Distances**

Equipment	Reference (dBA at 50 feet)	Number of Devices	Usage (%)	Estimated SPL (dBA $L_{eq}$ )			
				50 Feet	100 Feet	250 Feet	500 Feet
Large drilling rig (HDD)	85	1	80	84	78	70	64
Mud cleaner generator	72	1	80	71	65	57	51
Mud pumps	70	2	80	72	66	58	52
Fluid-handling pumps	70	4	80	75	69	61	55
Track backhoe	85	1	40	81	75	67	61
All-terrain forklift	85	1	40	81	75	67	61
Light towers	72	6	100	80	74	66	60
Heavy lift crane	85	1	16	77	71	63	57
18-wheeler truck	84	1	40	80	74	66	60
Composite noise level				89	83	75	69

Sources: FHWA 2006; EPA 1971.  
SPL = sound pressure levels

### *Operational Impacts*

Upon completion, the proposed project would not employ pumps, motors, or other noise-generating equipment. Therefore, there would be little or no operational noise generated during project operation, and impacts to people would be **less than significant**. Impacts to sensitive wildlife are addressed below under NOI-4.

### **CMSD and City of Newport Beach Facilities**

The Costa Mesa Sanitary District (CMSD) and the City of Newport Beach would construct new pipelines to connect areas within the Cities of Costa Mesa and Newport Beach to the upstream end of the proposed OCSD sewer pipeline. CMSD would also facilitate the abandonment of six CMSD pump stations and one private pump station, and the City of Newport Beach would facilitate the abandonment of the City of Newport Beach Pump Station, located at the end of Walkabout Circle.

The CMSD and City of Newport Beach pipelines would be installed by open trench construction methods, with the exception of the 24-inch sewer in Canyon Drive, which would be constructed using HDD or other trenchless methods due to the depth of the sewer. The method for abandoning the pump stations would consist of removing all the equipment from inside the concrete structure, drilling multiple holes in the bottom of the structure, removing the top 4 to 5 feet of the structure, filling the structure with sand, and then restoring the surface area to match the surrounding area. Abandoning the force mains would entail cutting the ends of the pipe and then filling the ends or the entire pipe with air-blown sand/cement slurry. The CMSD and City of Newport Beach proposed project components are anticipated to start during the same period as the OCSD proposed project components.

Noise levels from construction of the CMSD and City of Newport Beach facilities would be as described for the proposed OCSD sewer pipeline. Source–receiver distances of approximately 50 feet would be typical, although in some locations (for example, several of the homes immediately adjacent to the portion of the alignment near the interconnect on Avimore Terrace) trenching activities would be only a few feet away from adjacent residences. Noise levels in these instances would be very high, although short in duration (typically only 2 to 3 days), and would occur during daytime hours in conformance with the cities’ noise ordinances for construction. Because construction during open trench and HDD operations would conform to the cities’ noise ordinance limits on the hours of operation, the impact would be **less than significant**.



### ***Operational Impacts***

Upon completion, the proposed modifications to the CMSD and City of Newport Beach Facilities would not employ pumps, motors, or other noise-generating equipment. Therefore, there would be little or no operational noise generated during project operation.

***NOI-2: Would the project expose persons to or generate excessive ground-borne vibration or ground-borne noise levels?***

Ground-borne vibration from heavy equipment operations during construction of the proposed project was evaluated and compared with relevant vibration impact criteria. Ground-borne vibration is a small, rapidly fluctuating motion transmitted through the ground. Ground-borne vibration diminishes (attenuates) fairly rapidly over distance. Some soil types transmit vibration quite efficiently; other types (primarily sandy soils) do not. The FTA's *Transit Noise and Vibration Impact Assessment* (2006; FTA Manual) provides vibration impact criteria and recommended methodologies and guidance for assessment of vibration effects.

Vibration resulting from activities during construction of the proposed project was analyzed using the methodology contained in Section 12.2 of the FTA Manual. Vibration source levels for a variety of typical construction equipment types are supplied in Table 12-2 of the FTA Manual in terms of peak particle velocity inches per second (PPV IPS) at a reference distance of 25 feet from the source. The reference source vibration level is then adjusted for the actual distance of interest.

At a distance of approximately 50 feet, the distance to the nearest residences to the proposed OCSD sewer pipeline of the project and most of the proposed CMSD and City of Newport Beach components, the vibration levels from heavy construction machinery (such as a loaded truck) would be 0.027 PPV IPS, or 0.074 PPV IPS from a vibratory roller. Vibration levels of this magnitude would be below both the readily perceptible level of 0.08 PPV IPS and the annoyance and damage level for normal structures (0.20 PPV IPS; see Table 4.10-1).

For relatively small portions of the proposed CMSD and City of Newport Beach facilities, trenching activities would be only a few feet away from adjacent residences (for example, several of the homes immediately adjacent to the portion of the alignment near the interconnect on Avimore Terrace). In these instances, clearance between the residences would preclude the use of large heavy machinery in any case. Smaller equipment (such as a small bulldozer fitted with a trenching attachment and a hand-operated compactor) would likely be used for this work. These smaller-scale pieces of machinery would produce lower vibration levels (on the order of 0.003 PPV IPS at 25 feet or 0.133 PPV IPS at 2 feet), and thus would not exceed structural damage thresholds even within a few feet.

Upon completion, the proposed project would not employ pumps, motors, or other ground-borne noise or vibration-generating equipment. Therefore, there would be little or no operational vibration or noise generated during project operation.

Therefore, the proposed project would not expose persons to or generate excessive ground-borne vibrations or ground-borne noise and would have a **less-than-significant** impact.

**NOI-3:**        *Would the project result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?*

Upon completion, the proposed project would not employ pumps, motors, or other noise- or vibration-generating equipment. Operation of the proposed project would not result in permanent increases in ambient noise levels; therefore, impacts would be **less than significant**.

**NOI-4:**        *Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?*

As discussed in Threshold NOI-1, noise during construction would result in a short-term noise level increase of up to 81 dB during construction of the proposed project. The proposed project would comply with the noise regulations established in the cities' municipal noise ordinances. However, during construction of the proposed project, short-term construction noise levels at several residences (residences immediately adjacent to portions of the alignment on Brookhurst Street, near the interconnect in Aviemore Terrace, in the Newport Terrace community, and along Canyon Drive) would be substantially higher because of their proximity to the alignment. At a distance of 50 feet from construction activities, noise levels could range from 74 dBA to 89 dBA  $L_{eq}$ . Residences near the interconnect on Aviemore Terrace could experience noise levels of 95 dBA  $L_{eq}$  at a distance of 10 feet from the construction activities, which would be comparable to the exposure experienced by the construction workers. These levels would be substantially higher than existing ambient levels and would likely result in a high level of disturbance and disruption of conversations within the adjacent residences. Because construction of the proposed project would temporarily increase ambient noise levels by more than 5 dB, construction noise impacts with respect to a temporary or periodic increase in ambient noise levels in the project area would be **potentially significant (Impact NOI-1)**.

At locations that are more remote and not currently influenced by regular human activity, construction noise would be considerably louder than the low existing ambient levels. Dependent on the distance to the source, noise levels from construction activities could be in excess of 20 dB above ambient levels, and could exceed 60 dBA  $L_{eq}$  at habitat for special-status species such as the coastal California gnatcatcher (*Poliophtila californica californica*) or least Bell's vireo (*Vireo bellii pusillus*). As described in Section 4.3, Biological Resources, to avoid a significant

impact, Mitigation Measure MM-BIO-4 would limit construction in areas where gnatcatcher habitat occurs within 500 feet of the construction area to the period between September 1 and March 1, the non-breeding season; 500 feet is the distance required to result in an attenuation of 20 dB compared to the noise level at 50 feet. Therefore, noise impacts to special-status species during construction would be **less than significant**.

Once the new alignment is operational, a vacuum truck would be used periodically (approximately on a monthly basis) to clean the system's inverted sewer siphon. These maintenance activities, though relatively brief (typically on the order of 4 to 5 hours duration), would result in noise levels well above the 60 dBA  $L_{eq}$  threshold for special-status species, depending upon the distance from the work location to the habitat area. A noise barrier (soundwall) would not provide sufficient reduction, and truck enclosures or other technologies would not be practical to implement for this type of periodic work. In order to ensure that the high levels of noise associated with periodic maintenance do not adversely affect special-status species, during the breeding season, the vacuum truck would be operated from the existing Plant 2, which is not in proximity to special-status species habitat. Additionally, mitigation has been provided in the Biological Resources section of the EIR (MM-BIO-4 in Section 4.3.5) and OCSD will continue to conduct bird surveys annually. On an annual basis, the entire sewer would be cleaned, and this would be accomplished outside of the breeding season. Overall, as analyzed herein and in Section 4.3.4 of this EIR, noise impacts to special-status species during periodic maintenance associated with operation would be **significant (Impact NOI-2)**. Refer to Section 4.3.5 for applicable mitigation (MM-BOI-4).

**NOI-5:** *Would the project expose people residing or working in the project area to excessive noise levels (for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport)?*

The nearest airport to the project area is John Wayne Airport, located approximately 7.5 miles northeast. The Airport Land Use Commission (ALUC) has a responsibility to assist local agencies in ensuring compatible land uses in the vicinity of all airports in Orange County. The ALUC has published an Airport Influence Area map for John Wayne Airport (ALUC 2008). The project area is outside the Airport Influence Area. Therefore, **no impacts** would occur from public airport or public use airport noise.

**NOI-6:** *Would the project expose people residing or working in the project area to excessive noise levels (for a project within the vicinity of a private airstrip)?*

The project area is not within the vicinity of a private airstrip. The nearest airport to the project area is John Wayne Airport, located approximately 7.5 miles northeast. Since there

are no private airstrips within the vicinity of the project area, **no impact** would occur as a result of the proposed project.

#### **4.10.5 Mitigation Measures**

During construction of the proposed project, the following measures will be implemented to reduce constructed related noise identified in Impact NOI-1. Additionally, mitigation has been provided in the Biological Resources section of the EIR (MM-BIO-4 in Section 4.3.5) to address Impact NOI-2.

**MM-NOI-1** The Orange County Sanitation District (OCSD), Costa Mesa Sanitary District (CMSD), and City of Newport Beach shall each require their respective contractors to implement the following measures during construction of the proposed project, to the extent feasible:

- Construction shall not occur between the hours of 6:30 p.m. and 7:00 a.m. Monday through Friday, between 6:00 p.m. and 9:00 a.m. on Saturday, or at any time on Sundays or federal holidays. The hours of construction, including noisy maintenance activities and all material transport, shall be restricted to the periods and days permitted by the local noise or other applicable ordinance.
- All noise-producing project equipment and vehicles using internal-combustion engines shall be equipped with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specifications. Mobile or fixed “package” equipment (e.g., arc welders, air compressors) shall be equipped with shrouds and noise-control features that are readily available for that type of equipment.
- All mobile or fixed noise-producing equipment used on the project that are regulated for noise output by a local, state, or federal agency shall comply with such regulations while in the course of project activity.
- Electrically powered equipment shall be used instead of pneumatic or internal-combustion-powered equipment, where feasible.
- Material stockpiles and mobile equipment staging, parking, and maintenance areas shall be located as far as practicable from noise-sensitive receptors.
- Construction site and access road speed limits shall be established and enforced during the construction period.

- The use of noise-producing signals, including horns, whistles, alarms, and bells, shall be for safety warning purposes only.
- No project-related public address or music system shall be audible at any adjacent receptor.

#### **4.10.6 Level of Significance After Mitigation**

Implementation of Mitigation Measure MM-NOI-1 would serve to reduce the noise levels associated with construction of the proposed project to the maximum extent practicable. However, even with implementation of the aforementioned mitigation measure, the daytime noise levels from construction of the proposed project, especially the proposed CMSD and City of Newport Beach facilities, are expected to substantially exceed the existing daytime ambient noise levels at the nearest residential uses and thus could result in a substantial disturbance to these sensitive receptors. Therefore, because construction activities associated with the proposed project would generate a substantial temporary or periodic increase in ambient noise levels in the project area, Impact NOI-1 would remain **significant and unavoidable**.

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AERIAL SOURCE: Bing Maps

Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

**FIGURE 4.10-1**  
**Noise Measurement Locations**

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## 4.11 RECREATION

This section addresses potential impacts of the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project) on recreational activities and facilities and recommends mitigation measures where necessary to avoid or reduce significant impacts. There are a number of recreational facilities within the project vicinity, including parks, bikeways, and pedestrian corridors.

### 4.11.1 Regulatory Setting

#### State

##### *California Coastal Act*

The intent of the California Coastal Act (PRC, Section 30000 et seq.) is to protect, maintain, and where feasible enhance and restore the overall quality of the Coastal Zone environment and its natural and artificial resources. The California Coastal Commission regulates land and water use in the Coastal Zone and the California Coastal Act includes specific policies that address issues including visual resources, land/water uses, and shoreline public access and recreation. Relevant sections of the California Coastal Act associated with shoreline public access and recreation are listed below and all applicable sections are analyzed for general proposed project consistency in Section 4.9, Land Use and Planning.

- **Section 30210:** Maximum access and recreational opportunities shall be provided for all people, consistent with public safety needs and the need to protect public rights, private property owner rights, and natural resource areas from overuse.
- **Section 30211:** Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.
- **Section 30213:** Lower-cost visitor and recreational facilities shall be protected, encouraged, and provided where feasible; public recreational opportunities are preferred.

##### *California Department of Parks and Recreation*

The California Department of Parks and Recreation (DPR; California State Parks) manages 280 park units that protect and preserve an unparalleled collection of culturally and environmentally sensitive structures. The DPR is responsible for almost one-third of California's scenic coastline, coastal wetlands, estuaries, beaches, and dune systems, in addition to wilderness areas, terrestrial reserves, and historic structures. The DPR manages nearly 1.4 million acres, with over 280 miles of coastline, 635 miles of lake and river frontage, 15,000 campsites, and 3,000 miles of hiking, biking, and equestrian trails. The legal charter of California State Parks, as required by the Public

Resources Code (PRC), and the California Code of Regulations (CCR), among others, calls for it to “administer, protect, provide for recreational opportunity, and develop the State Park System; to interpret the values of the State Park System to the public; to operate the Off-Highway Motor Vehicle Recreation Program; to administer the California Historical Resources Protection Program; and to administer federal and state grants and bonds to local agencies” (DPR 2004).

The nearest state recreation facility, Huntington Beach State Park, is located approximately 0.75 mile south of the existing interplant line in Brookhurst Street, which the proposed 24-inch gravity sewer across Orange County Sanitation District (OCSD) Treatment Plant No. 2 (Plant No. 2) would tie into.

### **Local**

While the County of Orange does not have land use jurisdiction over the proposed project, several proposed sewer facilities would be located in Talbert Regional Park. Located within the jurisdictional boundary of the City of Costa Mesa, Talbert Regional Park was acquired by the County of Orange in the 1970s but remains under the city’s land use jurisdiction. Therefore, while the County of Orange does not have land use jurisdiction over proposed components located within Talbert Regional Park, the Recreation Element of the county’s General Plan is discussed below to determine general consistency with applicable recreation policies and regulations.

### ***County of Orange General Plan***

The Recreation Element of the County of Orange General Plan (County of Orange 2011) contains official policies associated with the acquisition, development, operation, maintenance, and financing of the county’s recreation facilities, including Talbert Regional Park. The Recreation Element is organized into five main sections (Purpose of the Element, Constraints and Opportunities, Local Parks Component, Regional Riding and Hiking Trails Component, and Regional Recreation Facilities Component), and each section includes a master plan with goals, objective, policies, and implementation programs. The Regional Recreation Facilities Component is of particular interest as portions of the proposed project would be located in the South Talbert area of Talbert Regional Park.

Applicable policies associated with regional recreation facilities and the proposed project are listed below.

- **Policy 26:** The natural and man-made environment of regional facilities shall be protected from deterioration due to overuse.
- **Policy 29:** The natural resources of regional recreation facilities shall be evaluated for their preservation and protection. Provision shall be made for periodic monitoring of resource management plans to insure that natural areas are used appropriately (County of Orange 2011, Chapter 7).

### ***City of Costa Mesa General Plan***

The strategy outlined in the City of Costa Mesa General Plan Open Space and Recreation Element (City of Costa Mesa 2002) is to preserve open space areas in the city and to meet the recreational needs of residents. Recreational needs are met through the provision of city facilities, but county-owned regional facilities such as Talbert Regional Park are also located within and adjacent to the city limits. As stated in the Open Space and Recreation Element, open space and recreational land covers approximately 20% of the total land area of the city and these lands provide a wide range of recreational opportunities, from highly developed, active recreation sites to low-activity, passive open space. The Open Space and Recreation Element goals, objectives, and policies address current and future conditions for the preservation of open space and improvement of recreational facilities. Relevant policies of the city's Open Space and Recreation Element are listed below.

- **Policy OSR-1A.1:** Provide a minimum of 5.76 acres of permanent public open space (consisting of 4.26 acres of neighborhood and community parks and 1.5 acres in school yards) for every 1,000 residents.
- **Policy OSR-1A.2:** Provide maximum visibility and accessibility for future public parks by locating such facilities adjacent to existing or planned public streets (City of Costa Mesa 2002, Chapter 10).

### ***City of Huntington Beach General Plan***

The City of Huntington Beach General Plan Recreation and Community Services Element (City of Huntington Beach 1996) is concerned with identifying, maintaining, and enhancing local parks and recreational services and facilities. The goal of the element is to enrich the quality of life for all residents by providing constructive and creative leisure opportunities. In total, the city contains 71 parks and public facilities, which together encompass approximately 577 acres. In addition to traditional parks and public facilities, the city operates two publicly owned golf courses, an extensive trail system for pedestrians and bicyclists, and approximately 15 acres of public beach. The closest city park to the proposed project, Seeley Park, is located at 8711 Surfcrest Drive and approximately 0.15 mile northwest of the existing interplant sewer pipeline in Brookhurst Street.

The Recreation and Community Services Element of the General Plan identifies a variety of goals and objectives to maintain and enhance local parks, recreational services, and facilities. As most policies guide park acquisition and park planning, design, and development, the majority are not applicable to the proposed project. Relevant policies of the Recreation and Community Services Element are listed below.

- **Policy RCS 2.1.1:** Maintain the current park per capita ratio of 5.0 acres per 1,000 persons, which includes the beach in the calculation (City of Huntington Beach 1996, Chapter 3).

### ***City of Newport Beach General Plan***

The primary purpose of the City of Newport Beach General Plan Recreation Element (City of Newport Beach 2006) is to ensure that the balance between the provision of sufficient parks and recreation facilities is appropriate for the residential and business population of Newport Beach. These facilities are important land use components in an urban environment, both providing visual relief from the built environment and contributing to residents' quality of life. The City of Newport Beach has approximately 278 acres of developed parklands and the nearest city recreational facility, Newport Shore Park, is located at 220 61st Street, approximately 1.15 miles south of the proposed 12-inch gravity sewer to be installed in 19th Street near Marina View Park in the City of Costa Mesa. The City of Newport Beach Recreation Element clearly identifies goals and objectives that will improve, enhance, and preserve parks and recreational facilities; relevant policies from the Recreation Element are listed below.

- **Policy R 2.2:** Protect public parkland from non-recreational uses; any loss of parkland through governmental action shall be replaced in-kind.
- **Policy R 9.1:** Provide adequate public access to the shoreline, beach, coastal parks, trails, and bay, acquire additional public access points to these areas and provide parking, where possible (City of Newport Beach 2006, Chapter 8).

### ***Newport Beach Coastal Land Use Plan***

While the Public Access and Recreation chapter of the City of Newport Beach Local Coastal Program Coastal Land Use Plan (City of Newport Beach 2009, Chapter 3) is primarily concerned with coastal recreation opportunities and public access to the sea and shoreline, as shown on Figure 4.11-1 the proposed City of Newport Beach sewer facilities would traverse a noncontiguous area of the city's land use jurisdiction surrounded by City of Costa Mesa and County of Orange property. Therefore, the policies and regulations in the Public Access and Recreation chapter would not be particularly relevant to the proposed project.

## **4.11.2 Existing Conditions**

### **Parks and Pedestrian Corridors**

#### ***Talbert Regional Park***

Talbert Regional Park, also known as the Talbert Nature Preserve, was acquired by the County of Orange in the 1970s from the State of California and is located in the City of Costa Mesa north and south of Victoria Street, which divides the park between the North Talbert area and South Talbert area. The North Talbert area is bordered by Placentia Avenue and Swan Drive, and the South Talbert area is bordered by Balboa Boulevard and Banning Ranch; both portions

of the park are bordered by the Santa Ana River to the west (see Figure 4.11-1). Talbert Regional Park consists of the approximate 92-acre North Talbert area (located north of Victoria Street) and the approximately 86-acre South Talbert area (located south of Victoria Street) (OC Parks 2013). In addition to offering trail-based recreation opportunities along a connected dirt trail system, picnicking and informal recreation opportunities are available and the various trails provide a linkage to other parks upstream and downstream along the Santa Ana River. A small, designated BMX area with several jumps and berms (Sheephills BMX Area) is also located in the South Talbert area west of the informational kiosk and along Trails B and F. In addition, the regional park is divided into six separate planting group zones that reflect the progression of natural vegetation communities and changing conditions found along the Santa Ana River. As shown on Figure 4.11-1, the proposed project would include the installation of new sewer pipelines in the South Talbert area. More specifically, a new 12-inch gravity sewer pipeline would be installed within a portion of Trail A south of Aviemore Terrace and a new 24-inch gravity sewer would be installed within a portion of Trail D along the eastern and southern boundary of Talbert Regional Park.

### ***Fairview Park***

Located adjacent to the North Talbert area of Talbert Regional Park, the 208-acre Fairview Park is the largest community park owned by the City of Costa Mesa. According to the City of Costa Mesa, the Master Plan for Fairview Park dictates that the park will remain a “natural” facility because of its archaeological and paleontological resources (City of Costa Mesa 2013). In addition to trail-based recreational opportunities via an extensive trail system, a shelter, picnic tables, restroom facilities, a glider launch/observation area, interpretive and picnic areas, and a parking area are also provided. Further, the eastern section of the park (east of Placentia Avenue and west of the Costa Mesa Golf Course) contains a miniature railroad, and a bridge spanning Placentia Avenue and connecting both parts of the park was constructed in 2006. In February 2013 the Fairview Park project (officially known as the Wetlands and Riparian Habitat project) was completed. The project included the introduction of streams, filtration ponds, and walking trails across an approximately 37-acre portion of the 208-acre park (Zint 2013). Lastly, Fairview Park is connected to the North and South Talbert areas of Talbert Regional Park by trails maintained by the City of Costa Mesa and by the Santa Ana River Trail & Parkway.

As measured from the park entrance along Canyon Drive and adjacent to the Waldorf School of Orange County, Fairview Park is located approximately 0.15 mile north of the proposed 24-inch gravity sewer to be installed in Canyon Drive.

***Vista Park***

Vista Park is an approximately 6-acre park in the City of Costa Mesa that sits on top of a hill north of Victoria Street and east of the Santa Ana River, overlooking the City of Huntington Beach. In addition to a concrete-paved trail located around the perimeter of an unprogrammed grass area, Vista Park also provides picnic tables, a playground, cooking facilities, restrooms, and a small parking area (City of Costa Mesa 2002). The canyon below the park to the west is a natural preserve (i.e., the Talbert North area of Talbert Regional Park) and there is currently no connectivity (other than Victoria Street) between Vista Park and the Talbert North area.

***Canyon Park***

Located north of 19th Street and east of Talbert Regional Park in the City of Costa Mesa, the 35-acre Canyon Park consists of playgrounds, picnic tables, barbecues, a paved concrete walk, and mildly sloping grass areas directly north of Arbor Street and a linked system of narrow, dirt-surfaced pedestrian trails in the canyon topography to the north. The winding paths within the canyon provide access to neighborhoods to the north as well as to the South Talbert area of Talbert Regional Park.

A portion of the City of Newport Beach proposed 18-inch gravity sewer, a portion of the Costa Mesa Sanitary District (CMSD) proposed 24-inch gravity sewer aligned within Canyon Drive, and the 12-inch gravity sewer to be installed between the existing Aviemore Terrace Pump Station (CMSD No. 5) and Sea Bluff Pump Station (CMSD No. 16) would briefly traverse Canyon Park (see Figure 4.11-1).

***Santa Ana River Trail & Parkway***

The Santa Ana River Trail & Parkway is the region's longest recreational trail and parkway (Santa Ana River Trail & Parkway 2013a). When completed, the 110-mile trail and bikeway corridor will connect the San Bernardino Mountains and the Big Bear Lake area to the mouth of the Santa Ana River and the Pacific Ocean. Segments of the trail and parkway between Huntington Beach and Chino Hills State Park and the Santa Ana River Regional Park near Norco and San Timoteo Creek near the City of San Bernardino have been completed (Santa Ana River Trail & Parkway 2013a). Near the Cities of Huntington Beach and Costa Mesa and near Talbert Regional Park, the Santa Ana River Trail and Parkway has been completed, is currently in use, and consists of dual 5-foot-wide, asphalt-paved, striped travel lanes along both the east and west banks of the Santa Ana River. Signage installed on a chain-link fence at the southern end of the trail along the eastern banks of the river states that this portion of the facility is not a county trail. However, the trail and parkway are accessible to pedestrians and bicycles at upstream areas east and west of the river, including along Victoria Street, and signage indicating "bike and equestrian use only" is posted at access points along Adams

Avenue. While the trail and parkway is accessible through the South Talbert area, the nearest recognized trailhead is located at Fairview Park along Placentia Avenue (the trail and parkway is accessible via trails originating from the Fairview Park parking area west of Placentia Avenue; Santa Ana River Trail & Parkway 2013b). The portion of the trail and parkway that is aligned parallel to the western boundary of Talbert Regional Park is operated and maintained by Orange County Parks (OC Parks).

The proposed OCSD 14-inch inverted sewer siphon from Talbert Regional Park to OCSD Plant No. 2 would be installed via horizontal directional drilling (HDD) methods beneath the Santa Ana River Trail & Parkway and the Santa Ana River (see Figure 4.11-1).

### **Bike Facilities**

Residents who use bicycles daily for their primary means of transportation are concerned with using the most convenient and direct route available to reach their destination. Those who use bicycles for recreational use are most likely to use a scenic route or bike trail. Bicycle facilities within Orange County are separated into the following classifications:

- **Bike Trails (Class 1)** are facilities at least 8 feet in width that are physically separated from vehicular roadways and are designated primarily for bicycle use. However, where significant pedestrian traffic can be anticipated, a design standard for combined pedestrian/bicycle traffic is provided in Section 1003.1(1) of the Orange County Highway Design Manual (HDM), Bikeway Planning and Design (County of Orange 2005, Chapter 1000). Class 1 bike trails within the proposed project vicinity can be found along the Santa Ana River (e.g., the Santa Ana River Trail & Parkway) and within Fairview Park (multipurpose and combination bicycle and pedestrian trails are located in Fairview Park; City of Costa Mesa 2003).
- **Bike Lanes (Class 2)** can be found within a painted stripe reserving at least 5 feet outside the motor vehicle travel lanes for bicycle use. Section 1003.2 of the HDM provides for a typical width of 8 feet, measured from the curb face. Bike lanes are the most common classification within the county as they are generally implemented within existing rights-of-way. Class 2 bike lanes within the proposed project vicinity can be found along Pacific Coast Highway, along Placentia Avenue, and on a portion of Victoria Street.
- **Bike Routes (Class 3)** are typically designated with white and green signs and are mainly useful only to bridge short distances between other, more established bike lanes or trails. They are typically only used on low-volume, residential streets. Bicycle traffic may share the road with either motor vehicles or a sidewalk with pedestrians and, in either case,

bicycle usage is considered secondary. The closest Class 3 bike routes to the proposed project vicinity are located on Pacific Coast Highway.

#### **4.11.3 Thresholds of Significance**

The following significance criteria are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential impacts on recreation. Impacts on recreation would be significant if the proposed project would:

- REC-1:** 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.
- REC-2:** Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment.

#### **4.11.4 Impact Discussion**

- REC-1:** *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?*

#### **Construction Impacts**

##### ***OCSD Southwest Costa Mesa Trunk Sewer Project No. 6-19***

Construction staging areas for open trench work would be located along the proposed sewer facility alignments, primarily along an existing dirt trail (Trail D) along the eastern and southern boundary of Talbert Regional Park. Construction staging for the HDD work associated with the proposed inverted siphon to be installed beneath the Santa Ana River and the adjacent Santa Ana River Trail & Parkway would be located within the fenced boundary of OCSD Plant No. 2 and along the proposed open trench/gravity sewer alignment within Trail D of Talbert Regional Park. Construction vehicles would access staging and alignments from the east via Balboa Boulevard. During open cut trenching and pipeline installation in Talbert Regional Park, segments of Trail D would be closed to recreational usage. In addition, construction activities would result in a temporary influx of construction workers, vehicles, and equipment within the regional park and open cut trenching would result in the temporary physical deterioration of public trail facilities, which would in turn reduce the availability of recreational opportunities to area residents and recreationists. Although Trail D would be temporarily closed to park users during construction, interior trails within the park (i.e., Trails B, C, E, and F) would remain open and connectivity to



the North Talbert area, Fairview Park, and the Santa Ana River Trail & Parkway would be maintained. Construction activities in the South Talbert area of Talbert Regional Park may cause park users to visit other parks in the vicinity; however, the temporary increase in usage of these facilities would not be expected to result in substantial physical deterioration. Users visiting the South Talbert area are afforded trail-based recreation opportunities, and increased use of trails elsewhere in the project area would not be anticipated to affect the physical integrity of the trails. Following installation of pipelines, trenches would be backfilled and surfaces would be restored to their preconstruction conditions. Published noticing of trail closures within Talbert Regional Park has been incorporated as a project design feature (see Chapter 3, Project Description) to minimize potential confusion regarding the availability of recreational facilities/trails and to ensure that trails temporarily impacted during construction are not further affected by unpermitted usage and activity. Overall, project impacts associated with the physical deterioration of recreational facilities would be **less than significant**.

In addition, no impacts to the Santa Ana River Trail & Parkway are anticipated to occur in association with HDD activities. The proposed inverted siphon would be installed beneath the trail and parkway facilities and would not affect recreational usage of facilities.

#### ***CMSD and City of Newport Beach Facilities***

The proposed CMSD 12-inch gravity sewer to be installed between the existing Aviemore Terrace Pump Station (CMSD No. 5) and Sea Bluff Pump Station (CMSD No. 16) would be partially located within Trail A of Talbert Regional Park. Therefore, during construction of this sewer facility, Trail A would be closed to recreational usage and construction activities would physically impact the trail via open cut trenching. Similarly, a portion of the City of Newport Beach proposed 18-inch gravity sewer between the existing City of Newport Beach Pump Station at Walkabout Circle and existing sewer infrastructure located in Canyon Park would result in the temporary closure of Canyon Park trail facilities. However, as discussed for OCSD construction activities occurring in the South Talbert area of Talbert Regional Park, several park trails would remain open during construction and connectivity to the North Talbert area, Fairview Park, and the Santa Ana River Trail & Parkway would be maintained (trails other than the connector trail to Talbert Regional Park would also remain open in Canyon Park). Increased usage of recreational facilities in the vicinity due to construction activities in Talbert Regional Park and Canyon Park may occur; however, increased usage would be temporary and would not lead to the physical deterioration of recreational facilities and amenities. Project design features have been incorporated to minimize potential confusion regarding the availability of recreational facilities/trails and to ensure that trails temporarily impacted during construction are not further affected by unpermitted usage and activity (see Chapter 3, Project Description). Therefore, project impacts during construction would be **less than significant**.

Abandonment of the President Pump Station (CMSD No. 14) in Canyon Park would necessitate the presence of construction personnel, equipment, and vehicles along park trails to access the construction site. While construction activities would temporarily affect the recreational experience within the park, trails would not require closure and direct impacts would only occur within the developed footprint of the existing pump station. As such, impacts associated with abandonment of the President Pump Station would be **less than significant**.

No recreation impacts are anticipated during the construction of proposed sewer facilities within paved roads or during abandonment activities at existing pump station locations. These facilities are not located within the boundary of an identified recreation facility or area and therefore the temporary influx of construction workers and equipment would not increase park usage and would not result in the physical deterioration of park facilities. Therefore, **no impacts** would occur.

### **Operational Impacts**

Once constructed, the proposed OCSD and CMSD sewer pipelines would be located underground and would not conflict with recreation use of trails with Talbert Regional Park. Regular operation of sewer infrastructure would not be anticipated to require regular maintenance; however, on an as-needed basis maintenance personnel may need to access pipeline segments via park trails. While this scenario is a possibility during project operation, the presence of maintenance personnel and maintenance activities in the regional park as it currently occurs would not be anticipated to be regular and would more likely be sporadic in nature. Existing pump stations located in Canyon Park, including President Pump Station (CMSD No. 14) and Sea Bluff Pump Station (CMSD No. 16), would no longer be operational and therefore maintenance personnel would no longer use existing Canyon Park trails to access facilities on an as-needed basis for inspection and maintenance. Therefore, the operation of proposed sewer facilities would not be anticipated to increase the use of existing regional or neighborhood parks such that substantial physical deterioration of the facility would occur or be accelerated, and impacts would be **less than significant**.

***REC-2: Would the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse effect on the environment?***

As stated in Chapter 3, Project Description, the purpose of the proposed project is to consolidate facilities and reduce the reliance on pump station infrastructure, with the benefit of reducing overall risks associated with facility failure and the reduction of long-term operational, maintenance, and replacement costs associated with pump station infrastructure. While a portion of the proposed OCSD project components would be located in an existing recreational facility (i.e.,

Talbert Regional Park) and open cut trenching for the installation of new 24-inch gravity sewer pipelines would result in the temporary closure of segments of dirt-surfaced pedestrian footpaths (Trail A and Trail D), the proposed project does not include recreational facilities and would not require the construction or expansion of recreational facilities. Maintenance of proposed project components would be addressed by existing maintenance personnel and therefore the proposed project would not induce population growth and no additional recreation facilities would be required. Therefore, **no impact** would occur.

#### **4.11.5 Mitigation Measures**

As discussed in Section 4.11.4, construction and operation of the proposed project would not result in significant impacts to recreational resources. Therefore, no mitigation measures are required.

#### **4.11.6 Level of Significance After Mitigation**

Impacts associated with construction and operation of the proposed sewer facilities in recreational facilities would be less than significant. No recreation impacts are anticipated during the construction of proposed sewer facilities within paved roads or during abandonment activities at existing pump station locations.

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**FIGURE 4.11-1  
Recreation Facilities**

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AERIAL SOURCE: Bing Maps

Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

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## **4.12 TRAFFIC AND CIRCULATION**

This section addresses potential traffic and circulation impacts associated with the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project), based on information provided by the California Department of Transportation (Caltrans), Orange County Transportation Authority (OCTA), and the general plans of the Cities of Costa Mesa, Huntington Beach, and Newport Beach.

### **4.12.1 Regulatory Setting**

#### **State**

##### ***California Department of Transportation***

Caltrans is the public agency responsible for designing, building, operating, and maintaining California's state highway system, which consists of freeways, highways, expressways, toll roads, and the areas between the roadways and property lines. Caltrans is also responsible for permitting and regulation of the use of state roadways. Caltrans' construction practices require temporary traffic-control planning during any activities that interfere with the normal function of a roadway. The project area is within Caltrans District 12.

##### ***Congestion Management Program***

In June 1990, California voters approved Proposition 111, which established a 9% per gallon gas tax, staged over a 5-year period, for the purpose of funding transportation-related improvements statewide. In order to be eligible for the revenues associated with Proposition 111, the Congestion Management Program (CMP) legislation (originally Assembly Bill (AB) 471, amended by AB 1791) requires urbanized counties in California to adopt a CMP. For Orange County, the authorized CMP agency is the OCTA. The CMP requires that a traffic impact assessment be conducted for any project generating 2,400 or more daily trips, or 1,600 or more daily trips for projects that have direct access to the CMP Highway System. Per the CMP guidelines, this number is based on the desire to analyze any impacts that compose 3% or more of the existing CMP Highway System facilities capacity. The CMP Highway System includes specific roadways, including state highways, smart streets, and CMP arterial monitoring locations/intersections.

#### **Local**

##### ***Orange County Congestion Management Program***

California Government Code Section 65089(b) requires the CMP to include specific elements, which determine the nature of OCTA's CMP policies, and ensure that the Southern California

Association of Governments' (SCAG's) CMP (2001) meets federal requirements. Orange County adopted its most recent CMP in compliance with Proposition 111 in 2009. The purpose of the state-mandated CMP is to monitor roadway congestion and assess the overall performance of the region's transportation system. The CMP was created with goals to directly link land use, transportation, and air quality to promote reasonable growth management programs. The CMP contains specific strategies and improvements to reduce traffic congestion and improve the performance of a multimodal transportation system. Examples of strategies include increased emphasis on public transportation and rideshare programs, mitigating the impacts of new development, and better coordinating land use and transportation planning decisions (OCTA 2009).

CMP Highway System-designated roadways within the Cities of Costa Mesa, Huntington Beach, and Newport Beach include the following: Harbor Boulevard, Adams Avenue, Beach Boulevard, and Pacific Coast Highway.

### ***Regional Transportation Plan***

The Regional Transportation Plan (RTP) is a 25-year, long-range transportation plan that focuses on improving the balance between land use and current, as well as future, transportation systems throughout the entire region. RTPs are developed to provide a clear vision of regional transportation goals, objectives, and strategies. In addition, RTPs must reflect Senate Bill 375 (SB 375, Steinberg, Statutes of 2008), which targets regional greenhouse gas (GHG) emission reductions from passenger vehicles and light-duty trucks through changes in land use and transportation development patterns (County of Orange 2010). The responsible regional transportation planning agency in Southern California is SCAG. Therefore, SCAG is required to adopt and submit an updated RTP to the California Transportation Commission and Caltrans every 4 or 5 years, depending on air quality attainment within the region (County of Orange 2010).

SCAG, in partnership with local governments, is required by federal law to create an RTP that determines the needs of the transportation system and prioritizes proposed transportation projects. The local transportation authority within the project area is the OCTA. OCTA's 2010 RTP looks out to the year 2035 and focuses primarily on sustainability, specifically addressing the reduction of GHGs from cars and trucks.

### ***City of Costa Mesa General Plan***

The City of Costa Mesa General Plan Circulation Element (2000) contains the city's overall transportation system plan. In order to adequately handle future traffic, the Land Use Element and the Circulation Element must be consistent and interconnected. The Land Use Element establishes the magnitude and pattern of future trip making through the specification of type,



density, intensity, and pattern of development. The Circulation Element promotes air quality objectives by providing an efficient circulation system that accommodates travel demand while minimizing the number and length of automobile trips.

#### ***City of Huntington Beach General Plan***

The City of Huntington Beach General Plan Circulation Element (1996) is in place to help increase local and regional traffic volumes, exceed a LOS standard, and promote alternative transportation programs. Mobility and land access are two major functions of the Circulation Element. The Circulation Element of the General Plan emphasizes the City's goals, objectives, and policies for future transportation planning that meet the demands for future mobility and land access.

#### ***City of Newport Beach General Plan***

The City of Newport Beach General Plan Circulation Element (2006) governs the long-term roadway mobility system that guarantees safety, quality of life, and efficiency for the visitors and residents of Newport Beach. The transportation goals and policies are intended to provide a balance between land use development and the city's future growth.

### **4.12.2 Existing Conditions**

#### **Regional Setting**

The project area is located within portions of the Cities of Costa Mesa, Huntington Beach, and Newport Beach. The regional transportation system is composed of an interconnected network of roadways, public transit systems, and bicycle and pedestrian corridors. Regional access to the project area is provided by the Pacific Coast Highway State Route 1 (SR 1), San Diego Freeway Interstate 405 (I-405), Costa Mesa Freeway State Route 55 (SR 55), and Beach Boulevard State Route 39 (SR 39). The regional transportation setting surrounding the project area is shown on Figure 4.12-1.

***Pacific Coast Highway (SR 1 or PCH)*** is a north–south state highway that provides access parallel to the coast of California. In the Orange County region, the configuration of SR 1 varies between a seven-lane divided roadway and a four-lane divided highway. In the general vicinity of the project area, SR 1 is a six-lane divided roadway.

***San Diego Freeway (I-405)*** is a major north–south interstate highway in Southern California. It stretches from the City of Irvine in the south to the City of San Fernando in the north and provides access to coastal communities in Orange County. I-405 is one the most traveled urban highways, with approximately 374,000 average annual daily traffic (FHWA 2010).

**Costa Mesa Freeway (SR 55)** is a north–south highway that runs through Orange County from the City of Anaheim in the north to the City of Costa Mesa in the south. The facility has five general-purpose lanes and one high-occupancy vehicle (HOV) lane in each direction (County of Orange 2010). SR 55 ends at 19th Street in Costa Mesa, but the roadway continues south of 19th Street as Newport Boulevard. Newport Boulevard is classified as a Major Road (six-lane divided) in the City of Costa Mesa and City of Newport Beach General Plan Circulation Elements, as well as on Orange County’s Master Plan of Arterial Highways.

**Beach Boulevard (SR 39)** is a stretch of highway that begins at SR 1 in the City of Huntington Beach and extends north through the cities of Westminster, Garden Grove, Buena Park, and Anaheim. Beach Boulevard is a designated “Smart Street Corridor” by the OCTA. The “Smart Street Corridor” concept seeks to improve roadway traffic capacity and smooth traffic flow through measures such as traffic signal synchronization, bus turnouts, intersection improvements, and addition of travel lanes by removing on-street parking and consolidating driveways (OCTA 2009).

### **Local Roadways**

The following is a list of major local roadways that surround or intersect the project area and the maximum capacity of average daily trips (ADT). The project is bounded by Brookhurst Street to the west, Placentia Avenue to the east, West Wilson Street to the north, and 18th Street to the south. Figure 4.12-1 illustrates the following local roadways.

**Brookhurst Street** is a six-lane divided Major Arterial that runs north–south from the City of Fullerton in the north to SR 1 in the south. Within the City of Huntington Beach, Brookhurst Street has a vehicle capacity of 52,000 to 70,000 ADT.

**Victoria Street** is a four-lane Standard Primary east–west arterial that traverses the project area. Victoria Street is classified as a Secondary (four-lane undivided) roadway in the City of Costa Mesa General Plan Circulation Element. East of SR 55, the roadway’s name changes to 22nd Street. Victoria Street west of Placentia Avenue has a maximum capacity of 38,000 ADT and continues over the Santa Ana River into the City of Huntington Beach, where the roadway’s name changes to Hamilton Avenue.

**Canyon Drive** is a two-lane Standard Collector undivided roadway, with a maximum capacity of 12,500 ADT. Canyon Drive runs through a residential neighborhood north and south of Victoria Street.

**Placentia Avenue** is a four-lane Standard Primary north–south arterial that extends from Hospital Road in the City of Newport Beach to Adams Avenue in the City of Costa Mesa, to the east of the project area. Placentia Avenue north of 19th Street has a maximum capacity of 38,000 ADT.

**19th Street** is a four-lane Augmented Primary east–west arterial. West of Placentia Avenue, 19th Street has a maximum capacity of 45,000 ADT.

### **Public Transportation**

Public transportation within the vicinity of the project area is primarily provided by OCTA. Currently, OCTA operates 76 different bus routes and nearly 6,200 bus stops that intertwine throughout Orange County. Within the project area, OCTA Route 35 runs along Brookhurst Street between SR 1 and Adams Avenue. Route 35 stops at the intersections of Brookhurst Street and SR 1 and Brookhurst Street and Adams Avenue 215 times throughout the week. Within the project area, OCTA Route 173 runs along Victoria Street between Magnolia Street and Harbor Boulevard. Route 173 stops at the intersections of Victoria Street and Magnolia and Victoria Street and Harbor Boulevard 76 times throughout the week.

### **Bikeways**

Residents who use bicycles daily for their primary means of transportation are concerned with using the most convenient and direct route available to reach their destination. Daily bicycle commuters are most likely to choose a route along a primary or major roadway. Those who use bicycles for recreational use are most likely to use a scenic route or bike trail. Bicycle facilities within Orange County are separated into the following classifications.

***Bike Trail (Class 1).*** These facilities are at least 8 feet in width, are physically separated from vehicular roadways, and are designated primarily for the use of bicycles. Bike trails typically serve corridors not served by streets and highways, or where sufficient right-of-way exists to construct a separate facility parallel to the roadway (County of Orange 2010). Class 1 bike trails within the project vicinity can be found along the Santa Ana River, around Fairview Park, down Victoria Street, and alongside SR 1.

***Bike Lane (Class 2).*** Bike lanes are found within a painted stripe reserving at least 5 feet outside the motor vehicle travel lanes for bicycle use. Section 1003.2 of the Orange County Highway Design Manual provides for a typical width of 8 feet, measured from the curb face. Bike lanes are the most common classification within Orange County, as they are generally implemented within existing rights-of-way (County of Orange 2010). Class 2 bike lanes within the project vicinity can be found along SR 1 south of the Santa Ana River, along Placentia Avenue, and on a portion of Victoria Street.

***Bike Route (Class 3).*** Typically designated with white and green signs, these routes are mainly useful only to bridge short distances between other, more established bike lanes or trails and are typically only used on low-volume, residential streets. Bicycle traffic may either share the road with motor vehicles or share a sidewalk with pedestrians; in either case, bicycle usage is

considered secondary (County of Orange 2010). A Class 3 bike route can be found in the project vicinity on SR 1 north of the Santa Ana River.

### **Pedestrian Corridors**

Trail systems and pedestrian corridors provide alternatives to automobile travel and offer recreational opportunities for the community. There are a number of pedestrian corridors throughout project area.

***Talbert Regional Park.*** Talbert Regional Park consists of 180 acres of open space and has a trail system within the park that provides linkages to other parks and parallels the Santa Ana River. Talbert Regional Park is divided by Victoria Street into the North Talbert area and the South Talbert area.

***Canyon Community Park.*** Canyon Community Park consists of 35 acres of open space and includes trails that lead to the bottom of the canyon. The park is located in the middle of the project area, south of Victoria Street and west of Placentia Avenue. The Newport Terrace residential neighborhood surrounds the eastern portion of Canyon Community Park and is within the City of Newport Beach and the City of Costa Mesa's jurisdiction.

***Santa Ana River Trail and Parkway.*** The Santa Ana River Trail and Parkway traverses the project area and is the longest recreational trail corridor in the region. It was developed through the collective efforts of park districts, counties, cities, nonprofits, and citizens. The lower Santa Ana River Trail and Parkway that traverses the project area is the most heavily used portion of the trail. This portion of the trail and parkway is operated and maintained by Orange County Parks.

### **4.12.3 Thresholds of Significance**

The following significance criteria are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential traffic and circulation impacts. Impacts to traffic and circulation would be significant if the proposed project would:

- TRA-1:** Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.

- TRA-2:** 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.
- TRA-3:** Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- TRA-4:** Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- TRA-5:** Result in inadequate emergency access.
- TRA-6:** Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

#### **4.12.4 Impact Discussion**

- TRA-1:** *Would the project conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?*

##### **Construction Impacts**

Construction of the proposed project would primarily occur within Talbert Regional Park, Canyon Park, and surrounding residential areas. The proposed Orange County Sanitation District (OCSD) components would not involve any construction within roadways, except for the connection to the existing Interplant Line within Brookhurst Street just west of Treatment Plant No. 2. Construction of the Costa Mesa Sanitary District (CMSD) and City of Newport Beach components, however, would involve construction within 19th Street and Canyon Drive. All other facilities would be outside of existing roadways.

The proposed project may require temporary lane closures during construction of the proposed City of Newport Beach 12-inch sewer in 19th Street, the proposed CMSD 24-inch sewer in Canyon Drive, and the proposed OCSD connection to the Interplant Line in Brookhurst Street, which may increase congestion on these streets during peak travel times. Construction vehicles traveling to and from the project area may also cause a slight increase in traffic volumes during

the 2-year construction period. Any potential lane and driveway closures would be coordinated with area residents and businesses to provide proper access. In addition, as listed in Table 3-1 in Chapter 3, Project Description, traffic-control plans would be prepared to address construction traffic and road closures within the public rights-of-way of the Cities of Costa Mesa, Huntington Beach, and Newport Beach. The traffic-control plans would include provisions for construction times and for allowance of bicyclist, pedestrian, and bus access throughout construction. There would also be provisions for emergency vehicle access, signage, and flagmen to ensure that traffic flow is not substantially impacted. With implementation of the traffic-control plans, impacts during construction would be **less than significant**.

### **Operational Impacts**

Once constructed, the proposed sewer pipelines would be located below the surface of the roadways and would not obstruct or impede any flow of transportation. Although the underground pipelines would require routine maintenance and repair in emergency situations, maintenance and repair vehicles are not anticipated to create a significant increase in traffic generation. The abandonment of pump stations would have no impact on traffic, as no maintenance would be required following the abandonment. Therefore, implementation of the proposed project would not substantially decrease the effectiveness of the circulation system and impacts would be **less than significant**.

**TRA-2:**        *Would the project 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?*

### **Construction Impacts**

As described in response to Threshold TRA-1, the proposed project may require temporary lane closures during installation of the proposed OCSD 24-inch gravity sewer west of the Santa Ana River on Brookhurst Street, the proposed CMSD 12-inch sewer on 19th Street, and the proposed CMSD 24-inch gravity sewer on Canyon Drive. The proposed CMSD 24-inch gravity sewer on Canyon Drive would be installed using HDD techniques and would therefore not significantly impede the flow of traffic. None of the impacted streets are listed as CMP-designated highways nor would the proposed project transect any CMP-designated highways. Therefore, the proposed project would not conflict with any standards in the CMP and impacts would be **less than significant**.

### Operational Impacts

Once constructed, the proposed project would not generate traffic since only routine maintenance and emergency repairs would require vehicle access to the proposed pipelines. The proposed sewer pipelines in 19th Street and Canyon Drive would be located below the surface of the roadways and the roadways would be restored to their original condition. Once abandoned, the pump stations would have no impact on traffic. Therefore, operation of the proposed project would not conflict with an applicable congestion management program and impacts would be **less than significant**.

***TRA-3: Would the project result in a change in air traffic patterns, including either an increase in traffic or a change in location that results in substantial safety risks?***

The proposed project does not include any permanent above-ground components. Therefore, it would not result in a change in air traffic patterns or result in substantial safety risks and there would be **no impact**.

***TRA-4: Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?***

The proposed project does not involve any design features or incompatible uses that would increase hazards within the project area. All construction within existing roadways would be temporary and the roadways would be restored to their existing condition after construction is complete. All of the proposed pipelines would be installed underground and would therefore not result in incompatible uses. Therefore, the proposed project would have **no impact** in this regard.

***TRA-5: Would the project result in inadequate emergency access?***

The proposed project may require temporary lane closures during construction of the proposed CMSD 12-inch sewer on 19th Street, the proposed CMSD 24-inch sewer on Canyon Drive, and the proposed OCSD connection to the Interplant Line in Brookhurst Street. These closures could temporarily affect emergency access in these areas; however, as listed in Table 3-1 in Chapter 3, Project Description, traffic-control plans will be prepared to address construction traffic and road closures within the public rights-of-way of the Cities of Costa Mesa, Huntington Beach, and Newport Beach. The traffic-control plans would include provisions for emergency vehicle access, signage, and flagmen to ensure adequate emergency access is maintained throughout construction within public rights-of-way. Once completed, the roadways would be restored to

their original condition and emergency access would not be affected. Therefore, impacts to emergency access would be **less than significant**.

**TRA-6:**      *Would the proposed project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?*

The proposed project would not result in any conflicts with adopted policies, plans, or programs that support alternative transportation, as all proposed pipelines would be located underground and the ground surface would be returned to current conditions following construction. However, during construction within Canyon Drive, 19th Street, and Brookhurst Street, bus service, bicycle lanes, and pedestrian sidewalks within these roadways may be temporarily impacted. As listed in Table 3-1 in Chapter 3, Project Description, traffic-control plans will be prepared to address construction traffic and road closures within the public rights-of-way of the Cities of Costa Mesa, Huntington Beach, and Newport Beach. The traffic-control plans will include provisions for the allowance of bicyclist, pedestrian, and bus access throughout construction. Therefore, with implementation of the traffic-control plans, impacts would be **less than significant**.

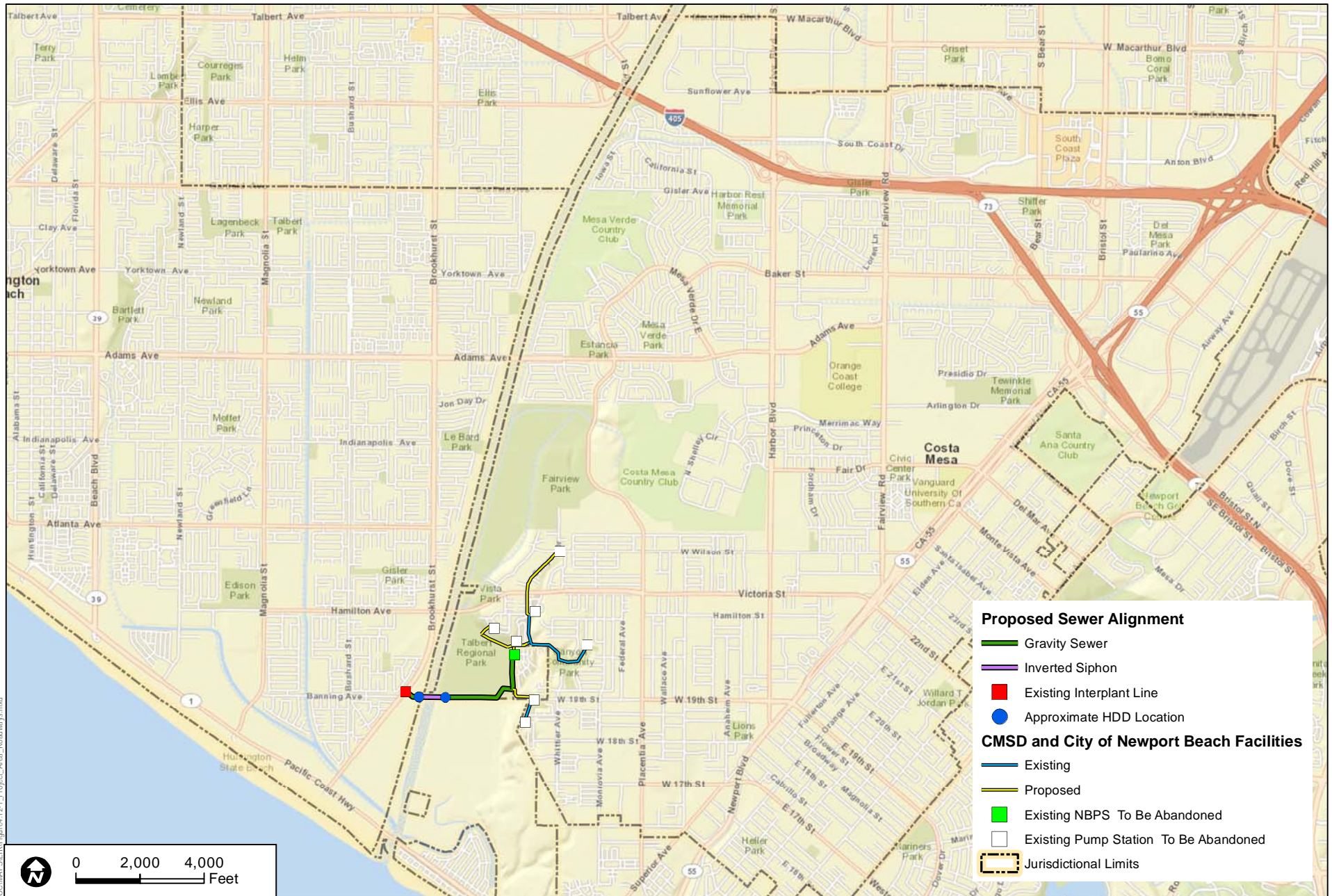
#### **4.12.5 Mitigation Measures**

No mitigation measures are required.

#### **4.12.6 Level of Significance After Mitigation**

Since no mitigation is required, impacts would remain below a level of significance.





**FIGURE 4.12-1**  
**Project Area Roadways**

**DUDEK**

7193-02

AERIAL SOURCE: Bing Maps

Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

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## **4.13 UTILITIES, SERVICE SYSTEMS, AND ENERGY**

This section describes the regulatory and existing setting related to utilities, service systems, and energy serving the project area, and analyzes potential impacts to these services and facilities resulting from the proposed Southwest Costa Mesa Trunk Sewer Project No. 6-19 (proposed project). This section addresses potential impacts on water, wastewater, stormwater, solid waste, and energy.

### **4.13.1 Regulatory Setting**

#### **Federal**

##### ***Federal Clean Water Act of 1987***

The Clean Water Act is the primary federal law that protects our nation's waters, including lakes, rivers, aquifers, and coastal areas. Section 401 of the Clean Water Act requires that any applicant for a federal permit to conduct any activity, including the construction or operation of a facility that may result in the discharge of any pollutant, must obtain certification from the state.

Section 303 of the Clean Water Act requires states to identify surface waters that have been impaired. Under Section 303(d), states, territories, and authorized tribes are required to develop a list of water quality segments that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. Section 404 of the Clean Water Act established a permit program to regulate the discharge of dredged material into waters of the United States.

##### ***National Pollution Discharge Elimination System***

Section 402 of the Clean Water Act established the National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants from point sources. The U.S. Environmental Protection Agency (EPA) has authorized the State of California to administer its NPDES permitting program. The NPDES permitting program prohibits the unauthorized discharge of pollutants from a point source (pipe, ditch, well, etc.) to waters of the United States. The permitting program addresses municipal, commercial, and industrial wastewater discharges and discharges from large animal-feeding operations. Permittees must verify compliance with permit requirements by monitoring their effluent, maintaining records, and filing periodic reports. The program is administered at the local level by the Regional Water Quality Control Boards (RWQCBs).

### ***Resource Recovery and Conservation Act of 1976***

The Resource Conservation and Recovery Act of 1976 (RCRA; 42 U.S.C. 6901 et seq.) gives the EPA the authority to control hazardous waste from “cradle to grave.” This includes the generation, transport, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled the EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

The federal Hazardous and Solid Waste Amendments are the 1984 amendments to RCRA that focused on waste minimization and phasing out land disposal of hazardous waste as well as corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.

### ***Federal Energy Policy and Conservation Act***

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel-economy standards for on-road motor vehicles in the United States. Pursuant to the act, the National Highway Traffic Safety Administration (NHTSA) is responsible for establishing additional vehicle standards. In 2012, new fuel-economy standards were approved for model year 2017 through 2025 passenger cars and light trucks at 54.5 miles per gallon (EPA 2012). Fuel economy is determined based on each manufacturer’s average fuel economy for the fleet of vehicles available for sale in the United States.

### ***Energy Independence and Security Act of 2007***

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law. In addition to setting increased Corporate Average Fuel Economy (CAFE) standards for motor vehicles, the EISA includes other provisions related to energy efficiency:

- Renewable Fuel Standard (RFS) (Section 202)
- Appliance and Lighting Efficiency Standards (Sections 301–325)
- Building Energy Efficiency (Sections 411–441).

This federal legislation requires ever-increasing levels of renewable fuels—the RFS—to replace petroleum. The EPA is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. The RFS program regulations were developed in collaboration with refiners, renewable fuel producers, and many other stakeholders.

The RFS program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the United States. As required under the Energy Policy Act, the original RFS program (RFS1) required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the RFS program was expanded in several key ways that laid the foundation for achieving significant reductions of greenhouse gas (GHG) emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of our nation's renewable fuels sector. The updated program is referred to as RFS2 and includes the following:

- Expanding the RFS program to include diesel, in addition to gasoline.
- Increasing the volume of renewable fuel required to be blended into transportation fuel, from 9 billion gallons in 2008 to 36 billion gallons by 2022.
- Establishing new categories of renewable fuel and setting separate volume requirements for each one.
- Requiring the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces.

Additional provisions of the EISA address energy savings in government and public institutions, promoting research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”

## **State**

### ***State Water Resources Control Board***

The State Water Resources Control Board (SWRCB) preserves, enhances, and restores the quality of California's water resources, and ensures their proper allocation and efficient use for the benefit of present and future generations. Wastewater generators must obtain a permit to discharge their wastewater. Pursuant to the federal Clean Water Act and California's Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act), the SWRCB regulates wastewater discharges to surface waters through the NPDES program. Some wastewater discharges are exempt from federal NPDES requirements, but California law may still apply. Under California law, the SWRCB requires Waste Discharge Requirements (WDRs) for some discharges in addition to those subject to NPDES permits. Permits contain specific requirements that limit the pollutants in discharges. They also require dischargers to monitor their wastewater to ensure that it meets all requirements. Wastewater dischargers must maintain their treatment facilities, and treatment plant operators must be certified. The SWRCB routinely inspects treatment facilities and strictly enforces permit requirements.

### ***California Water Code***

California's Porter-Cologne Act, which became Division 7 (Water Quality) of the California Water Code, establishes the responsibilities and authorities of the nine RWQCBs and the SWRCB. Among other things, the act directs each RWQCB to formulate and adopt a water quality control plan—known as a “Basin Plan”—for all areas within the region. The Basin Plan defines existing and potential beneficial uses and water quality objectives for coastal waters, groundwater, surface waters, imported surface waters, and reclaimed waters in the basin (RWQCB 1994).

### ***Urban Water Management Plans***

Urban water management plans (UWMPs) are prepared by California's urban water suppliers to support their long-term resource planning and ensure that adequate water supplies are available to meet existing and future water demands. Urban water purveyors are required to prepare and update a UWMP every 5 years. The UWMPs address water supply, treatment, reclamation, and water conservation, and contain a water shortage contingency plan. Local UWMPs are supplemental to the regional plans prepared by the Metropolitan Water District (Metropolitan). The Water Conservation Bill of 2009 (SBX7-7) requires each urban retail water supplier to develop an urban water use target and an interim urban water use target. SBX7-7 authorizes urban retail water suppliers to determine and report progress toward achieving these targets on an individual agency basis.

### ***Recycled Water Policy Resolution No. 2009-0011***

The purpose of the Recycled Water Policy is to increase the use of recycled water from municipal wastewater sources that meets the definition in Water Code Section 13050(n) in a manner that implements state and federal water quality laws. When used in compliance with the policy, Title 22 of the California Code of Regulations, and all applicable state and federal water quality laws, the SWRCB finds that recycled water is safe for the approved uses, and strongly supports recycled water as a safe alternative to potable water for such approved uses.

### ***Statewide Storm Water Management Plan***

California's Statewide Storm Water Management Plan (SWMP) describes a program to reduce the discharge of pollutants associated with the stormwater drainage systems that serve highways and highway-related properties, facilities, and activities. It identifies how the California Department of Transportation (Department) will comply with the provisions of the NPDES permit (Order No. 99-06-DWQ) (Permit) issued by the SWRCB on July 15, 1999. The Permit requires that the previous edition of the Statewide SWMP be revised to include or describe procedures for implementing the requirements stated in several provisions of the



Permit. This Statewide SWMP has been revised to show compliance with this requirement, although the format employed differs somewhat from the specific chapter designations outlined in the Permit.

### ***California Senate Bill 7***

Senate Bill 7 (SB x7-7) was enacted in November 2009 to require all water suppliers to increase water use efficiency. The legislation sets an overall goal of reducing per capita urban water use by 20% by December 31, 2020 (California Water Code, Section 10608.20). In order to reach this goal, SB x7-7 requires each urban retail water supplier to report progress in meeting water use targets (California Water Code, Section 10608.40). The law also requires wholesale water suppliers to support their retail member agencies' efforts to comply with SB x7-7 through a combination of regionally and locally administered active and passive water conservation measures, programs, and policies, as well as the use of recycled water.

### ***State Agency Model Integrated Waste Management Act of 1999***

Assembly Bill 75 (AB 75) was passed in 1999, and the State Agency Model Integrated Waste Management Act (Chapter 764, Statutes of 1999, Strom-Martin) took effect on January 1, 2000. The act mandated that state agencies develop and implement an integrated waste management plan. The act also mandated that community service districts providing solid waste services report disposal and diversion information to the city, county, or regional agency in which the community service district is located. Provisions of the act require all state agencies and large state facilities to divert at least 50% of solid waste from landfills after 2004 and that each state agency and large facility submit an annual report to the California Department of Resources Recycling and Recovery (CalRecycle) summarizing its yearly progress in implementing waste diversion programs (CalRecycle 2010).

### ***Assembly Bill 939***

Enacted by AB 939 and signed into law in 1990, the California Integrated Waste Management Authority established an integrated system of solid waste management whereby each city and county is required to develop and implement plans consistent with the mandated diversion rates of 25% by 1995 and 50% by 2000. Under the California Integrated Waste Management Authority, the county has prepared a countywide siting element and summary plan describing areas to be developed as disposal or waste management facilities (PRC, Section 41700).

### ***Title 24 of the California Code of Regulations***

Part 2 of Title 24 of the California Code of Regulations (CCR) refers to the California Building Code, which contains regulations and general construction building standards of state adopting

agencies, including administrative, fire, and life safety and field inspection provisions. Part 2 was updated in 2008 to reflect changes in the base document from the Uniform Building Code to the International Building Code. Part 9 refers to the California Fire Code, which contains fire-safety-related building standards referenced in other parts of Title 24. This code is preassembled with the 2000 Uniform Fire Code of the Western Fire Chiefs Association. This code was revised in January 2008 with a change in the base model/consensus code from the Uniform Fire Code series to the International Fire Code.

### ***Senate Bill 1368***

On September 29, 2006, Governor Arnold Schwarzenegger signed into law SB 1368. The law limits long-term investments in baseload generation by the state's utilities to power plants that meet an emissions performance standard jointly established by the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC).

The CEC has designed the following regulations:

- Establish a standard for baseload generation owned by, or under long-term contract to, publicly owned utilities of 1,100 pounds of carbon dioxide (CO<sub>2</sub>) per megawatt-hour. This will encourage the development of power plants that meet California's growing energy needs while minimizing their emissions of GHGs.
- Require posting of notices of public deliberations by publicly owned utilities on long-term investments on the CEC website. This will facilitate public awareness of utility efforts to meet customer needs for energy over the long term while meeting the state's standards for environmental impact.
- Establish a public process for determining the compliance of proposed investments with the emissions performance standard (CEC 2012a).

### ***Assembly Bill 1493***

Adopted in 2002 by the state legislature, AB 1493 (Pavley) required that the California Air Resources Board (CARB) develop and adopt, no later than January 1, 2005, regulations to achieve the maximum feasible and cost-effective reduction of GHG emissions from motor vehicles.

The first California request to implement GHG standards for passenger vehicles, known as a waiver request, was made in December 2005 and was denied by the EPA in March 2008. That decision was based on a finding that California's request to reduce GHG emissions from passenger vehicles did not meet the Clean Air Act requirement of showing that the waiver was needed to meet "compelling and extraordinary conditions."



The EPA granted California the authority to implement GHG emissions reduction standards for new passenger cars, pickup trucks, and sport-utility vehicles on June 30, 2009. On September 24, 2009, CARB adopted amendments to the Pavley regulations (AB 1493) that reduce GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment to a nationwide program to reduce new passenger-vehicle GHGs from 2012 through 2016. CARB's September 2009 amendments will allow for California's enforcement of the Pavley rule while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to harmonize its rules with the federal rules for passenger vehicles. It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 22% in 2012 and about 30% in 2016, all while improving fuel efficiency and reducing motorists' costs.

CARB has adopted a new approach to passenger vehicles—cars and light trucks—by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California (CARB 2012).

### ***California Public Utilities Commission***

The CPUC sets forth specific rules that relate to the design, installation, and management of California's public utilities, including electric, natural gas, water and transportation, and telecommunications. CPUC Decisions #77187 and #78500 state that utilities must be underground if the developable lots are less than 3 acres in size. CPUC Decision #81620 states that lots over 3 acres (large-lot subdivisions) are not required to underground utilities. A formal waiver from the CPUC is required for an exemption from complying with these decisions.

CPUC Decision 95-08-038 governs the planning and construction of new transmission facilities, distribution facilities, and substations. The decision requires permits for the construction of certain power-line facilities or substations if the voltages would exceed 50 kilovolts (kV) or the substation would require the acquisition of land or an increase in voltage rating above 50 kV. Distribution lines and substations with voltages less than 50 kV do not need to comply with the decision; however, the utility must obtain any applicable local permits required for the construction and operation of these projects.

### ***California Energy Commission***

The CEC is the state's primary energy policy and planning agency. Responsibilities of the CEC include, but are not limited to, forecasting future energy needs and keeping historical energy data, licensing thermal power plants 50 megawatts (MW) or larger, promoting energy efficiency, supporting renewable energy by providing market support, and planning for and directing state response to energy emergencies.

SB 1389 requires the CEC to conduct “assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices.” The CEC reports the results of these assessments and forecasts every 2 years to the governor, the legislature, and the California public in the Integrated Energy Policy Report. The most recent report to be completed is the *2011 Integrated Energy Policy Report* (CEC 2012b).

## **Local**

### ***City of Huntington Beach Energy Action Plan***

In April 2011, the City of Huntington Beach adopted an Energy Action Plan (EAP) to protect the environment and to be more sustainable. The EAP outlines the city’s history and commitment to eliminating energy waste, preparing for peak oil production, and reducing GHG emissions. Areas of focus for the EAP are as follows:

- Utility Bill audits and expenditure tracking
- Developing and managing energy efficiency projects
  - Utility partnerships
  - Monitoring Based Commissioning (MBCx)
  - IS energy efficiency
  - Energy efficiency retrofits/upgrades
  - HVAC and controls retrofits
- Managing Federal, State and utility grants and incentive programs
- Developing and managing renewable energy programs
- Developing energy and sustainable guidelines/policies
- Design BMPs and resource sharing regionally through Local Government Energy Management Services Program (LGEMSP) (City of Huntington Beach 2011a).

## **4.13.2 Existing Conditions**

### **4.13.2.1 Water, Wastewater, and Stormwater**

#### **Water**

#### ***Municipal Water District of Orange County***

The Municipal Water District of Orange County (MWDOC) came together with four other municipal water districts in order to purchase wholesale surface water from Metropolitan.

The MWDOC joined forces with the Cities of Anaheim, Fullerton, and Santa Ana, as well as the Coastal Municipal Water District, consisting of Costa Mesa, Newport Beach, and Laguna Beach. Together they are able to import wholesale water to all Orange County cities, private companies, and local independent and dependent water districts for storage and direct distribution to their residential and business customers.

### *City of Costa Mesa*

Mesa Consolidated Water District (Mesa) provides water to a population of 111,166 throughout its 18-square-mile service area. Mesa receives its water from two main sources, the Lower Santa Ana River Groundwater Basin, which is managed by the Orange County Water District (OCWD), and imported water from the MWDOC. Groundwater is pumped from six wells that pump clear water from the basin and two wells that pump colored water. The colored water is treated at the Colored Water Treatment Facility and imported water is treated at the Robert B. Diemer Filtration Plant (Diemer Filtration Plant) and delivered to Mesa through the imported water connections (Mesa 2010). Table 4.13-1 illustrates the City of Costa Mesa's daily per capita water use.

**Table 4.13-1**  
**Base Daily Per Capita Water Use**

Fiscal Year Ending	Service Area Population	Gross Water Use (gallons per day)	Daily Per Capita Water Use (gallons per day)
2004	107,096	18,497,925	173
2005	107,078	17,643,029	165
2006	106,964	18,167,455	170
2007	107,047	19,084,557	178
2008	107,494	17,679,197	164
Base Daily Per Capita Water Use			170.0

Source: Mesa 2010, Table 2-7.

### *City of Huntington Beach*

The City of Huntington Beach obtains its imported water from MWDOC, its Metropolitan member agency. Metropolitan treats water supplied to the City of Huntington Beach at the Diemer Filtration Plant in northern Orange County and the Joseph Jensen Filtration Plant in Granada Hills. The Public Works Department operates four storage and distribution reservoirs with a combined capacity of 55 million gallons. The storage system is supported with four booster stations located at the reservoir sites. The booster pumps have a total capacity of 58,690 gallons per minute, which is adequate to keep the system pressurized under peak conditions. In the 2010 water year, the City pumped approximately 62% of its water supply from groundwater wells accessing the Santa Ana River groundwater basin and purchased 38% from Metropolitan

through the MWDOC (City of Huntington Beach 2011b). Table 4.13-2 illustrates the City of Huntington Beach's daily per capita water use.

**Table 4.13-2**  
**Base Daily Per Capita Water Use**

Fiscal Year Ending	Service Area Population	Gross Water Use (gallons per day)	Daily Per Capita Water Use (gallons per day)
2004	199,987	30,429,732	152
2005	201,068	29,118,383	145
2006	201,664	28,239,091	140
2007	201,897	29,518,304	146
2008	202,319	28,264,086	140
2009	203,568	27,898,087	137
2010	204,831	25,386,081	124
Base Daily Per Capita Water Use			159.3

Source: City of Huntington Beach 2011b, Table 1.

### ***City of Newport Beach***

The city provides water to a population of approximately 67,000 throughout its 35.77-square-mile service area. The city receives its water from two main sources, the Lower Santa Ana River Groundwater Basin, which is managed by the OCWD, and imported water from the MWDOC. Today, the city relies on 60% groundwater, 37% imported, and 3% recycled water (City of Newport Beach 2010). Groundwater is pumped from four active wells located throughout the city, and imported water is treated at the Diemer Filtration Plant and delivered to the city through six imported water connections (City of Newport Beach 2010). Table 4.13-3 illustrates the City of Newport Beach's daily per capita water use.

**Table 4.13-3**  
**Base Daily Per Capita Water Use**

Fiscal Year Ending	Service Area Population	Gross Water Use (gallons per day)	Daily Per Capita Water Use (gallons per day)
2004	65,500	15,985,387	244
2005	65,993	15,630,375	237
2006	65,962	15,616,451	237
2007	66,067	16,677,329	252
2008	66,451	16,038,474	241
Base Daily Per Capita Water Use			242.3

Source: City of Newport Beach 2010.

## Wastewater

### *Orange County Sanitation District*

The Orange County Sanitation District (OCSD) is the California Environmental Quality Act (CEQA) lead agency for the proposed project. Created in 1954, OCSD is the third-largest wastewater agency west of the Mississippi River and serves a population of more than 2.5 million. OCSD is responsible for collection, treatment, recycling, and disposal of treated wastewater generated within a 479-square-mile service area located in central and northwestern Orange County. The OCSD service area includes 21 cities and three special districts; it is governed by a 25-member board of directors consisting of elected officials from each city and sewer agency located in the OCSD service area. OCSD facilities include over 800 miles of sewer lines, 15 off-site pumping stations, and two treatment plants. Currently, OCSD treats approximately 210 million gallons per day (mgd) of wastewater through two connected treatment plants located adjacent to the Santa Ana River: Reclamation Plant No. 1 in Fountain Valley and Treatment Plant No. 2 (Plant No. 2) in Huntington Beach.

OCSD Plant No. 2 is located in the City of Huntington Beach, adjacent to the Santa Ana River and about 1,500 feet from the ocean. The proposed project would provide a more direct route for the transportation of wastewater from the City of Costa Mesa Sanitary District (CMSD) and the City of Newport Beach to OCSD Plant No. 2. The plant provides a mix of advanced primary and secondary treatment and receives raw wastewater through five major sewers. Approximately 33% of the influent receives secondary treatment through an activated sludge system, and all of the effluent is discharged to the ocean disposal system.

### *City of Costa Mesa*

CMSD is a responsible agency under CEQA for the proposed project for the components within the CMSD service area. Formed in 1944, CMSD serves a population of approximately 116,700 within the City of Costa Mesa and portions of Newport Beach and unincorporated Orange County. CMSD provides liquid waste collection and transmission to OCSD facilities for treatment and disposal. CMSD is also responsible for operations, maintenance, and repairs of CMSD facilities. Table 4.13-4 illustrates CMSD's wastewater collection, treatment, and recycled water standards.

**Table 4.13-4**  
**Wastewater Collection and Treatment (acre-feet per year)**

Type of Wastewater	2005	2010	2015	2020	2025	2030
Wastewater Collected and Treated in Service Area	273,017	232,348	302,400	312,704	321,104	329,392
Volume That Meets Recycled Water Standards	12,156	75,000	105,000	105,000	105,000	105,000

Source: Mesa 2010, Table 6-2.

***City of Huntington Beach***

The City of Huntington Beach wastewater collection and treatment facilities are serviced by OCSD. The city's sewer system consists of 385 miles of sewer lines, 10,000 manholes, and 28 lift stations. OCSD operates the third-largest wastewater system on the West Coast, consisting of nearly 600 miles of trunk sewers and 200 miles of subtrunk sewers, two regional treatment plants, and an ocean disposal system. The OCSD sewerage system collects wastewater through an extensive system of gravity flow sewers, pump stations, and pressurized sewers (force mains). The sewer system consists of 12 trunk sewer systems ranging in size from 12 to 96 inches in diameter (City of Huntington Beach 2011b).

***City of Newport Beach***

The City of Newport Beach Wastewater Division is also a CEQA responsible agency for the proposed project, for the components proposed within the City of Newport Beach. The Wastewater Division is responsible for the collection of residential and commercial wastewater. Wastewater collected by the City of Newport Beach is transmitted to OCSD facilities for treatment and disposal. The Wastewater Division is also responsible for operations, maintenance, and repairs of pump stations, sewer mains, and laterals.

The City of Newport Beach is responsible for wastewater collection and conveyance to the OCSD sewer treatment plant located in Huntington Beach. OCSD also treats wastewater from several other municipalities. OCSD discharges treated water into the ocean through a 120-inch-diameter ocean outfall pipe that extends 5 miles offshore to the discharge point. The treatment levels meet all current state and federal requirements. OCSD also sends up to 10 mgd of treated wastewater to the OCWD for further processing for landscape irrigation and for injection into the groundwater/seawater intrusion barrier (City of Newport Beach 2010). Table 4.13-5 illustrates CMSD's wastewater collection, treatment, and recycled water standards.

**Table 4.13-5**  
**Wastewater Collection and Treatment (acre-feet per year)**

Type of Wastewater	2005	2010	2015	2020	2025	2030
Wastewater Collected and Treated in Service Area	273,017	232,348	302,400	312,704	321,104	329,392
Volume That Meets Recycled Water Standards	12,156	75,000	105,000	105,000	105,000	105,000

Source: City of Newport Beach 2010, Table 6-2.

## **Stormwater**

### ***Orange County Flood Control District***

The Orange County Flood Control District (OC Flood) is the Public Works department that operates the storm drainage systems throughout the county. OC Flood was created in 1927 after the passing of the Orange County Flood Control Act. In 1968, the U.S. Congress created the National Flood Insurance Program. Community participation in the National Flood Insurance Program is required in order to receive funding from the Federal Emergency Management Agency (FEMA). OC Flood has been a long-time member of the National Flood Insurance Program. They design and construct channels, storm drains, dams, pump stations and other drainage related facilities. The Orange County flood management system consists of 350 miles of flood channels, several dams and pump stations, flood-control basins, and other infrastructure. The implementation of drainage facilities protects residents and development from flooding by removing water runoff from the streets. OC Flood also partners with water districts and special districts to enhance regional water conservation efforts (OC Public Works 2010).

### ***OCSD On-Site Stormwater Management Plan***

Stormwater compliance at OCSD's treatment plants (Plant No. 1 and Plant No. 2) are governed through OCSD's NPDES Ocean Discharge Permit. OCSD collects stormwater on site at both treatment plants and directs it through the wastewater treatment system for treatment. At no time is any industrial stormwater from the treatment process areas allowed to run off the plant site. Because all industrial stormwater is treated through the wastewater treatment process and discharged through the outfall, no surface water bodies are affected and the RWQCB determined that OCSD is exempt from the General Industrial Stormwater Permit. Instead, in compliance with the NPDES Ocean Discharge Permit, OCSD prepared and submitted an On-Site Stormwater Management Plan to the RWQCB. The On-Site Stormwater Management Plan regulates stormwater management for OCSD's two treatment plants and addresses stormwater management during operation and construction activities.

#### **4.13.2.2 Solid Waste and Recycling**

The Orange County Integrated Waste Management Department owns and operates three active landfills serving the Orange County region. These include the Frank R. Bowerman Landfill, at 11002 Bee Canyon Access Road, Irvine; the Olinda Alpha Landfill, at 1942 North Valencia Avenue, Brea; and the Prima Deshecha Landfill, at 32250 La Pata Avenue, San Juan Capistrano. The Olinda Alpha Landfill and the Prima Deshecha Landfill are open to the public while the Frank R. Bowerman Landfill is for commercial use only. All three landfills are Class III landfills. Class III landfills accept only non-hazardous municipal solid waste for disposal; no hazardous or liquid waste can be accepted. Table 4.13-6 illustrates each facility's capacity, maximum daily loads, and expected closure date.

**Table 4.13-6**  
**Solid Waste Facilities in the County of Orange**

Solid Waste Facility	Max Capacity	Remaining Capacity	Max Daily Load (tons)	Remaining Capacity Date	Closure Date
Frank R. Bowerman	266,000,000	205,000,000	11,500	2008	2053
Olinda Alpha	74,900,000	38,578,383	8,000	2005	2021
Prima Deshecha	172,900,000	87,384,799	4,000	2005	2067

Source: CalRecycle 2010.

### 4.13.2.3 Energy

#### Electricity

Southern California Edison (SCE) provides electricity to most of Orange County, with San Diego Gas & Electric providing electric service to about 6% of the households in the southern portion of Orange County (Capistrano Valley/San Clemente Foothill region). Electric generation located in Orange County is owned by SCE, Los Angeles Department of Water and Power, and the City of Anaheim, as well as various smaller producers who sell their power back to SCE. Future electrical demand will require an expansion in the present electrical system capacity to meet the projected demand (County of Orange 2005).

Common pump station design over the last 50 years has been to provide two pumps sized for the peak design flow rate, one of which is a standby pump. For pump stations with long force mains, the friction loss when operating at the peak design flow rate is excessive, resulting in high energy costs. Frequent pump cycling on and off due to sewer infiltration and flow creates excessive energy costs. The proposed project includes the abandonment of eight pump stations (six CMSD pump stations, one City of Newport Beach pump station, and one private pump station), which would dramatically reduce the amount of energy consumed.

#### Natural Gas

The only supplier of natural gas in Orange County is the Southern California Gas Co. (SoCalGas). SoCalGas currently receives over 90% of its supply from out-of-state sources. Existing supply considerations are complicated by the fact that natural gas is distributed according to priorities established by the State Public Utilities Commission. Natural gas represents the largest source of electricity in California, and is the second-largest type of consumed fuel. SoCalGas is the nation's largest gas distribution utility, providing service to 14 million customers over an area of approximately 50,000 square miles. SoCalGas's service area covers Central and Southern California, excluding the City of Los Angeles. Based in Rosemead, California, the utility has been providing electric service to the region for more than 125 years. SoCalGas's service territory includes more than 180 cities.



### **OCSD Energy Supplies**

OCSD Plant No. 1 and Plant No. 2 operate using energy provided by their own Central Power Generation (Cen Gen) facilities. OCSD Plant No. 2 Cen Gen includes five identical internal-combustion engines, 4,166 horsepower each; a 3,000 kW generator; a 1 MW steam turbine; and a total nameplate capacity of 16 MW. The proposed project would use both SCE and Plant No. 2 Cen Gen facilities to provide electrical power during construction activities. In addition, construction of the proposed project would require the use of temporary electrical power connections.

#### **4.13.3 Thresholds of Significance**

The following significance criteria are based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), and will be used to determine the significance of potential utility, service system, and energy impacts. Impacts to utilities, service systems, and energy would be significant if the proposed project would:

- UTIL-1:** Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.
- UTIL-2:** Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impact.
- UTIL-3:** Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impact.
- UTIL-4:** Not have sufficient water supplies available to serve the project from existing entitlements and resources, or need new or expanded entitlements.
- UTIL-5:** Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.
- UTIL-6:** Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- UTIL-7:** Not comply with federal, state, and local statutes and regulations related to solid waste.
- UTIL-8:** Cause the demand for energy resources to exceed the available supply or cause a need for new or expanded facilities.
- UTIL-9:** Result in a wasteful, inefficient, or unnecessary use of energy.

#### 4.13.4 Impact Discussion

**UTIL-1:** *Would the proposed project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

Implementation of the proposed project would consolidate existing pipelines that travel to OCSD Plant No. 2, located in Huntington Beach, and allow for the abandonment of eight pump stations (six CMSD pump stations, one City of Newport Beach pump station, and one private pump station). OCSD Plant No. 2 operates under permits issued by the RWQCB and the EPA (Order No. R8-2012-0035, NPDES No. CA0110604). The plant has a current capacity of 168 mgd and treats an average of 144 mgd. The amount of wastewater being transported to OCSD Plant No. 2 would not increase as a result of the proposed project. Therefore, the proposed project would continue to comply with all applicable permits and would not exceed wastewater treatment requirements. Impacts would be **less than significant**.

**UTIL-2:** *Would the proposed project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental impact?*

The proposed project itself would involve construction of wastewater facilities, namely the proposed OCSD 24-inch gravity sewer and 14-inch inverted gravity sewer siphon, the two proposed CMSD 12-inch sewers and one 24-inch gravity sewer, and the proposed City of Newport Beach 18-inch sewer. The proposed project would consolidate sewer pipelines and reduce the reliance on pump station infrastructure, with the benefit of reducing overall risks associated with facility failure and reducing long-term operational, maintenance, and replacement costs associated with pump station infrastructure. The proposed project would successfully divert flows from the Fairview Road Trunk Sewer (currently planned for upsizing), eliminating the need for expansion, which would prevent infrastructure replacement costs and impacts to the public during construction. In addition, OCSD Plant No. 2 currently has a capacity of 168 mgd and treats an average of 144 mgd, and the proposed project would not increase the total amount of wastewater being transported to the treatment facility. Impacts of constructing and operating the project are evaluated throughout this Draft Environmental Impact Report (EIR). The proposed project may require water for construction-related activities, including watering dirt or dusty materials, and washing down streets or paved areas. OCSD, CMSD, and the City of Newport Beach's existing water entitlements and resources would be adequate to support the proposed project's needs. Additionally, no water would be used during the operational stage of the proposed project. Since implementation of the proposed project would not require or result in the construction of new water or wastewater treatment facilities which could cause significant environmental impact, impacts would be **less than significant**.

**UTIL-3:**      *Would the proposed project require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impact?*

As described in Section 4.8, Hydrology and Water Quality, the proposed project would result in no net increase in impervious surface area since all disturbed areas would be returned to pre-project conditions upon completion of construction and the 20-foot-wide access road would be permeable. Construction of the proposed project would not require new stormwater drainage facilities or the expansion of existing facilities since construction best management practices (BMPs) would be implemented as listed in Table 3-1 in Chapter 3, Project Description. These construction BMPs would be implemented in order to prevent pollutants from contacting stormwater and entering municipal stormwater facilities. and to control erosion and sedimentation. BMPs may include physical stabilization (i.e., hydraulic or straw mulch, geotextiles), vegetation stabilization (i.e., hydroseeding), wind-erosion control measures, perimeter protection, storm drain inlet protection, and/or velocity reduction measures. Therefore, no new off-site stormwater drainage facilities would be required to accommodate runoff from the proposed project. As a result, impacts to existing or proposed stormwater drainage systems would be **less than significant**.

**UTIL-4:**      *Would the proposed project have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

The proposed project may require water for construction-related activities, including watering dirt or dusty materials, and washing down streets or paved areas. OCSD, CMSD, and the City of Newport Beach's existing water entitlements and resources would be adequate to support the proposed project's needs. No water would be used during the operational stage of the proposed project. Therefore, the proposed project would have sufficient water supplies and no new or expanded entitlements would be needed, and impacts would be **less than significant**.

**UTIL-5:**      *Would the proposed project 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 providers existing commitments?*

As described under Thresholds UTIL-1 and UTIL-2, the proposed project involves the construction of new OCSD, CMSD, and Newport Beach sewer pipelines, as well as the abandonment of several pump stations. The project would not increase the total amount of wastewater to be treated at OCSD Plant No. 2, nor does it involve the development of any

uses that would result in increased demand for wastewater treatment. Therefore, impacts would be **less than significant**.

***UTIL-6: Would the proposed project be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?***

Solid waste generated from the proposed project would include debris from pump station abandonment and trash accumulated by the construction crew. Abandonment of the pump stations would involve removing all the equipment from inside the concrete structures. All trash produced by contractors and equipment operators would be removed from the project area daily and disposed of properly in accordance with federal, state, and local statutes and regulations related to solid waste. Impacts on the surrounding landfills would be minimal and limited to construction activities; no solid waste would be generated from the operation of the proposed project. Therefore, impacts to surrounding landfills would be temporary during the construction phase, and impacts associated with sufficient landfill capacity to accommodate the proposed project's solid waste disposal needs would be **less than significant**.

***UTIL-7: Would the proposed project comply with federal, state, and local statutes and regulations related to solid waste?***

As discussed in the response to Threshold UTIL-6, solid waste generated from the proposed project would include debris from pump station abandonment and trash accumulated by the construction crew. Efforts would be made to recycle all reusable materials in cooperation with local agencies and businesses. All trash produced by contractors and equipment operators would be removed from the project area daily and disposed of properly in accordance with federal, state, and local statutes and regulations related to solid waste. Therefore, the impact would be **less than significant**.

***UTIL-8: Would the proposed project cause the demand for energy resources to exceed the available supply or cause a need for new or expanded facilities?***

### **Construction Impacts**

Construction of the proposed project would result in a temporary increase in energy consumption. Primary energy demand for the proposed project would include gasoline and diesel-powered construction equipment, the use of automobiles to transport workers to and from the project area, and the use of electrical construction devices. During the construction phase of the proposed 500 linear feet of OCSD 24-inch gravity sewer and proposed OCSD dual 14-inch inverted sewer siphon beneath the Santa Ana River, electricity would be provided by SCE and the OCSD Plant No. 2 Cen Gen facility. SCE infrastructure and temporary electrical power connection would also be used to provide construction activities with an adequate amount of

electricity. The current supply of energy resources would be sufficient to serve construction activities and impacts would be considered **less than significant**.

### **Operational Impacts**

Operation of the proposed project would result in minimal energy consumption due to vehicle trips to and from the project area during operation and maintenance activities. However, the proposed project would not require any energy resources to operate efficiently. Due to implementation of the proposed OCSD 24-inch gravity sewer, wastewater would travel through the pipeline to OCSD Plant No. 2 primarily via gravity flow. This would allow for the abandonment of eight pump stations (six CMSD pump stations, one City of Newport Beach pump station, and one private pump station), which would dramatically reduce the amount of energy resources consumed. Once the wastewater reaches OCSD Plant No. 2, its Cen Gen facility would continue to be the primary source of energy. The proposed project would not create an increase in energy demand from OCSD's Plant No. 2 Cen Gen facility. Therefore, since abandonment of the eight pump stations would decrease the amount of energy consumed and energy demand from OCSD Plant No. 2 would stay the same, the proposed project would not exceed available supply or cause a need for new or expanded facilities; impacts would be **less than significant**.

**UTIL-9:**        *Would the proposed project result in a wasteful, inefficient, or unnecessary use of energy?*

### **Construction Impacts**

As described under Threshold UTIL-8, construction of the proposed project would result in a temporary increase in energy consumption due to the use of construction equipment and vehicles. As described in Chapter 3, Project Description, the proposed project would integrate design features and construction measures that would help to reduce the energy use associated with construction equipment and vehicles. As a result, construction of the proposed project would not result in wasteful, inefficient, or unnecessary use of energy, and impacts would be **less than significant**.

### **Operational Impacts**

As described in the response to Threshold UTIL-8, implementation of the proposed OCSD 24-inch gravity sewer would allow wastewater to travel through the proposed pipelines to OCSD Plant No. 2 primarily via gravity flow. The proposed project would allow for the abandonment of eight pump stations (six CMSD pump stations, one City of Newport Beach pump station, and one private pump station), which would dramatically reduce the amount of energy resources consumed by the existing wastewater infrastructure. Therefore, the

proposed project would not result in wasteful, inefficient, or unnecessary use of energy and impacts would be **less than significant**.

#### **4.13.5 Mitigation Measures**

No mitigation is required.

#### **4.13.6 Level of Significance After Mitigation**

Since no mitigation is required, impacts would remain less than significant.

## **CHAPTER 5 CUMULATIVE EFFECTS**

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### **5.1 INTRODUCTION**

Although the environmental effects of an individual project may not be significant when that project is considered independently, the combined effects of several projects may be significant when considered collectively. Such impacts are “cumulative impacts.” Section 15355 of the California Environmental Quality Act (CEQA) Guidelines defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” Section 15130 of the CEQA Guidelines provides guidance for analyzing significant cumulative impacts in an Environmental Impact Report (EIR). According to this section of the CEQA Guidelines, the discussion of cumulative impacts “...need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness.” The discussion should also focus only on significant effects resulting from the project’s incremental effects and the effects of other projects. According to Section 15130(a)(1), “[a]n EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.”

Cumulative impacts can occur from the interactive effects of a single project. For example, the combination of noise and dust generated during construction activities can be additive and can have a greater impact than either noise or dust alone. However, substantial cumulative impacts more often result from the combined effect of past, present, and future projects located in proximity to the project under review. Therefore, it is important for a cumulative impacts analysis to be viewed over time and in conjunction with other related past, present, and reasonably foreseeable future developments whose impacts might compound or interrelate with those of the project under review.

### **5.2 METHODOLOGY**

According to Section 15130(b) of the CEQA Guidelines, cumulative impact analysis may be conducted and presented by either of two methods: (1) a list of past, present, and probable activities producing related or cumulative impacts; or (2) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact. The cumulative list approach has been utilized in the cumulative analysis presented in this chapter, as discussed in Section 5.2.1.

### 5.2.1 Cumulative Projects List

Cumulative impacts for all environmental issue areas are based on a list of projects within the proposed project's study area that either have applications submitted or approved, are under construction, or have recently been completed. Based on information provided by the Orange County Sanitation District (OCSD); Costa Mesa Sanitary District (CMSD); Orange County Parks; Orange County Public Works; and the Cities of Costa Mesa, Huntington Beach, and Newport Beach, 18 cumulative projects were considered in this analysis. The cumulative projects identified in the project area are listed in Table 5-1, and the project numbers listed correspond to the numbers shown on Figure 5-1. The geographic scope of the area affected by cumulative effects includes portions of the Cities of Costa Mesa, Huntington Beach, and Newport Beach surrounding the project area.

**Table 5-1**  
**Cumulative Projects**

Project No.	Name	Location	Description	Status
<i>OCSD</i>				
1a	J-98	OCSD Plant No. 2	Electrical Power and Distribution System Upgrades	Construction planned 7/2017–6/2020
1b	J-111	OCSD Plant No. 2	CEN GEN Emission Control	Construction planned 1/2013–12/2015
1c	J-117	OCSD Plant No. 2	Ocean Outfall System Rehabilitation	Construction planned 7/2016–6/2019
1d	P2-91-1	OCSD Plant No. 2	Digester Rehabilitation Plant No. 2	Construction planned 7/2016–6/2024
1e	P2-98	OCSD Plant No. 2	Primary Treatment Odor Control Replacement	Construction planned 6/2016–7/2019
1f	P2-103	OCSD Plant No. 2	Additional High-Pressure Flare	Construction planned 6/2013–7/2015
1g	P2-107	OCSD Plant No. 2	SCADA System and Network Upgrades	Construction planned 6/2015–7/2018
1h	SP-128	OCSD Plant No. 2	Plant No. 2 Maintenance Building Modifications	Construction planned 6/2013–6/2017
1i	SP-129	OCSD Plant No. 2	Oxygen Plant Rehabilitation	Construction planned 10/2014–5/2018



**Table 5-1  
Cumulative Projects**

Project No.	Name	Location	Description	Status
<i>City of Huntington Beach</i>				
2	Poseidon Desalination Plant	21730 Newland Street, Huntington Beach	Construction and operation of a 50-million-gallon-per -day seawater desalination facility. The facility would consist of seawater intake pre-treatment facilities, a seawater desalination plant utilizing reverse osmosis technology, product water storage, two pump stations, materials storage tanks, and a 42- to 48-inch-diameter product water transmission pipeline possibly up to 10 miles in length in Huntington Beach and Costa Mesa.	Applicant (Poseidon) is in the process of securing permits from regulatory agencies.
<i>City of Costa Mesa</i>				
3	Senior Housing	1640 Monrovia Avenue, Costa Mesa	Development of a 185-unit senior living facility and 40 assisted living units on a 6.8-acre site.	Approved
4	Live/Work Units	1032–1036 West 18th Street, Costa Mesa	Development of a 34-unit common interest live/work development on a 0.48-acre site.	Approved
5	Residential Development; PA-12-24	1259 Victoria Street, Costa Mesa	Development of a 17-unit residential development on a 0.42-acre site.	Approved
6	Live/Work Units; PA-12-21	1527 Newport Boulevard, Costa Mesa	Development of 40 live/work units on a 1.9-acre site.	Approved
7	Live/Work Units	2079 and 2083 Thurin Street, Costa Mesa	Development of a 2-story 10-unit common interest development on a 0.79-acre site.	Approved
8	Restaurant/bowling	1870 Harbor Boulevard and 1875 Newport Boulevard, Costa Mesa	Development of a 17,000-square-foot (sq. ft.) new restaurant, 14,000 sq. ft. bowling center, 7,000 sq. ft. wine storage facility on a 4.6-acre site.	Approved
9	Residential; PA-13-04	2157 Tustin Avenue, Costa Mesa	Development of a 14-unit residential development.	Approved
10	Live/Work Units; PA-13-07	132 Industrial Way, Costa Mesa	Development of a 22-unit live/work development.	Approved
11	Fairview Park Wetlands Restoration	Fairview Park, Costa Mesa	Complete the construction of Fairview Park Wetlands and Riparian Habitat Project Phase II.	Approved
12	Fairview Channel Bike Trail	Fairview Park, Costa Mesa	Construction of bike trail from Santa Ana River to Placentia Avenue on the northern border of Fairview Park.	Approved
13	Brentwood Park Improvements	Brentwood Park, Costa Mesa	Construction of walkways, safety lighting, bio-swale, landscaping, and irrigation.	Approved

**Table 5-1  
Cumulative Projects**

Project No.	Name	Location	Description	Status
14	Traffic Signal Improvements	Victoria Street/Valley Road, Costa Mesa	Project includes traffic signal modifications consisting of implementation of protective-permissive phasing for eastbound and westbound left-turn movements, new mast arms for northbound and southbound approaches, and closed-circuit television camera installation.	Approved
<i>City of Newport Beach</i>				
15	Newport Banning Ranch	North of Pacific Coast Highway, east of the Santa Ana River channel, and south of the Talbert Nature Preserve	A Planned Community Development Plan consisting of 402.3 acres, a maximum of 1,375 dwelling units, 75,000 sq. ft. of commercial retail, 75-room boutique hotel, bed and breakfast or other overnight accommodations, parks and open space.	Pending Coastal Commission approval
16	Newport Boulevard Modification	Newport Boulevard, Newport Beach	This project involves widening Newport Boulevard to accommodate one additional northbound through lane from 30th Street to 32nd Street and one additional southbound through lane from Via Lido to 32nd Street terminating as a right-turn-only lane at 32nd Street.	Under review
17	St. James Road Sewer Relocation	Behind homes along St. James Road to a property below the hillside at 745 Dover Drive, Newport Beach	Relocation of the St. James Road Sewer main. Plans are underway to construct a new medical office building at 745 Dover Drive.	Under review
18	Newport Boulevard Water Main Rehabilitation	Newport Boulevard between Via Lido and 30th Street, Newport Beach	Rehabilitation of the 20-inch and 16-inch mains on Balboa Boulevard from 19th Street to the Channel Bridge.	Under review

### 5.3 CUMULATIVE IMPACT ANALYSIS

The discussion in this section evaluates the potential for the proposed project to contribute to an adverse cumulative impact on the environment. For issues addressed in this Draft EIR, the thresholds used to determine significance are those presented in each of the sections of Chapter 4, Environmental Analysis. For each resource area, an introductory statement is made regarding what would amount to a significant cumulative impact in that resource area. Discussion is then presented regarding the potential for the identified cumulative projects to result in such a cumulative impact, followed by discussion of whether the project's contribution to any cumulative impact would be cumulatively considerable.

### **5.3.1 Aesthetics**

The geographic area affected by cumulative projects for visual resources is primarily restricted to the surrounding areas with direct views of the project area. The viewshed includes Talbert Regional Park, Canyon Park, the Santa Ana River bikeway, surrounding residential land uses, and views from the Costa Mesa Bluffs.

A significant adverse cumulative aesthetic impact would occur where the development of the cumulative projects would degrade the visual quality of an area or where projects would combine to block important views. As described in Section 4.1, Aesthetics, the proposed project would have less-than-significant impacts to aesthetics particularly since no permanent aboveground facilities are proposed and the pipelines would be installed underground.

The nearest cumulative projects to the proposed project include rehabilitation and improvements on the OCSD Plant No. 2 site, which are expected to be consistent with the existing visual character and quality of the site. Additional nearby projects include small-scale mixed-use or residential developments within urbanized areas that would not greatly alter the aesthetics or introduce new sources of light and glare. The Newport Banning Ranch project, as planned, would involve the development of a large-scale residential, commercial, and resort community, just south of the proposed project. As identified in the Newport Banning Ranch EIR, the project would not result in significant impacts related to views, visual resources, or visual character or quality; however, it would result in significant and unavoidable impacts resulting from lighting and glare (City of Newport Beach 2011). Although the proposed project would be located adjacent to the northern boundary of the Newport Banning Ranch, the proposed project's less-than-significant impacts to aesthetics are not anticipated to combine with the Newport Banning Ranch project to create a cumulatively considerable impact. In addition, following construction of the proposed project, the project area would be restored to its existing condition and would not require any new lighting. As a result, cumulative impacts to aesthetics are not considered significant.

### **5.3.2 Air Quality**

The cumulative setting for air quality impacts includes cumulative projects in the surrounding areas within the Cities of Costa Mesa, Huntington Beach, and Newport Beach, and within the South Coast Air Basin.

Potential cumulative air quality impacts would result when cumulative projects' pollutant emissions combine to degrade air quality conditions below acceptable levels. As described in Section 4.2, Air Quality, the proposed project would not result in any significant air quality impacts during construction or operation. Construction of the cumulative projects listed in Table 5-1 overlap with the 2-year construction period anticipated for the proposed project,

which could potentially result in significant cumulative air quality impacts during construction. However, it is not anticipated that the proposed project would make a considerable contribution to such impacts since construction would be phased over time and the project must adhere to South Coast Air Quality Management District (SCAQMD) Rules during construction-related activities: 401 (Visible Emissions), 403 (Fugitive Dust), and 431.2 (Sulfur Content of Liquid Fuels). These measures would assist in minimizing less-than-significant project-generated fugitive dust emissions and combustion pollutants. Once constructed, however, the proposed project would not result in any increase in operational emissions, and although the cumulative projects may result in increased traffic and associated emissions, the proposed project would not contribute to such impacts. Therefore, the proposed project's contribution to cumulative air quality impacts would not be significant.

### **5.3.3 Biological Resources**

The geographic area affected by cumulative projects for biological resources includes the immediate surroundings of the project area, including Talbert Regional Park, Canyon Park, Santa Ana River, and surrounding undeveloped lands.

A significant adverse cumulative biological resources impact would occur where the construction or operation of the cumulative projects would encroach into areas containing sensitive biological resources, affect the movement of wildlife species, or affect the functionality of a planned conservation area. As described in Section 4.3, Biological Resources, the potentially significant impacts to biological resources include those on special-status plants (southern tarplant), habitat linkages, and waters of the United States. These impacts would be mitigated to below a level of significance through implementation of mitigation measures. In addition, the proposed project has been designed to be consistent with requirements of the County of Orange Central and Coastal Natural Community Conservation Planning and Habitat Conservation Plan (NCCP/HCP). The majority of the projects listed in Table 5-1 are located in urbanized areas that have been previously disturbed. However, the proposed Newport Banning Ranch project that is planned within 400 acres of open space just south of the project area would result in significant impacts on similar biological resources (City of Newport Beach 2011). This development would also be required to comply with the County of Orange Central and Coastal NCCP/HCP, which would help to reduce potential cumulative impacts. Just north of the project area in North Talbert Regional Park, the Fairview Park Wetlands and Riparian Habitat Project Phase II is currently underway. This restoration project will enhance existing habitat and protect sensitive biological resources. Although there is the potential for cumulative impacts to biological resources to occur as a result of the cumulative projects, the proposed project's contribution to such impacts would not be cumulatively considerable since all impacts would be mitigated to below a level of significance.

### **5.3.4 Cultural Resources**

The geographic area affected by cumulative projects for cultural resources includes the nearby surrounding areas within the Cities of Costa Mesa, Huntington Beach, and Newport Beach.

A cumulative impact to cultural resources refers to a proposed project's incremental effects in combination with other closely related past, present, and reasonably foreseeable future projects whose impacts may compound or increase the incremental effect of the proposed project to cultural resources listed or eligible for inclusion in the National Register of Historic Places (NRHP) and the California Register of Historic Resources (CRHR). Cumulative impacts may result in a substantial adverse change in the significance of a resource, potentially jeopardizing its eligibility for listing on the NRHP and CRHR.

As described in Section 4.4, Cultural Resources, the proposed project would result in potentially significant impacts to cultural and paleontological resources; however, implementation of mitigation measures would reduce these impacts to less than significant. If unexpected finds are encountered during the construction phase of the project, OCSD, CMSD, or the City of Newport Beach would be required to comply with California Public Resources Code (PRC) Sections 5097–5097.6. Although cumulative projects that require substantial excavation, such as the Newport Banning Ranch project, have the potential to result in adverse impacts to historic, archaeological, and paleontological resources, these projects would also be required to comply with state and federal regulations protecting such resources and impacts would be mitigated on a project-by-project basis. Therefore, cumulative impacts to cultural resources are not anticipated.

### **5.3.5 Geology and Soils**

The geographic area affected by cumulative projects for geology and soils includes the nearby surrounding areas within the Cities of Costa Mesa, Huntington Beach, and Newport Beach.

Potential cumulative impacts on geology and soils would result from projects that combine to create geologic hazards, including unstable geologic conditions, or substantially contribute to erosion. As described in Section 4.6, Geology and Soils, the proposed project would result in less-than-significant impacts related to geology and soils. Project design features described in Chapter 3, Project Description, would ensure that the potential for geological impacts resulting from the proposed project would be less than significant. Construction of the cumulative projects listed in Table 5-1 would be subject to similar geologic hazards due to their location in seismically active Southern California. However, all of the cumulative projects listed would be required to adhere to similar geotechnical design considerations and construction guidelines in order to minimize and avoid significant geologic hazards. Therefore, the proposed project, in

combination with the other cumulative projects, would not create cumulatively considerable impacts related to geology and soils.

### **5.3.6 Greenhouse Gas Emissions**

Given the global scope of climate change, it is not anticipated that a single project would have an individually discernible effect on global climate change. As described in Section 4.6, Greenhouse Gas Emissions, the proposed project would have a less-than-significant impact on greenhouse gas (GHG) emissions. GHG emissions are inherently a cumulative impact—resulting from past, current, and future projects—and the cumulative projects listed in Table 5-1 would likely contribute to this widespread cumulative impact. The cumulative projects listed in Table 5-1 include several small-scale mixed-use and residential developments, infrastructure improvements, and the large-scale Newport Banning Ranch project, which would all generate emissions during construction. In addition, they would result in related activities, including contribution to the number of vehicle trips in the area and electrical generation; all of which contribute to emissions of GHGs. Once constructed, the proposed project would not result in any increase in traffic or energy use, and would actually reduce energy use due to the abandonment of pump stations. Therefore, the proposed project would not result in a considerable contribution to cumulative GHG impacts.

### **5.3.7 Hazards and Hazardous Materials**

The geographic area affected by cumulative projects for hazards and hazardous materials includes the nearby surrounding areas within the Cities of Costa Mesa, Huntington Beach, and Newport Beach.

Cumulative impacts related to hazards and hazardous materials would result from projects that combine to increase exposure to hazards and hazardous materials. As described in Section 4.7, Hazards and Hazardous Materials, the proposed project would result in potentially significant impacts associated with hazards and hazardous materials. Impacts would be reduced to a less-than-significant level through compliance with mitigation measures. In addition, the proposed project would be required to comply with all federal, state, and local regulations associated with construction near hazardous materials, and the use, handling, transportation, and storage of hazardous materials. Potentially significant hazards associated with the proposed project include the potential to encounter refuse during construction near the former Newport Terrace Landfill; the relatively close proximity of the project area to surrounding schools; and the potential to create a hazard to the public or the environment due to the proximity of hazardous materials sites pursuant to Government Code Section 65962.5. Cumulative projects listed in Table 5-1 located within the immediate vicinity of the proposed project could also be exposed to similar hazards or result in similar impacts related to hazardous materials. However, the cumulative projects would also be required to comply with federal, state, and local regulations

that would minimize or avoid potentially significant impacts. Therefore, the proposed project combined with the listed cumulative projects would not result in a significant cumulative impact related to hazards and hazardous materials.

### **5.3.8 Hydrology and Water Quality**

The geographic area affected by cumulative projects for hydrology and water quality includes the nearby surrounding areas within the Cities of Costa Mesa, Huntington Beach, and Newport Beach, including the Santa Ana River.

Cumulative water quality impacts result from projects that combine to either violate any water quality standards or waste discharge requirements, or substantially deplete groundwater supplies. Cumulative hydrology impacts also result from projects combining to alter the course of surface water flow or to increase flood hazards in a particular area, either through diverting floodways or constructing structures within the floodways. As stated in Section 4.8, Hydrology and Water Quality, the proposed project would have less-than-significant impacts on hydrology and water quality. The proposed project is required to obtain a general National Pollutant Discharge Elimination System (NPDES) dewatering permit from the Santa Ana Regional Water Quality Control Board (RWQCB); implement a stormwater pollution prevention plan (SWPPP); comply with applicable federal, state, and local regulations; and follow best management practices (BMPs). The cumulative projects listed in Table 5-1 have the potential to result in significant impacts on hydrology and water quality due to construction and changes in existing drainage patterns or increases in impervious surfaces. However, each project would also be required to comply with federal, state, and local regulations, and implement BMPs as necessary to reduce potentially significant impacts. Therefore, the proposed project would not combine with existing urban runoff or that of cumulative projects to create a significant cumulative impact. Compliance with stormwater standards and required permits would preclude a cumulatively considerable contribution to hydrology and water quality impacts.

### **5.3.9 Land Use and Planning**

The geographic area affected by cumulative projects for land use and planning includes the nearby surrounding areas within the Cities of Costa Mesa, Huntington Beach, and Newport Beach.

Cumulative land use impacts would result from projects that contribute to development that is inconsistent with applicable plans or are incompatible with existing or planned uses or planned addition of incompatible uses. As described in Section 4.9, Land Use and Planning, the proposed project would result in less-than-significant land use impacts. Applicable land use plans or regulations of agencies with land use jurisdiction over the proposed project area and the applicability of identified plans, policies, or regulations to the various project components can be found in Table 4.9-3. Cumulative projects listed in Table 5-1 would be

required to comply with their respective city's general plan, zoning ordinance, and any applicable community plans. Projects that are not consistent with their city's general plan land use designation, zoning, or community plan designations would require adoption of a general plan amendment, zone change, and/or community plan amendment. Projects that require a general plan amendment and/or community plan amendment are required to demonstrate conformance with pertinent goals, policies, and recommendations. Therefore, the proposed project, in combination with the cumulative projects, would not result in a cumulatively considerable impact to land use and planning.

### **5.3.10 Noise**

The cumulative setting for noise impacts includes receptors within 1,000 feet of the project area. Potential cumulative impacts on noise would result when projects combine to generate noise levels in excess of the Cities of Costa Mesa, Huntington Beach, or Newport Beach noise ordinances, either during construction or operation. As discussed in Section 4.10, Noise, construction of the proposed project would temporarily increase ambient noise levels by more than 5 A-weighted decibels (dBA). Construction noise impacts with respect to a temporary or periodic increase in ambient noise levels in the project area would be potentially significant and a mitigation measure (MM-NOI-1) would be required to reduce impacts; however, impacts would remain significant and unavoidable after mitigation. The proposed project would comply with the noise regulations established in the cities' municipal noise ordinance. Cumulative projects listed in Table 5-1 would intensify development, which would amplify ambient noise levels due to an increase in traffic volumes and urban activity/human presence. The cumulative projects located nearest the project area would involve construction that may overlap with construction of the proposed project, and result in cumulative noise impacts during construction. Although all cumulative projects would be required to adhere to the cities' noise ordinances and impacts would be mitigated on a project-by-project basis, there is the potential for overlapping construction noise to combine to exceed these standards. Therefore, the proposed project, in combination with the cumulative projects, would result in potentially significant cumulative noise impacts. Mitigation measures would be implemented to reduce potential impacts; however the combination of impacts from cumulative projects may remain significant and unavoidable.

### **5.3.11 Recreation**

The geographic area affected by cumulative projects for recreation includes the nearby surrounding areas within the Cities of Costa Mesa, Huntington Beach, and Newport Beach, including Talbert Regional Park, Canyon Park, and the Santa Ana River Trail.



Cumulative impacts to recreational facilities would occur if the proposed project, combined with other projects, would create substantial physical deterioration or construction of recreational facilities. As described in Section 4.11, Recreation, the proposed project would not result in significant impacts associated with recreation. While a portion of the proposed OCSD project components would be located in an existing recreational facility (i.e., Talbert Regional Park), which would be impacted during construction, project design features would be incorporated to ensure these impacts remain below a level of significance. In addition, since the proposed project would not result in any population growth in the area, it would not require the construction or expansion of recreational facilities. The cumulative projects listed in Table 5-1 include residential developments, including the Newport Banning Ranch, which would increase the population surrounding the project area and could have significant impacts on recreational facilities. However, since the proposed project would not require the construction or expansion of recreational facilities, it would not contribute to a cumulative impact on recreation.

### **5.3.12 Traffic and Circulation**

The cumulative setting for traffic and circulation impacts includes the roadways and intersections surrounding the project area within the Cities of Costa Mesa, Huntington Beach, and Newport Beach.

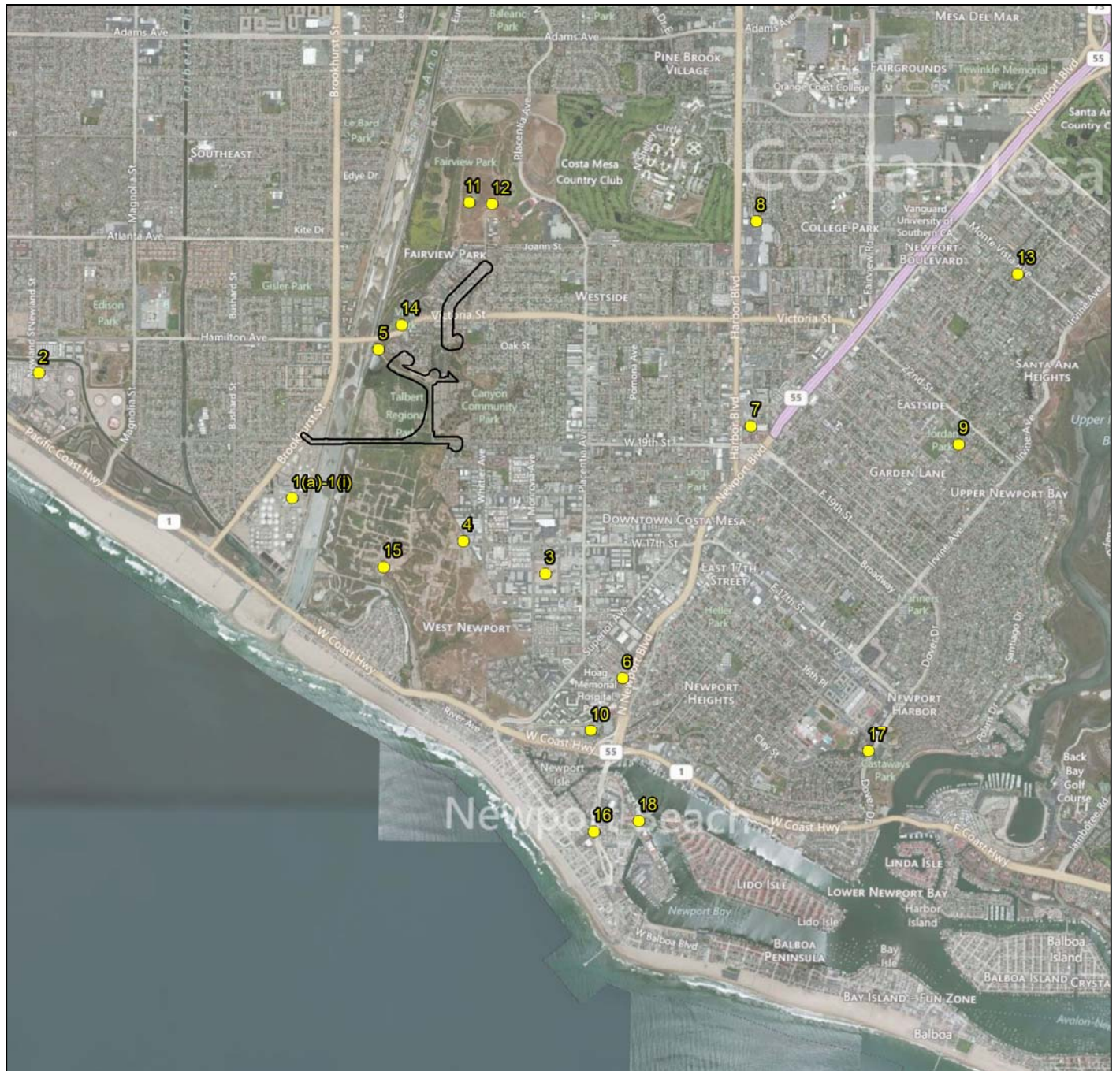
Cumulative traffic impacts result when multiple projects contribute trips to the same circulation system features. As described in Section 4.12, Transportation and Traffic, the proposed project would not result in significant impacts associated with transportation and traffic. All construction within existing roadways would be temporary and the roadways would be restored to their existing conditions after construction is complete. In addition, project design features, including traffic management plans, would be implemented to ensure any impacts to roadways would be less than significant. Once constructed, the proposed project would not result in any increase in traffic since existing staff would maintain the proposed pipelines. The cumulative projects listed in Table 5-1 have the potential to substantially increase traffic on surrounding roadways due to an increase in residential and commercial uses. Although the cumulative impact from these projects may be significant, the proposed project's impacts would be temporary and would therefore not create a considerable contribution to cumulative traffic impacts.

### **5.3.13 Utilities, Service Systems, and Energy**

The geographic area affected by cumulative projects for impacts to utilities, service systems, and energy includes the nearby surrounding areas within the Cities of Costa Mesa, Huntington Beach, and Newport Beach.









Cumulative impacts on utilities and service systems, including water, wastewater, stormwater, solid waste, and energy services would result when projects combine to increase demand on services such that additional services must be constructed or provided. This would usually result

from an incremental addition of people occupying an area or incremental construction of new or larger buildings requiring utilities provision. As described in Section 4.13, Utilities, Service Systems, and Energy, the proposed project would result in less-than-significant impacts to utilities, service systems, and energy. The proposed project would consolidate sewer pipelines and reduce the reliance on pump station infrastructure, which would decrease the amount of energy use. There would not be an increase in the total amount of wastewater being transported and only a minimal amount of water would be required for project construction. The cumulative projects include the development of residential and commercial projects, including the large-scale Newport Banning Ranch; all of which would increase the demands for utilities, service systems, and energy. Although the cumulative projects may result in a significant cumulative impact on such services and facilities, the proposed project would not result in a cumulatively considerable contribution to such an impact.



 Project Boundary

#### Cumulative Projects

-  1(a)-1(i): OCSD Plant 2 Projects
-  2: Poseidon Desalination Plant
-  3: Senior Housing
-  4: Live/Work Units
-  5: Residential Development; PA-12-24
-  6: Live/Work Units; PA-12-21
-  7: Live/Work Units
-  8: Restaurant/bowling

-  9: Residential; PA-13-04
-  10: Live/Work Units; PA-13-07
-  11: Fairview Park Wetlands Restoration
-  12: Fairview Channel Bike Trail
-  13: Brentwood Park Improvements
-  14: Traffic Signal Improvements
-  15: Newport Banning Ranch
-  16: Newport Blvd Modification
-  17: St. James Road Sewer Relocation
-  18: Newport Boulevard Water Main Rehabilitation



0 0.5 1 Miles

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SOURCE: BING 2013

Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

**FIGURE 5-1**  
**Cumulative Projects Map**

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## **CHAPTER 6 OTHER CEQA CONSIDERATIONS**

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### **6.1 EFFECTS NOT FOUND TO BE SIGNIFICANT**

The following environmental factors have been analyzed and were determined to have no significant impact as a result of the proposed project implementation. The following environmental factors will not be evaluated further in this Draft Environmental Impact Report (EIR):

- Agriculture and forestry resources
- Mineral resources
- Population and housing
- Public services
- Parking.

#### **6.1.1 Agriculture and Forestry Resources**

The project area is highly disturbed and does not contain active agricultural or forestry lands. A review of the Department of Conservation 2006 maps prepared for the Farmland Mapping and Monitoring Program revealed that there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located near the proposed project area (California Department of Conservation 2010). Furthermore, the project area and its adjacent uses are not zoned for agricultural uses, forest land, timberland, or timberland production. No part of the proposed project is located on land that is currently under a Williamson Act contract. The proposed project is located in areas zoned as IL (Industrial Limited), CC (Coastal Conservation), OS-S (Shoreline Subdistrict), OS-WR (Water Recreation Subdistrict). Additionally, the proposed project area has land use designations of P (Public), OS-C (Open Space Conservation), and OS-S (Open Space – Shore). Because the proposed project area does not contain any of the aforementioned agricultural or forest indicators, no impacts would occur to Prime, Unique, or Important Farmland with proposed project implementation; forest land, timberland, or farmland would not be lost or converted to non-forest or non-agricultural uses; and no overall impacts to agriculture and forestry resources would occur.

#### **6.1.2 Mineral Resources**

The General Plans of the County of Orange (2011) and Cities of Costa Mesa (2000), Newport Beach (2006), and Huntington Beach (1996) do not identify the project area as located within an active well field or as having locally important mineral resources. Therefore, no impacts on regional minerals or minerals of state importance would occur. Additionally, implementation of

the proposed project would not reduce the availability of locally important mineral resources and no impact would occur.

### **6.1.3 Population and Housing**

The proposed project is considered an extension of infrastructure since it involves the construction of new OCSD and CMSD sewer lines. As discussed in greater detail in Section 6.4, Growth Inducement, the proposed project would not indirectly induce growth because the purpose of the proposed project is to consolidate facilities and reduce the reliance on pump station infrastructure. The proposed project is the last trunk sewer planned within OCSD's service area and is not intended to expand OCSD's service area or increase OCSD's wastewater capacity.

Also, the proposed project would not directly induce population growth because it does not propose any new homes or businesses. The proposed project would not displace any existing housing or people as it is located within Talbert Regional Park, Canyon Park, and surrounding existing streets. Therefore, the proposed project would not necessitate the construction of replacement housing. For these reasons, the proposed project would not result in significant impacts to population and housing.

### **6.1.4 Public Services**

Although additional workers would be required during construction of the proposed project, it is anticipated that most of these workers would commute to the project area from surrounding communities. In addition, once constructed, the proposed project components would not require additional employees to maintain them. Since there would not be an increase in population attributed to the proposed project, it would not require new or expanded facilities in order to provide adequate police services, fire suppression, or emergency medical services. Nor would it generate a new population of school age children that would impact local schools. Therefore, the proposed project is not expected to result in impacts to the aforementioned public services.

### **6.1.5 Parking**

The proposed project would not cause any permanent changes in existing parking supply or demand as it does not involve the construction of any uses that would require additional parking, nor would it remove any existing parking. During construction, there may be temporary closures of on-street parking spaces due to adjacent construction; however these closures would be short-term and would not impact large amounts of parking at one time. Therefore, the proposed project is not anticipated to result in parking impacts.

## 6.2 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

As described in Chapter 4, Environmental Analysis, the proposed project would result in significant impacts related to biological resources, cultural resources, hazards and hazardous materials, and noise. All of the significant impacts would be reduced to below a level of significance through implementation of mitigation measures, as described in each section, with the exception of impacts to ambient noise levels during construction of the proposed project (Impact NOI-1), which would remain significant and unavoidable after mitigation. As a result, Impact NOI-1 would be the only significant and unavoidable environmental impact associated with the proposed project.

## 6.3 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL EFFECTS

The California Environmental Quality Act (CEQA) Guidelines (Section 15126.2(c)) require that an EIR identify significant and irreversible environmental changes that would be caused by the proposed project. Construction of the proposed project would consume fossil fuels, a non-renewable resource, to power construction vehicles and equipment. The proposed project would also require materials, including steel and concrete, to build the trunk sewer and other pipelines, and to fill the abandoned pump stations. Operation of the proposed project would not increase the use of fossil fuels.

## 6.4 GROWTH INDUCEMENT

The CEQA Guidelines (Section 15126.2(d)) require that an EIR evaluate the growth-inducing impacts of a proposed project. Section 15126.2(d) calls for the EIR to:

*Discuss the way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a reclaimed water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

A project can have direct and/or indirect growth inducement potential. Direct growth would result if a project, for example, involved construction of new housing. A project would have indirect growth inducement potential if it established substantial new permanent employment

opportunities (e.g., commercial, industrial, or governmental enterprises) or if it would involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project would indirectly induce growth if it would remove an obstacle to additional growth and development, such as removing a constraint on a required public service.

A project that is determined to be growth inducing has the potential to result in subsequent environmental effects as a result of such growth. These environmental effects are considered indirect secondary effects of growth. Secondary effects of growth can result, for example, in significant increased demand on community and public service infrastructure; increased traffic and noise; and degradation of air and water quality.

As described previously in Section 6.1.3, implementation of the proposed project would not potentially or directly result in population growth or in the construction of additional housing in the project area. Construction of the proposed project would continue for approximately 2 years, although it is not anticipated to create employment opportunities beyond the levels normally available to construction workers in the area. While additional workers would be required during construction of the proposed project, it is anticipated that most of these workers would commute to the project area from surrounding communities. In addition, once constructed, the proposed project components would not require additional employees to maintain them. Therefore, the proposed project would not have direct impacts on growth.

The purpose of the proposed project is to consolidate facilities and reduce the reliance on pump station infrastructure. The proposed project is the last trunk sewer planned within OCSD's service area and is not intended to expand OCSD's service area or increase OCSD's wastewater capacity. Instead of expanding infrastructure, the proposed project would have the benefit of reducing overall risks associated with facility failure and the reduction of long-term operational, maintenance, and replacement costs associated with pump station infrastructure. In addition, the proposed project would successfully divert flows from the Fairview Road Trunk Sewer, currently planned for upsizing to accommodate ultimate system flows. This diversion is expected to eliminate the need for upsizing of the Fairview Road Trunk Sewer, saving infrastructure replacement costs and impacts to the public during its construction phase.

For the reasons described above, the proposed project would not result in the removal of an obstacle to growth, and thus, would not indirectly induce growth nor would it induce secondary effects caused by growth.



## **CHAPTER 7 ALTERNATIVES**

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### **7.1 CEQA REQUIREMENTS**

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, Environmental Impact Reports (EIRs) are required to “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” (14 CCR 15126.6(a)). An EIR “must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation” (14 CCR 15126.6(a)). The alternatives discussion is required even if these alternatives “would impede to some degree the attainment of the project objectives, or would be more costly” (14 CCR 15126.6(b)).

The inclusion of an alternative in an EIR does not constitute definitive evidence that the alternative is in fact “feasible.” The final decision regarding the feasibility of alternatives lies with the decision maker for a given project, who must make the necessary findings addressing the feasibility of alternatives for avoiding or substantially reducing a project’s significant environmental effects (PRC, Section 21081; see also 14 CCR 15091).

### **7.2 PROJECT OBJECTIVES**

As described in Chapter 3, Project Description, the proposed project objectives are as follows:

- Provide a reliable conveyance system for projected 2030 wastewater flows tributary to each of the existing sewer pump stations proposed to be abandoned.
- Provide infrastructure that may be efficiently maintained and easily accessed in the event of an emergency.
- Reduce the risk of spills in the local agency wastewater collection system due to system failure.
- Avoid operational risks associated with pump stations in the wastewater collection system.
- Avoid substantial disruption in the Talbert Nature Preserve for construction and operation.
- Avoid the need for new easements from private property owners.
- Avoid substantial traffic disruption during the construction phase, particularly on Victoria Street and Hamilton Avenue.
- Provide a solution that reduces the potential for chronic noise and odor complaints.

### **7.3 SIGNIFICANT ENVIRONMENTAL IMPACTS**

Chapter 4 of this Draft EIR identifies potential impacts associated with the proposed project. As described in Chapter 4, the proposed project would result in significant impacts to biological resources, cultural resources, hazards and hazardous materials, and noise; all of these impacts would be reduced to below a level of significance through implementation of proposed mitigation measures, with the exception of the impact to ambient noise levels during construction of the proposed project (Impact NOI-1), which would remain significant and unavoidable after mitigation. Impacts to all other issue areas analyzed in Chapter 4 would be less than significant and would not require mitigation.

### **7.4 ALTERNATIVES CONSIDERED BUT REJECTED**

An EIR must briefly describe the rationale for selection and rejection of alternatives. The lead agency may make an initial determination as to which alternatives are potentially feasible, and therefore merit in-depth consideration, and which are not feasible. Alternatives whose implementation is remote or speculative, or the effects of which cannot be reasonably predicted, need not be considered (CEQA Guidelines, Section 15126.6(f)(3)). Factors that may be considered when addressing the feasibility of an alternative include site suitability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, economic viability, and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site.

Prior to selecting the proposed alignment for the Southwest Costa Mesa Trunk Sewer Project No. 6-19, the Orange County Sanitation District (OCSD) completed an extensive evaluation of 11 alignments over approximately 1 year. The identified alignments were processed through a preliminary screening of 20 initial weighted criteria, and a secondary screening of 8 criteria, including impacts to environmentally sensitive habitat areas, permitting requirements, maintenance/accessibility, odor control, design safety requirements, and flow handling. The process was intended to eliminate outlying alignments based on “fatal flaws” or poor ranking among other considered alignments. The results of the preliminary evaluation, along with detailed hydraulic analysis of the alignments, resulted in the continuation of seven alignments for more in-depth analysis. These remaining seven alignments were further discussed and evaluated as part of the initial engineering evaluations, resulting in the elimination of three alignments and leaving four remaining alignments to be further evaluated in detail in the EIR, including the proposed alignment. The proposed project was selected as the best alignment in terms of minimizing environmental impacts while also meeting the project objectives. The remaining three alternatives are included in Subsection 7.5, Alternatives Analysis.

Alternatives to the proposed project were identified during the Notice of Preparation comment period, including an alternative that would utilize existing streets and avoid all impacts to Talbert Regional Park, and an alternative that would upgrade the existing pump stations rather than constructing additional sewer lines and abandoning the pump stations. Both of these are considered below.

It may be possible to locate the proposed pipelines within existing streets; however, such an alternative would result in substantial traffic impacts during construction due to the installation of new pipelines within existing streets. In particular, such an alternative would not meet the project objective of avoiding substantial traffic disruption during construction on Victoria Street/Hamilton Avenue, since it would require construction within Victoria Street/Hamilton Avenue, which is a major east–west connector between the Cities of Costa Mesa and Newport Beach. This alternative would also fail to meet the project objective of providing infrastructure that can be efficiently maintained and easily accessed, because future maintenance and improvements to pipelines located within existing streets may result in road closures or other traffic concerns. Additionally, this alternative would not meet the project objectives of avoiding risks associated with pump stations or avoiding the potential for chronic noise and odor due to force main air-release appurtenances required at high points of the pipeline profile. An all-streets alternative may require additional pump stations and force mains, depending on the elevations along such an alignment, which would have the potential for chronic noise and odor issues. At a minimum, this alternative would require a new pump station at the site of the existing City of Newport Beach Pump Station, located at the Talbert Nature Preserve boundary. As such, this alternative would not avoid disruption within the preserve and would not meet the related project objective. Therefore, this alternative would not meet most of the project objectives and it was rejected from detailed evaluation.

An alternative that involved upgrading the existing pump stations rather than constructing additional sewer pipelines was also considered; however, a new regional pump station to serve future projected sewer flows would still be necessary and would likely be located in Talbert Regional Park, resulting in biological, noise, and other impacts. This alternative would not meet the project objectives of providing a reliable conveyance system for future projected wastewater flows, avoiding risks associated with pump stations, or avoiding substantial disruption in Talbert Regional Park. The existing pump stations proposed for abandonment are located close to existing residential uses, and any upgrades may require additional easements into private property in order to provide adequate capacity. This would not meet the project objective of avoiding the need for new easements from private property owners. Construction and operational noise impacts resulting from these pump stations would be greater than those resulting under the proposed project. The upgraded pump stations would also increase energy demands. Therefore, this alternative would not meet most of the project objectives and it was rejected from detailed evaluation.

## **7.5 ALTERNATIVES ANALYSIS**

This section discusses four alternatives to the proposed project, including the No Project Alternative. The No Project Alternative is a required element of an EIR pursuant to Section 15126.6(e) of the CEQA Guidelines that examines the environmental effects that would occur if the project were not to proceed. The other alternatives are discussed as part of the “range of reasonable alternatives” selected by OCSD. The alternatives addressed in this section are listed below, followed by a more detailed discussion of each:

1. No Project Alternative
2. Plant No. 2 Pump Station Alternative
3. Victoria Street Force Main Alternative
4. Victoria Street Gravity Alternative

### **7.5.1 No Project Alternative**

Under the No Project Alternative, a new OCSD Southwest Costa Mesa Trunk Sewer (OCSD sewer pipeline) connecting the City of Newport Beach Pump Station at Walkabout Circle (Newport Beach Pump Station) to OCSD Wastewater Treatment Plant No. 2 (Plant No. 2) would not be constructed, nor would it include the construction of the Costa Mesa Sanitary District (CMSD) and City of Newport Beach pipelines, or abandonment of associated pump stations. The project area would not be impacted by construction of the pipelines, or abandonment of the pump stations (all eight pump stations would remain in service). However, without a new OCSD sewer pipeline, there would continue to be risks associated with facility failure of the eight existing pump stations that would be taken out of service under the other alternatives. As such, the existing 9,800-foot Fairview Road Trunk Sewer, which extends along Fairview Avenue between Newport Boulevard and West Baker Street northeast of the project site, would require upsizing with a parallel or replacement sewer to accommodate higher future projected wet-weather flows. Construction of the Fairview Road Trunk Sewer improvements would last approximately 12 months. The Fairview Road Trunk Sewer improvements were analyzed in the 2007 Program EIR for the Collection System Improvement Plan (OCSD 2007). The description of the Fairview Road Trunk Sewer improvements, described above, is based on the description provided in the Program EIR.

#### **7.5.1.1 Ability to Meet Project Objectives**

The No Project Alternative would require upsizing of the Fairview Road Trunk Sewer with a parallel or replacement sewer. This upsizing would meet the project objectives of providing a reliable conveyance system for future projected flows, reducing the risk of system failure, and avoiding substantial disruption in Talbert Regional Park. The No Project Alternative would also

meet the project objectives of avoiding the need for new easements from private property owners, avoiding traffic on Victoria Street/Hamilton Avenue, and avoiding the potential for chronic noise and odor complaints at high points in the pipeline profile. However, the No Project Alternative would not meet the project objective of providing infrastructure that may be efficiently maintained and easily accessed in the event of an emergency, since the Fairview Road Trunk Sewer runs beneath Fairview Road (a major arterial roadway in the City of Costa Mesa). Nor would the No Project Alternative meet the project objective of avoiding operational risks associated with pump stations, since none of the pump stations would be abandoned under this alternative. The No Project Alternative would meet most, but not all, project objectives.

### **7.5.1.2 Impact Analysis**

#### **Aesthetics**

As described in Section 4.1, Aesthetics, the proposed project would not result in significant impacts to aesthetics. Construction activities associated with installation of the proposed sewer pipelines would have minimal effects on designated scenic vistas in the area, and during operations, proposed sewer pipelines would be located underground (no aboveground facilities are proposed) and would not affect views from scenic vistas or state scenic highway corridors. In addition, because the proposed sewer pipelines would be installed underground and no aboveground facilities would be constructed, the project would not degrade the existing visual character or quality of the surrounding area. Construction activities would occur during the hours of operation permitted by the Cities of Costa Mesa, Huntington Beach, and Newport Beach (nighttime construction is not anticipated), and as no aboveground facilities or structures are proposed, the project would not result in the introduction of new sources of light or glare. Under the No Project Alternative, the existing Fairview Road trunk sewer in the City of Costa Mesa would require a parallel or larger-capacity replacement sewer to accommodate future projected wet-weather flows. Therefore, similar to the proposed project, a temporary change in the visual character of the area attributed to an increased presence of construction workers, vehicles, and equipment would occur during installation of the new Fairview Road Trunk Sewer. Similar to the proposed project, since nighttime construction is not anticipated, construction lighting impacts would be similar to those discussed in Section 4.1 for the proposed project. Furthermore, because no aboveground facilities are anticipated to be required, the No Project Alternative and the proposed project would have similar aesthetic impacts.

#### **Air Quality**

As described in Section 4.2, Air Quality, implementation of the proposed project would not result in any significant air quality impacts during construction or operation. Although construction of the proposed project would result in emissions during the 24-month construction

period, the emissions would stay below significant levels. Once the new sewer pipelines are installed, no additional routine daily operational activities that would generate air pollutant emissions are anticipated to occur. Construction of the Fairview Road Trunk Sewer improvements would result in emissions during the estimated 12-month construction period due to the use of construction equipment. It is assumed that similar equipment would be used as for the proposed project; however, the Fairview Road Trunk Sewer would be limited to open trench construction and would not involve the horizontal directional drilling (HDD) method, which is a trenchless technique for installing pipes or utility lines belowground using a surface-mounted drill rig. The No Project Alternative would have reduced construction emissions compared to the proposed project since the construction period would be half as long and there would be no HDD, which requires additional construction equipment. In both cases, operational emissions would not increase, since no additional traffic or other sources of emissions are expected following construction. Although the proposed project would not result in significant air quality impacts, the No Project Alternative would have reduced air quality impacts when compared to the proposed project.

### **Biological Resources**

As described in Section 4.3, Biological Resources, the proposed project would result in significant impacts to special-status plant species (southern tarplant (*Centromadia parryi* ssp. *australis*)), temporary and permanent loss of suitable habitat for least Bell's vireo (*Vireo bellii pusillus*), and impacts on habitat linkages and jurisdictional waters. These significant impacts would be reduced to less than significant with incorporation of mitigation measures. Under the No Project Alternative, the Fairview Road Trunk Sewer would require either upsizing with a parallel or replacement sewer, or trenchless rehabilitation methods to accommodate future projected wet-weather flows. However, the construction of such improvements would not result in any direct or indirect impacts to biological resources since construction would occur within the existing Fairview Road, which has been previously disturbed. Therefore, the No Project Alternative would result in lesser impacts when compared to the proposed project since there would be no direct or indirect impacts to biological resources.

### **Cultural Resources**

As described in Section 4.4, Cultural Resources, the proposed project would result in potentially significant impacts to unknown cultural or paleontological resources; however, implementation of mitigation measures would reduce these impacts to less than significant. Under the No Project Alternative, the new OCSD sewer pipeline connecting the Newport Beach Pump Station to Plant No. 2 would not be constructed, nor would it include the construction of the CMSD and City of Newport Beach pipelines or abandonment of associated pump stations. Under the No Project Alternative, installation of a new Fairview Road Trunk Sewer parallel or replacement would be

necessary to support future projected wet-weather flows without the proposed project. Since construction of the Fairview Road Trunk Sewer would occur within previously disturbed areas beneath the roadway, impacts to cultural resources would be reduced under this alternative when compared to the proposed project.

### **Geology and Soils**

As described in Section 4.5, Geology and Soils, the proposed project would have a less than significant impact related to geologic hazards. Under the No Project Alternative, no additional structures or workers would be exposed to ground rupture or strong seismic shaking if the project area were to remain in its current state; however, the upsizing of the Fairview Road Trunk Sewer would result in similar risks related to geology and soils as the proposed project. The proposed project would be at risk of geologic hazards; however, these risks would be reduced to below a level of significance through proper geotechnical investigation and design. Under the No Project Alternative the expansion of the Fairview Road Trunk Sewer would also be at risk of geologic hazards due to the location in seismically active Southern California and would be required to comply with similar geotechnical design considerations. However, the No Project Alternative would not require HDD tunneling under the Santa Ana River, which has greater geologic risks than open trench construction. Therefore, although the proposed project's impacts would be less than significant, the No Project Alternative would have lesser impacts to geology and soils when compared to the proposed project.

### **Greenhouse Gas Emissions**

As described in Section 4.6, Greenhouse Gas Emissions, the proposed project would not result in significant impacts to greenhouse gas (GHG) emissions during construction or operation. Under the No Project Alternative, the Fairview Road Trunk Sewer would require upsizing with a parallel or replacement sewer to accommodate future projected wet-weather flows. As described above, upsizing the Fairview Road Trunk Sewer would result in slightly less construction-related emissions than the proposed project since the construction period would be shorter and there would be no HDD construction under this alternative. However, under the No Project Alternative, the eight existing pump stations would remain in place and would continue to generate GHG emissions due to energy use and potentially from backup generators. This would result in greater operational GHG emissions than the proposed project. Therefore, since the long-term operation emissions would be greater under the No Project Alternative, it would have greater GHG impacts when compared to the proposed project.

### **Hazards and Hazardous Materials**

As described in Section 4.7, Hazards and Hazardous Materials, the proposed project would result in significant impacts, including the potential to encounter refuse during construction near the

former Newport Terrace Landfill; the relative proximity of the project area to surrounding schools; and the potential to create a hazard to the public or the environment due to the proximity of hazardous materials sites pursuant to Government Code Section 65962.5. These impacts would be reduced to below a level of significance with incorporation of mitigation measures. Pipeline installation surrounding the former Newport Terrace Landfill could potentially release refuse, creating a hazard to the public and the environment. The No Project Alternative would require upsizing or replacement of the Fairview Road Trunk Sewer in order to accommodate future projected wet-weather flows. Future upsizing or replacement of the Fairview Road Trunk Sewer would occur within Fairview Road, which is a previously disturbed area. Although hazards or hazardous materials could be present beneath Fairview Road, the road is not located near the former Newport Terrace Landfill. Since none of the existing pump stations would be abandoned under this alternative, the operational risks associated with these pump stations would remain, resulting in potential wastewater spills. Overall, the proposed project would have greater risks associated with hazards due to the proximity of the former Newport Terrace Landfill and potential spills, although both projects' impacts would be less than significant after mitigation measures are implemented.

### **Hydrology and Water Quality**

As stated in Section 4.8, Hydrology and Water Quality, the proposed project would have less than significant impacts on hydrology and water quality. The proposed project would involve open trench construction and HDD tunneling under the Santa Ana River and within Canyon Drive. Impacts would remain below a level of significance with compliance with all applicable permits and regulations. Under the No Project Alternative, the project area would not be impacted by construction of the pipelines or abandonment of the pump stations. However, the existing Fairview Road Trunk Sewer would be upsized with a parallel or replacement sewer to accommodate higher future projected wet-weather flows. The Fairview Road Trunk Sewer improvements would involve open trench construction within the existing roadway, which would temporarily alter existing drainage patterns. The roadway would be returned to existing conditions after construction. Similar to the proposed project, the Fairview Road Trunk Sewer improvements would be required to comply with applicable permits and regulations. Therefore, since construction under both the proposed project and the No Project Alternative would be in accordance with all permits and regulations they would have similar impacts on hydrology and water quality.

### **Land Use and Planning**

As described in Section 4.9, Land Use and Planning, the proposed project would result in less than significant land use impacts and would not create any conflicts with surrounding or incompatible uses. Under the No Project Alternative, the project area would not be impacted by



construction of the pipelines or abandonment of the pump stations. However, the existing Fairview Road Trunk Sewer would require upsizing with a parallel or replacement sewer to accommodate higher future projected wet-weather flows. Future upsizing of the Fairview Road Trunk Sewer would take place within its existing location and would not create an incompatible use. Therefore, the No Project Alternative would have similar impacts to land use when compared to the proposed project.

### **Noise**

As discussed in Section 4.10, Noise, construction of the proposed project would result in a significant impact due to the temporary increase in ambient noise levels in the project area during construction and this impact would remain significant and unavoidable after mitigation. Under the No Project Alternative, the future expansion of the Fairview Road Trunk Sewer would also result in construction noise that could impact neighboring uses. Both the proposed project and the No Project Alternative would install pipeline close to residential neighborhoods. Even with compliance with the cities' noise ordinances, construction activities would substantially increase noise levels and impacts could be significant without mitigation. Construction of the Fairview Road Trunk Sewer improvements would last approximately 12 months, or half as long as the construction of the proposed project. Therefore, the No Project Alternative would have reduced noise impacts due to the shortened construction period.

### **Recreation**

As described in Section 4.11, Recreation, the proposed project would not result in substantial physical deterioration or construction of new recreational facilities. Although a majority of the proposed OCSD sewer pipeline would be installed around the perimeter of Talbert Regional Park and may temporarily close Trails A and D within the park, temporary trail closures would not result in substantial deterioration of the park. The No Project Alternative, however, would not have any effect on or within any recreational facility, as no construction would occur in Talbert Regional Park or Canyon Park. In addition, upsizing the Fairview Road Trunk Sewer would not impact any recreational facilities. Therefore, the No Project Alternative would have reduced recreation impacts compared to the proposed project.

### **Traffic and Circulation**

As described in Section 4.12, Traffic and Circulation, the proposed project would not result in significant impacts to traffic. The proposed project would require temporary lane closures associated with the CMSD and City of Newport Beach portions of the proposed project and would cause a temporary increase in traffic due to construction vehicles. A traffic management plan would be submitted to the relevant cities to reduce impacts to roadways. The No Project Alternative would require future upsizing of the Fairview Road Trunk Sewer, which would occur

entirely within the existing roadway and would result in temporary road closures and detours during construction. The Fairview Road Trunk Sewer upsizing would be installed using open trench techniques for an approximate distance of 9,800 feet, which would result in greater conflicts with traffic and circulation than the proposed project. Although the No Project Alternative would be required to submit a traffic management plan, impacts on traffic and circulation would be greater compared to the proposed project.

### **Utilities, Service Systems, and Energy**

As described in Section 4.13, Utilities, Service Systems, and Energy, the proposed project would result in less than significant impacts to utilities, service systems, and energy. The proposed project would consolidate sewer pipelines and reduce the reliance on pump station infrastructure, which would decrease energy use. Under the No Project Alternative, the pump stations would continue to be in service, requiring the same amount of energy and continuing to be at risk of facility failure. Therefore, the No Project Alternative would have greater impacts related to utilities, service systems, and energy compared to the proposed project.

## **7.5.2 Plant No. 2 Pump Station Alternative**

Under the Plant No. 2 Pump Station Alternative, shown on Figure 7-1, the OCSD sewer pipeline would have a similar alignment to the proposed project, and would include the construction of approximately 3,400 linear feet of 24-inch-diameter gravity sewer from the existing Newport Beach Pump Station site. The OCSD sewer pipeline would extend south along the eastern border of Talbert Regional Park and then west from the terminus of 19th Street toward the Santa Ana River.

Construction of the CMSD and City of Newport Beach pipelines and abandonment of associated pump stations would occur under this alternative. Similar to the proposed project, this portion of the pipeline would be installed by open trench construction methods. The crossing of the Santa Ana River would be constructed with microtunneling methods. Vertical jacking and receiving shafts would be constructed on both sides of the Santa Ana River and a casing pipe of up to 52 inches inside diameter would be jacked under the Santa Ana River levees and channel. An earth pressure balance microtunneling machine would be used, and care and attention would be required of the contractor to avoid subsidence of the ground above due to the potential for over-excavation during the tunneling operation. The vertical shaft on the east side of the Santa Ana River would be converted to a drop manhole to transition the flow from the 24-inch upstream gravity sewer to the 24-inch downstream gravity sewer installed within the jacked casing. The vertical shaft on the west side of the Santa Ana River would be within the OCSD Plant No. 2 and would be converted to a wet well for a submersible pump station or a conventional wet-pit/dry-pit pump station. The new pump station located in

OCS D Plant No. 2 would convey flows with approximately 350 linear feet of 14-inch-diameter force main to the existing Interplant Line in Brookhurst Street. This segment of pipeline would also be installed with open trench construction methods.

#### **7.5.2.1 Ability to Meet Project Objectives**

The Plant No. 2 Pump Station Alternative would meet the project objectives of providing a reliable conveyance system for future projected wastewater flows, providing for efficient maintenance and ease of access during a spill or emergency, and reducing the risk of spills due to system failure. This alternative would also meet the project objectives of avoiding the need for a new regional pump station in Talbert Regional Park as well as avoiding the need for new easements from private property owners. In addition, the Plant No. 2 Pump Station Alternative would meet the project objective of avoiding substantial traffic disruption on Victoria Street and Hamilton Avenue because construction would not take place on these streets. Furthermore, this alternative would meet the objective of avoiding the potential for chronic noise and odor complaints due to force main air-release appurtenances required at high points in the pipeline profile. The Plant No. 2 Pump Station Alternative would meet all of the project objectives.

#### **7.5.2.2 Impact Analysis**

##### **Aesthetics**

The proposed project and the Plant No. 2 Pump Station Alternative would have similar impacts on aesthetics. The proposed project and the Plant No. 2 Pump Alternative would rely on similar construction methods to install the 24-inch gravity sewer within Talbert Regional Park; however, different tunneling techniques would be used to cross beneath the Santa Ana River to Plant No. 2. The proposed project's HDD tunneling techniques and the Plant No. 2 Pump Station Alternative's microtunneling techniques would involve the use of different construction equipment; however, sensitive residential and recreation viewers in the areas would not likely be able to discern the nuances associated with differences in tunneling techniques and equipment. In addition, construction of the proposed project and the Plant No. 2 Pump Station Alternative would both occur during the hours of operation for construction activities established by the Cities of Costa Mesa, Huntington Beach, and Newport Beach (no nighttime construction is anticipated). Therefore, as with the proposed project, construction of the Plant No. 2 Pump Station would not substantially affect designated scenic vistas in the surrounding area and would not affect existing views from a state scenic highway corridor or a locally designated scenic roadway.

Unlike the proposed project, the Plant No. 2 Pump Station Alternative may include aboveground facilities/equipment if the conventional wet-pit/dry-pit pump station option is ultimately constructed. However, because the new pump station would be located within the

boundary of OCSD Plant No. 2 in the immediate vicinity of existing wastewater treatment facilities, structures, and equipment, the introduction of a pump station at the proposed location would be consistent with the existing visual character of the area. In addition, views of the new pump station from off-site areas, including Brookhurst Street, the Santa Ana River Trail and Parkway, trails within Talbert Regional Park, and nearby residences, would be screened by existing OCSD structures and facilities; existing vegetation, including eucalyptus trees and an approximately 8-foot-tall continuous concrete masonry unit wall installed east of Brookhurst Street; and existing vegetation and fencing located west of the Santa Ana River Trail & Parkway. As such, impacts to the existing visual character or quality of the site during operations would be similar to those of the proposed project and would be less than significant.

Because nighttime construction is not anticipated, construction lighting impacts would be similar to those discussed in Section 4.1 for the proposed project. Similar to all existing buildings within Plant No. 2, lights would be installed around the new pump station for emergency use. Emergency lights would normally be left off; therefore, installation would not represent a substantial new source of nighttime lighting. The Plant No. 2 Pump Station Alternative may result in the construction and operation of a conventional wet-pit/dry-pit pump station that may include aboveground components; therefore, this alternative may generate new sources of glare during operation. However, as stated above, existing views to the new pump station are screened from sensitive viewers by existing OCSD structures and facilities, vegetation, and walls/fences. Potential sources of glare (i.e., surfaces and equipment with metallic/reflective coatings and finishes) associated with the new pump station are similar to those displayed by existing structures and equipment within the boundary of OCSD Plant No. 2. Therefore, while operational glare impacts would be slightly greater than those of the proposed project (no new aboveground structures would be constructed for the proposed project and therefore no new sources of glare would be introduced to the project area), overall impacts would be similar to the proposed project.

### **Air Quality**

As described in Section 4.2, Air Quality, implementation of the proposed project would not result in any significant air quality impacts during construction or operation. Although construction of the proposed project would result in emissions during the 24-month construction period, the emissions would stay below significant levels. Once the new sewer pipelines are installed, no additional routine daily operational activities that would generate air pollutant emissions are anticipated to occur. Both the proposed project and the Plant No. 2 Pump Station Alternative would require open trench construction methods to install the 24-inch gravity sewer along the eastern and southern border of Talbert Regional Park. Once they reach the east side of the Santa Ana River, microtunneling techniques would be used to cross beneath the Santa Ana

River to Plant No. 2, as opposed to the proposed HDD technique for the proposed project. These construction methods would result in similar emissions. However, the Plant No. 2 Pump Station Alternative would involve construction of a new pump station, which would generate additional construction emissions. Therefore, the Plant No. 2 Pump Station Alternative would have greater impacts on air quality than the proposed project.

### **Biological Resources**

As described in Section 4.3, Biological Resources, the proposed project would result in significant impacts to special-status plant species (southern tarplant (*Centromadia parryi* ssp. *australis*)), temporary and permanent loss of suitable habitat for least Bell's vireo (*Vireo bellii pusillus*), and impacts on habitat linkages and jurisdictional waters. These significant impacts would be reduced to less than significant with incorporation of mitigation measures. The proposed project and the Plant No. 2 Pump Station Alternative have similar alignments; however, the Plant No. 2 Pump Station Alternative would more closely follow the boundary of Talbert Regional Park in the southeastern corner, which is identified as sensitive habitat, including wetlands. Compared to the proposed project, this alternative would have similar permanent impacts to wetlands and increased temporary impacts to wetlands due to construction within the southeast corner of Talbert Regional Park. Since the Plant No. 2 Pump Station Alternative would not avoid this area, there would be greater impacts to biological resources and jurisdictional waters. Therefore, biological resource impacts would be greater under the Plant No. 2 Pump Station Alternative when compared to the proposed project.

### **Cultural Resources**

As described in Section 4.4, Cultural Resources, the proposed project would result in potentially significant impacts to archaeological resources; however, implementation of mitigation measures would reduce any impacts to a less than significant level. According to the cultural resources survey conducted for the project, there is very low potential for historic, archaeological, or paleontological resources on or near the project area. The proposed project and the Plant No. 2 Pump Station Alternative have similar alignments and would have similar impacts on cultural resources. Both the proposed project and the Plant No. 2 Pump Station Alternative would use open trench construction to install the 24-inch gravity sewer along the eastern and southern border of Talbert Regional Park. Tunneling under the Santa Ana River would also occur under each scenario. Since both the proposed project and the Plant No. 2 Pump Station Alternative would disturb similar areas, impacts to cultural resources would be similar.

### **Geology and Soils**

As described in Section 4.5, Geology and Soils, the proposed project would have a less than significant impact related to geologic hazards. The proposed project and the Plant No. 2 Pump

Station Alternative have similar alignments and would have similar impacts on geology and soils. Both the proposed project and the Plant No. 2 Pump Station Alternative would require open trench construction methods to install the 24-inch gravity sewer along the eastern and southern border of Talbert Regional Park, and they would both be exposed to the same geologic hazards. Once they reach the east side of the Santa Ana River, different tunneling techniques would be used to cross beneath the Santa Ana River to Plant No. 2. Both of the tunneling techniques have a risk of inducing subsidence beneath the Santa Ana River due to tunneling failure and over-excavation. In both cases, proper geotechnical design considerations would be required during project design to ensure that impacts to geology and soils are reduced to below a level of significance. Therefore, the proposed project and the Plant No. 2 Pump Station Alternative would have similar impacts associated with geology and soils.

### **Greenhouse Gas Emissions**

As described in Section 4.6, Greenhouse Gas Emissions, the proposed project would not result in significant impacts to GHG emissions during construction or operation. Although the Plant No. 2 Pump Station Alternative would involve similar construction along a similar alignment to the proposed project, this alternative involves the construction and operation of a new pump station on OCSD Plant No. 2. Construction and operation of this pump station would result in greater GHG emissions due to the additional energy needed to power the pump station. Therefore, the Plant No. 2 Pump Station Alternative would have greater GHG impacts when compared to the proposed project.

### **Hazards and Hazardous Materials**

As described in Section 4.7, Hazards and Hazardous Materials, the proposed project would result in significant impacts, including the potential to encounter refuse during construction near the former Newport Terrace Landfill; the relative proximity of the project area to surrounding schools; and the potential to create a hazard to the public or the environment due to the proximity of hazardous materials sites pursuant to Government Code Section 65962.5. These impacts would be reduced to below a level of significance with incorporation of mitigation measures. The Plant No. 2 Pump Station Alternative would encounter the same hazardous conditions as the proposed project since the alignment would be similar. All regulations pertaining to hazardous materials would also be followed under this alternative. Therefore, impacts to hazards and hazardous materials would be similar to the proposed project.

### **Hydrology and Water Quality**

As stated in Section 4.8, Hydrology and Water Quality, the proposed project would have less than significant impacts on hydrology and water quality. The proposed project would be required to comply with all applicable permits and regulations. The Plant No. 2 Pump Station Alternative

would have a similar alignment to the proposed project and would use similar open trench construction techniques during the installation of the 24-inch gravity sewer. Techniques for tunneling under the Santa Ana River would be different for the proposed project than for the Plant No. 2 Pump Station Alternative; however, impacts on hydrology and water quality would be similar with each technique. Therefore, the Plant No. 2 Pump Station Alternative would have similar impacts to the proposed project.

### **Land Use and Planning**

As described in Section 4.9, Land Use and Planning, the proposed project would result in less than significant land use impacts and would not create any conflicts with surrounding or incompatible uses. The proposed project would require a new 30-foot-wide permanent easement, and a 20-foot wide temporary easement would be required along the southern boundary of Talbert Regional Park during construction to allow sewer maintenance trucks to access all project manholes and structures. Since the Plant No. 2 Pump Station Alternative would have a similar alignment to the proposed project, it would also require a new permanent easement and access road. Therefore, the proposed project and the Plant No. 2 Pump Station Alternative would have the same impacts on land use.

### **Noise**

As discussed in Section 4.10, Noise, construction of the proposed project would result in a significant impact due to the temporary increase in ambient noise levels in the project area during construction and this impact would remain significant and unavoidable after mitigation. Since the Plant No. 2 Pump Station Alternative and the proposed project would both use open trench construction methods along a similar alignment, it is anticipated that noise levels would be similar. Therefore, the Plant No. 2 Pump Station Alternative and the proposed project would have similar impacts associated with noise.

### **Recreation**

As described in Section 4.11, Recreation, the proposed project would not result in substantial physical deterioration or construction of new recreational facilities. A majority of the proposed OCSD sewer pipeline would be installed along the eastern and southern border of Talbert Regional Park and may temporarily close Trails A and D within the park. Since the Plant No. 2 Pump Station Alternative would have a similar alignment to the proposed project, impacts to recreation would also be similar.

## **Traffic and Circulation**

As described in Section 4.12, Traffic and Circulation, the proposed project would not result in significant impacts associated with traffic and circulation. All construction within existing roadways would be temporary and the roadways would be restored to their existing condition after construction is complete. Since the Plant No. 2 Pump Station Alternative would have a similar alignment to the proposed project, it would have similar impacts on traffic and circulation.

## **Utilities, Service Systems, and Energy**

As described in Section 4.13, Utilities, Service Systems, and Energy, the proposed project would result in less than significant impacts to utilities, service systems, and energy. The proposed project would consolidate sewer pipelines and reduce the reliance on pump station infrastructure, which would decrease energy use. There would not be an increase in the total amount of wastewater being transported and only a minimal amount of water would be required for project construction. In addition, any reusable materials accumulated during pump station abandonment would be recycled. The Plant No. 2 Pump Station Alternative would have similar impacts during construction and would also result in the abandonment of several pump stations; however, since a new pump station would be constructed on Plant No. 2, there would be increased demand for energy under this alternative. Therefore, the Plant No. 2 Pump Station Alternative's impacts on utilities, service systems, and energy would be greater than the proposed project.

### **7.5.3 Victoria Street Force Main Alternative**

Under the Victoria Street Force Main Alternative, shown on Figure 7-2, the OCSD sewer pipeline would be constructed as approximately 3,200 linear feet of 14-inch-diameter trunk sewer force main from a new pump station adjacent to the existing Newport Beach Pump Station site. The trunk sewer force main would extend northwest along the northern border of Talbert Regional Park in the existing dirt trail. From there the trunk sewer force main would continue west on Victoria Street, which turns into Hamilton Avenue on the west side of the Santa Ana River. The pipeline would be installed within the existing bridge deck crossing the Santa Ana River. From the bridge, the pipeline would remain on Hamilton Avenue until the intersection at Brookhurst Street, where it would connect to the existing OCSD Interplant Line through a new drop manhole.

Construction of the CMSD and City of Newport Beach pipelines and abandonment of associated pump stations would occur under this alternative. All pipelines would be installed by open trench construction methods, except for the portion installed within the existing bridge deck. This bridge deck section would be installed by sliding and supporting pipe segments into an existing empty bridge cell by use of spacers/rollers.



### **7.5.3.1 Ability to Meet Project Objectives**

The Victoria Street Force Main Alternative would meet the project objectives of providing a reliable conveyance system for future projected wastewater flows, providing for efficient maintenance and ease of access during a spill or emergency, and reducing the risk of spills due to system failure. This alternative would also meet the project objective of avoiding the potential for chronic noise and odor complaints due to force main air-release appurtenances required at high points in the pipeline profile. This alternative would not, however, meet the project objective of avoiding the need for new easements from private property owners, since easements would be required along Hamilton Avenue. Nor would this alternative meet the project objectives of avoiding substantial traffic disruption on Victoria Street/Hamilton Avenue or avoiding the need for a new regional pump station in Talbert Regional Park. The Victoria Street Force Main Alternative would meet some, but not all of the project objectives.

### **7.5.3.2 Impact Analysis**

#### **Aesthetics**

As stated in Section 4.1, Aesthetics, construction and operation of the proposed project would result in less than significant impacts. Construction activities would occur within Talbert Regional Park; however, intervening topography and vegetation would limit the availability of off-site views of construction activities from designated scenic vistas in the area (i.e., the segment of Pacific Coast Highway spanning the Santa Ana River and the eastward-oriented public seating space located south of the Newport Shores Community Association Clubhouse tennis court) and locally designated scenic roads. Once constructed and installed, proposed sewer pipelines associated with the Victoria Street Force Main Alternative would be located underground/within existing roads and would not include aboveground structures or facilities. Therefore, similar to the proposed project, impacts to designated scenic vistas, state scenic highway corridors, and locally designated scenic roads would be less than significant. Also, during construction of the Victoria Street Force Main Alternative, the presence of workers, vehicles, and equipment in Talbert Regional Park would temporarily affect the existing visual character of the park; however, similar to the proposed project, sewer pipelines would be installed underground and would not be visible during operations. Therefore, similar to the proposed project, long-term impacts to the existing visual character of the project area resulting from the Victoria Street Force Main Alternative would be less than significant. Lastly, both the proposed project and the Victoria Street Force Main Alternative would adhere to the permitted hours of construction activity operations established by the Cities of Costa Mesa, Huntington Beach, and Newport Beach; therefore, nighttime construction is not anticipated. While this alternative would entail the construction of a new pump station, the facility would be located at the site of the existing City of

Newport Beach pump station at Walkabout Circle and the new pump station would likely display a similar form and profile and similar building materials would likely be used. As such, the Victoria Street Force Main Alternative would not introduce potential new sources of glare to the project area. Because nighttime construction is not anticipated, construction lighting impacts would be similar to those discussed in Section 4.1 for the proposed project. Therefore, with the exception of the potential glare produced by a new aboveground facility, the lighting and glare impacts associated with the Victoria Street Force Main Alternative would be similar to those resulting from implementation of the proposed project.

### **Air Quality**

As described in Section 4.2, Air Quality, implementation of the proposed project would not result in any significant air quality impacts during construction or operation. Although construction of the proposed project would result in emissions during the 24-month construction period, the emissions would stay below significant levels. Once the new sewer pipelines are installed, no additional routine daily operational activities that would generate air pollutant emissions are anticipated to occur. Both the proposed project and the Victoria Street Force Main Alternative would use similar open trench construction techniques. The Victoria Street Force Main Alternative would not use HDD tunneling as part of the installation process to cross the Santa Ana River. This reduced impact would be offset by the construction of a new pump station under the Victoria Street Force Main Alternative. In both cases, operational emissions would not increase, since no additional traffic or other sources of emissions are expected following construction. Therefore, the proposed project and the Victoria Street Force Main Alternative would have similar impacts to air quality.

### **Biological Resources**

As described in Section 4.3, Biological Resources, the proposed project would result in significant impacts to special-status plant species (southern tarplant (*Centromadia parryi* ssp. *australis*)), temporary and permanent loss of suitable habitat for least Bell's vireo (*Vireo bellii pusillus*), and impacts on habitat linkages and jurisdictional waters. These significant impacts would be reduced to less than significant with incorporation of mitigation measures. The Victoria Street Force Main Alternative would include 3,200 linear feet of a 14-inch-diameter trunk sewer force main that would extend northwesterly along the northern border of Talbert Regional Park from a new pump station adjacent to the Newport Beach Pump Station (to be abandoned) to an existing OCS D Interplant Line at the intersection of Brookhurst Street and Hamilton Avenue. This alternative would impact biological resources in the northwest portion of Talbert Regional Park, which would not be impacted under the proposed project. This would result in potential impacts to coastal California gnatcatcher (*Polioptila californica californica*) and a greater number of southern tarplants. However, temporary and permanent impacts to wetlands would be

reduced under this alternative since the alignment would avoid the wetlands in the southeast corner of Talbert Regional Park. Although both the proposed project and the Victoria Street Force Main Alternative would result in impacts to biological resources, overall, biological resource impacts would be reduced under this alternative due to the substantial reduction in impacts to wetlands.

### **Cultural Resources**

As described in Section 4.4, Cultural Resources, the proposed project would result in potentially significant impacts to unknown cultural or paleontological resources; however, implementation of mitigation measures would reduce these impacts to less than significant. The Victoria Street Force Main Alternative would be subject to the same type of land monitoring during earthmoving activities. The cultural resources record search performed for the proposed project found one recorded archaeological site near the Victoria Street Force Main Alternative alignment, compared to the three found near the proposed project's alignment. Overall, the proposed project and the Victoria Street Force Main Alternative would result in similar impacts to cultural resources.

### **Geology and Soils**

As described in Section 4.5, Geology and Soils, the proposed project would have a less than significant impact related to geologic hazards. The OCSD portion of the proposed project that would require HDD tunneling techniques to install the 14-inch inverted siphon beneath the Santa Ana River would create a risk of causing ground subsidence. The Victoria Street Force Main Alternative would install the 14-inch force main pipeline on the Victoria–Hamilton bridge deck crossing over the Santa Ana River, eliminating the risk of subsidence associated with the HDD methods required for the proposed project. Although the proposed project and the Victoria Street Force Main Alternative would have similar geologic risks due to their location in seismically active Southern California, the Victoria Street Force Main Alternative would have reduced risks associated with geology and soils.

### **Greenhouse Gas Emissions**

As described in Section 4.6, Greenhouse Gas Emissions, the proposed project would not result in significant impacts to GHG emissions during construction or operation. The Victoria Street Force Main Alternative would have similar operational emissions since approximately the same length of pipeline would be installed using open trench construction methods. However, construction activities would be slightly different since a new pump station would need to be built under this alternative. This increase in construction-related emissions would be offset, however, by the HDD tunneling techniques required under the proposed project. Following construction, the operation of the new pump station would require electricity and would therefore

increase operational GHG emissions compared to the proposed project. Therefore, the Victoria Street Force Main Alternative would result in greater GHG impacts when compared to the proposed project.

### **Hazards and Hazardous Materials**

As described in Section 4.7, Hazards and Hazardous Materials, the proposed project would result in significant impacts, including the potential to encounter refuse during construction near the former Newport Terrace Landfill; the relative proximity of the project area to surrounding schools; and the potential to create a hazard to the public or the environment due to the proximity of hazardous materials sites pursuant to Government Code Section 65962.5. These impacts would be reduced to below a level of significance with incorporation of mitigation measures. The Victoria Street Force Main Alignment would still be close to surrounding schools as well as to hazardous materials sites (pursuant to Government Code Section 65962.5) found on Victoria Street. This alternative would also be located near the former Newport Terrace Landfill. Therefore, the Victoria Street Force Main Alternative would be similar to the proposed project with regard to hazards and hazardous materials impacts.

### **Hydrology and Water Quality**

As stated in Section 4.8, Hydrology and Water Quality, the proposed project would have less than significant impacts on hydrology and water quality. The proposed project is required to obtain a general National Pollutant Discharge Elimination System (NPDES) dewatering permit from the Santa Ana Regional Water Quality Control Board (RWQCB), implement a stormwater pollution prevention plan (SWPPP), comply with applicable federal, state, and local regulations, and follow best management practices (BMPs). The Victoria Street Force Main Alternative would be required to comply with the same rules and regulations as the proposed project. Water would be used in a similar fashion during construction of the proposed project and the Victoria Street Force Main Alternative; no water would be required during the operation of either alternative. Therefore, the proposed project and the Victoria Street Force Main Alternative would result in similar impacts to hydrology and water quality.

### **Land Use and Planning**

As described in Section 4.9, Land Use and Planning, the proposed project would result in less than significant land use impacts and would not create any conflicts with surrounding or incompatible uses. The Victoria Street Force Main Alternative would result in less than significant land use impacts and would not create any conflicts with surrounding land uses or create incompatible uses. Neither alignment would substantially conflict with any applicable land use plans or ordinances. Therefore, the proposed project and the Victoria Street Force Main Alternative would have similar impacts on land use and planning.

## Noise

As discussed in Section 4.10, Noise, construction of the proposed project would result in a significant impact due to the temporary increase in ambient noise levels in the project area during construction and this impact would remain significant and unavoidable after mitigation. The proposed project would comply with the noise regulations established in the cities' municipal noise ordinances and construction would only take place during allowed times and days of the week. Similar to the proposed project, the Victoria Street Force Main Alternative would use open trench construction methods to install the OCSD pipeline along the northern border of Talbert Regional Park and similar noise volumes would be generated. Therefore, the Victoria Street Force Main Alternative would have similar impacts when compared to the proposed project.

## Recreation

As described in Section 4.11, Recreation, the proposed project would not result in substantial physical deterioration or construction of new recreational facilities. A majority of the proposed OCSD sewer pipeline would be installed along the eastern and southern border of Talbert Regional Park. Impacts to recreation as a result of the proposed project would not be significant. While both the proposed project and the Victoria Street Force Main Alternative would install sewer pipelines within Talbert Regional Park, the Victoria Street Force Main Alternative pipeline would be concentrated along the northern boundary of the park and would not affect the interior trails of the park. Therefore, impacts on recreation would be less than significant and similar to the Victoria Street Force Main Alternative when compared to the proposed project.

## Traffic and Circulation

As described in Section 4.12, Traffic and Circulation, the proposed project would not result in significant impacts associated with traffic and circulation. All construction within existing roadways would be temporary and the roadways would be restored to their existing condition after construction is complete. The Victoria Street Force Main Alternative would have the same impacts to traffic and circulation, except for the lane closure on Brookhurst Street. The proposed project would have temporary lane closures on Brookhurst Street at Plant No. 2 and the Victoria Street Force Main Alternative would have lane closures along Victoria Street (which transitions to Hamilton Avenue on the westerly side of the Santa Ana River) and into the intersection of Hamilton Avenue and Brookhurst Street. The Victoria Street Force Main Alternative would require lane closures along Victoria Street/Hamilton Avenue while crossing the Santa Ana River and, similar to the proposed project, would require a traffic management plan to ensure impacts to the roadway remain below a level of significance. Therefore, impacts to traffic and circulation under the Victoria Street Force Main Alternative would be similar to the proposed project.

## **Utilities, Service Systems, and Energy**

As described in Section 4.13, Utilities, Service Systems, and Energy, the proposed project would result in less than significant impacts to utilities, service systems, and energy. The proposed project would consolidate sewer pipelines and reduce the reliance on pump station infrastructure, which would decrease energy use. There would not be an increase in the total amount of wastewater being transported, only a minimal amount of water would be required for project construction, and as much solid waste as possible would be recycled during the abandonment of the pump stations. All of these factors would be true for the Victoria Street Force Main Alternative. However, a new pump station adjacent to the existing Newport Beach Pump Station would be constructed as part of this alternative. The addition of a new pump station under the Victoria Street Force Main Alternative would result in a greater use of energy than the proposed project and would result in greater impacts.

### **7.5.4 Victoria Street Gravity Alternative**

Under the Victoria Street Gravity Alternative, shown on Figure 7-3, the OCSD sewer pipeline would be constructed as approximately 1,500 linear feet of 24-inch-diameter gravity sewer from the existing Newport Beach Pump Station site. Construction of the CMSD and City of Newport Beach pipelines and abandonment of associated pump stations would occur under this alternative. The OCSD sewer pipeline would extend northwest along the northern border of Talbert Regional Park within the wide dirt trail (Trail A) toward Victoria Street. A 1,235-linear-foot-long inverted sewer siphon segment under the Santa Ana River would be installed by the HDD method. Once past the Santa Ana River, the pilot bore would curve upward and exit the ground beyond the easterly levee in Hamilton Avenue. Inverted sewer siphon inlet and outlet structures (manholes) would be installed at both ends of the HDD-installed pipeline and would serve as the transition points between the twin 14-inch inverted siphon segment of the pipeline and the 24-inch-diameter pipelines on either side.

After the siphon, the flows would be conveyed by approximately 300 linear feet of 24-inch-diameter gravity sewer in Hamilton Avenue to the existing OCSD Interplant Line in Brookhurst Street. This segment of pipeline would be installed by open trench construction methods.

#### **7.5.4.1 Ability to Meet Project Objectives**

The Victoria Street Gravity Alternative would meet the project objectives of providing a reliable conveyance system for future projected wastewater flows, providing for efficient maintenance and ease of access during a spill or emergency, and reducing the risk of spills due to system failure. This alternative would also meet the project objectives of avoiding the potential for chronic noise and odor complaints due to force main air-release appurtenances required at high points in the pipeline profile, avoiding the need for new easements from private property owners,

and avoiding the need for a new regional pump station in Talbert Regional Park. However, the Victoria Street Gravity Alternative would not meet the project objective of avoiding substantial traffic disruption on Victoria Street/Hamilton Avenue. Therefore, this alternative would meet most of the project objectives.

#### **7.5.4.2 Impact Analysis**

##### **Aesthetics**

With the exception of the proposed approximate 1,235-foot inverted siphon that would extend from Talbert Regional Park northwest to Hamilton Avenue in City of Huntington Beach and ultimately tie into the existing OCSD Interplant Line in Brookhurst Avenue via a 24-inch gravity sewer, the Victoria Street Gravity Alternative would be similar to the Victoria Street Force Main Alternative discussed in Section 7.5.3. Proposed sewer pipelines and construction activity within Talbert Regional Park would be concentrated along the eastern and northwestern park boundaries; construction would also occur along Hamilton Avenue (see Figure 7-3). Due to the presence of intervening vegetation and terrain, views of Victoria Street Gravity Alternative construction activities within Talbert Regional Park would be screened from designated scenic vistas, state scenic highway corridors, and locally designated scenic roads. Further, once installed underground, the proposed sewer pipelines would not include aboveground vertical elements that would impede or obstruct existing views.

Similarly, construction activities associated with the Victoria Street Gravity Alternative would occur within the same general vicinity as the proposed project, and while additional residences and commercial business along Hamilton Avenue and Brookhurst Street would be afforded views of construction activities, roads are relatively common locations for construction to occur. In addition, the presence of construction vehicles, workers, and equipment would not substantially affect the visual character of the area, which includes wide roads, multiple overhead utility lines, gas stations, and commercial businesses.

For the reasons described above, impacts to scenic vistas and roadways resulting from construction and operation of the Victoria Street Gravity Alternative would be similar to the proposed project. Similarly, construction and operation impacts to the existing visual character or quality of the site resulting from the Victoria Street Gravity Alternative would be similar to the proposed project. Because nighttime construction is not anticipated, construction lighting impacts would be similar to those discussed in Section 4.1 for the proposed project. Furthermore, the exclusion of aboveground structures/facilities would be the same for the proposed project and the Victoria Street Gravity Alternative and as such, operational lighting and glare impacts would be similar.

## Air Quality

As described in Section 4.2, Air Quality, implementation of the proposed project would not result in any significant air quality impacts during construction or operation. Although construction of the proposed project would result in emissions during the 24-month construction period, the emissions would stay below significant levels. Once the new sewer pipelines are installed, no additional routine daily operational activities that would generate air pollutant emissions are anticipated to occur. The proposed project and the Victoria Street Gravity Alternative would use similar open trench construction techniques and HDD tunneling as part of the installation process. Since similar construction methods would be used, similar construction equipment would also be used. In both cases, operational emissions would not increase, since no additional traffic or other sources of emissions are expected following construction. Therefore, the proposed project and the Victoria Street Gravity Alternative would have similar impacts on air quality.

## Biological Resources

As described in Section 4.3, Biological Resources, the proposed project would result in significant impacts to special-status plant species (southern tarplant (*Centromadia parryi* ssp. *australis*)), temporary and permanent loss of suitable habitat for least Bell's vireo (*Vireo bellii pusillus*), and impacts on habitat linkages and jurisdictional waters. These significant impacts would be reduced to less than significant with incorporation of mitigation measures. Under the Victoria Street Gravity Alternative, shown on Figure 7-3, the OCSD sewer pipeline would be constructed as approximately 1,500 linear feet of 24-inch-diameter gravity sewer from the existing Newport Beach Pump Station site. The OCSD sewer pipeline would extend northwest along the northern border of Talbert Regional Park within the dirt trail (Trail A) toward Victoria Street. A 1,235-linear-foot-long, 14-inch-diameter inverted sewer siphon would be installed under the Santa River using HDD tunneling techniques. This alternative would impact biological resources, including moderate-quality upland habitat, which occasionally can support California gnatcatcher, and a greater number of southern tarplants, in the northwest portion of Talbert Regional Park that would not be impacted under the proposed project. However, temporary and permanent impacts to wetlands would be reduced under this alternative since the alignment would avoid the wetlands in the southeast corner of Talbert Regional Park. These wetlands include mature willow riparian habitat, some of which has been developed as mitigation for other projects. Although both the proposed project and the Victoria Street Gravity Alternative would result in impacts to biological resources, overall biological resource impacts would be reduced under this alternative due to the reduction in impacts to high value wetlands in comparison to increased impacts to moderate quality upland habitats.



## **Cultural Resources**

As described in Section 4.4, Cultural Resources, the proposed project would result in potentially significant impacts to unknown cultural or paleontological resources; however, implementation of mitigation measures would reduce these impacts to less than significant. The Victoria Street Gravity Alternative would be subject to the same type of land monitoring during earthmoving activities as the proposed project. The cultural resources record search performed by Dudek found only one recorded archaeological site near the Victoria Street Gravity Alternative alignment, compared to the three found near the proposed project's alignment. However, no prehistoric archaeological sites were recorded within either of the proposed alignments, and if something were uncovered during earthmoving activities, both alternatives would be required to comply with California Public Resources Code (PRC), Section 5097–5097.6. Therefore, the proposed project and the Victoria Street Gravity Alternative would have similar impacts on cultural resources.

## **Geology and Soils**

As described in Section 4.5, Geology and Soils, the proposed project would have a less than significant impact related to geologic hazards. The proposed project and the Victoria Street Gravity Alternative would be installed using similar techniques. Both of the 24-inch gravity sewers would be installed using open trench construction methods, and both alternatives would use HDD techniques to install the 14-inch inverted sewer siphon under the Santa Ana River. HDD tunneling techniques would have a risk of inducing subsidence beneath the Santa Ana River due to tunneling failure and over-excavation. The proposed project would use HDD tunneling techniques to install 800 feet of pipeline and the Victoria Street Gravity Alternative would use HDD tunneling techniques to install 1,235 feet of pipeline. Therefore, since more pipeline must be laid using HDD tunneling techniques for the Victoria Street Gravity Alternative there is a greater risk of subsidence. Impacts on geology and soils would therefore be greater under the Victoria Street Gravity Alternative than the proposed project.

## **Greenhouse Gas Emissions**

As described in Section 4.6, Greenhouse Gas Emissions, the proposed project would not result in significant impacts to GHG emissions during construction or operation. The Victoria Street Gravity Alternative would have similar construction emissions since approximately the same length of pipeline would be installed using open trench construction methods and HDD tunneling methods. In addition, there would be no new pump stations constructed under this alternative that would require additional energy use during operations. Therefore, the proposed project and the Victoria Street Gravity Alternative would have similar impacts on GHG emissions.

### **Hazards and Hazardous Materials**

As described in Section 4.7, Hazards and Hazardous Materials, the proposed project would result in significant impacts, including the potential to encounter refuse during construction near the former Newport Terrace Landfill; the relative proximity of the project area to surrounding schools; and the potential to create a hazard to the public or the environment due to the proximity of hazardous materials sites pursuant to Government Code Section 65962.5. These impacts would be reduced to below a level of significance with incorporation of mitigation measures. The Victoria Street Gravity Alignment would still be close to surrounding schools as well as hazardous materials sites (pursuant to Government Code Section 65962.5) found on Victoria Street. This alternative would also be located near the former Newport Terrace Landfill. Therefore, the Victoria Street Gravity Alternative would be similar to the proposed project with regard to hazards and hazardous materials impacts.

### **Hydrology and Water Quality**

As stated in Section 4.8, Hydrology and Water Quality, the proposed project would have less than significant impacts on hydrology and water quality. The proposed project is required to obtain a general NPDES dewatering permit from the Santa Ana RWQCB, implement a SWPPP, comply with applicable federal, state, and local regulations, and follow BMPs. The Victoria Street Gravity Alternative would be required to comply with the same rules and regulations as the proposed project. Water would be used in a similar fashion during construction of the proposed project and the Victoria Street Gravity Alternative; no water would be required during the operation of either alternative. Therefore, the proposed project and the Victoria Street Gravity Alternative would have similar impacts to hydrology and water quality.

### **Land Use and Planning**

As described in Section 4.9, Land Use and Planning, the proposed project would result in less than significant land use impacts and would not create any conflicts with surrounding or incompatible uses. The Victoria Street Gravity Alternative would also result in less than significant land use impacts and would not create any conflicts with surrounding land uses or create incompatible uses. Similar to the proposed project, this alternative would not substantially conflict with any applicable land use plans or ordinances. Therefore, the proposed project and the Victoria Street Gravity Alternative would have similar impacts on land use and planning.

### **Noise**

As discussed in Section 4.10, Noise, construction of the proposed project would temporarily increase ambient noise levels during construction and this impact would remain significant and unavoidable after mitigation. The proposed project would comply with the noise regulations

established in the cities' noise ordinances and construction would only take place during allowed times and days of the week. Similar to the proposed project, the Victoria Street Gravity Alternative would use open trench construction methods and HDD tunneling techniques to install the pipeline, which would generate similar noise volumes. Therefore, the Victoria Street Gravity Alternative would have similar noise impacts compared to the proposed project.

## **Recreation**

As described in Section 4.11, Recreation, the proposed project would not result in substantial physical deterioration or construction of new recreational facilities. A majority of the proposed OCSD sewer pipeline would be installed along the eastern and southern border of Talbert Regional Park and may temporarily close Trails A and D within the park. The Victoria Street Gravity Alternative also would not result in substantial physical deterioration or construction of recreational facilities. In addition, a majority of the Victoria Street Gravity Alternative is also within Talbert Regional Park and would cause a temporary closure of Trail A during installation of the force main. However, Trail D would not be closed as a result of the Victoria Street Gravity Alternative. Overall, impacts on recreation would be less than significant and therefore similar to the proposed project.

## **Traffic and Circulation**

As described in Section 4.12, Traffic and Circulation, the proposed project would not result in significant impacts associated with traffic and circulation. All construction within existing roadways would be temporary and the roadways would be restored to their existing condition after construction is complete. The proposed project and the Victoria Street Gravity Alternative would have similar impacts to traffic and circulation. However, the proposed project would have temporary lane closures on Brookhurst Street at Plant No. 2, and the Victoria Street Gravity Alternative would have lane closures at the intersection of Brookhurst Street and Hamilton Avenue. Also, under this alternative, construction traffic impacts during the installation of the HDD siphon would be an additional impact. Since traffic management plans would be required in both cases and would ensure that impacts remain below a level of significance, traffic and circulation impacts under this alternative would be similar to the proposed project.

## **Utilities, Service Systems, and Energy**

As described in Section 4.13, Utilities, Service Systems, and Energy, the proposed project would result in less than significant impacts to utilities, service systems, and energy. The proposed project would consolidate sewer pipelines and reduce the reliance on pump station infrastructure, which would decrease energy use. There would be no increase in the total amount of wastewater being transported and only a minimal amount of water would be required for project construction. In addition, any reusable materials accumulated during pump station abandonment

would be recycled. The Victoria Street Gravity Alternative would have the same impacts on utilities, service systems, and energy as the proposed project.

## 7.6 SUMMARY MATRIX

A matrix displaying the major characteristics and significant environmental effects of each alternative is provided in Table 7-1 to summarize the comparison of each alternative with the proposed project. The matrix also indicates whether the alternative meets the project objectives as defined in Chapter 3, Project Description, and listed in Section 7.2.

**Table 7-1**  
**Alternatives Impact Summary**

Environmental Issue	Proposed Project Impacts Prior to Mitigation	Proposed Project Impacts with Mitigation	No Project Alternative	Plant No. 2 Pump Station Alternative	Victoria Street Force Main Alternative	Victoria Street Gravity Alternative
Aesthetics	LTS	LTS	—	—	—	—
Air quality	LTS	LTS	▼	▲	—	—
Biological resources	S	LTS	▼	▲	▼	▼
Cultural resources	S	LTS	▼	—	—	—
Geology and soils	LTS	LTS	▼	—	▼	▲
Greenhouse gas emissions	LTS	LTS	▲	▲	▲	—
Hazards and hazardous materials	S	LTS	▼	—	—	—
Hydrology and water quality	LTS	LTS	—	—	—	—
Land use and planning	LTS	LTS	—	—	—	—
Noise	S	S	▼	—	—	—
Recreation	LTS	LTS	▼	—	—	—
Traffic and circulation	LTS	LTS	▲	—	—	—
Utilities, service systems, and energy	LTS	LTS	▲	▲	▲	—
Meets most project objectives?	Yes	Yes	Yes	Yes	Yes	Yes

LTS = less than significant impact; S = significant impact

▲ Alternative is likely to result in greater impacts to issue when compared to proposed project

— Alternative is likely to result in similar impacts to issue when compared to proposed project.

▼ Alternative is likely to result in reduced impacts to issue when compared to proposed project.

## **7.7 ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

As indicated in Table 7-1, the No Project Alternative would result in the least environmental impacts and would be the environmentally superior alternative. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. The Plant No. 2 Pump Station Alternative would not result in a reduction in impacts. The Victoria Street Force Main Alternative would reduce biological resource and geology and soils impacts but would also result in increased impacts to air quality and utilities and service systems. As such, the environmentally superior alternative is the Victoria Street Gravity Alternative because this alternative alignment would result in reduced impacts to biological resources. However, the Victoria Street Gravity Alternative would result in greater impacts to geology and soils when compared to the proposed project. All other impacts would be similar to the proposed project.

With the exception of permanent impact to biological resources, it is noted that all of the impacts incurred under the proposed project would be temporary (during construction only), and most of these impacts are less than significant, or can be mitigated to less than significant. Overall, the proposed project and the Victoria Street Gravity Alternative would be approximately equal in their ability to reduce impacts.

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**FIGURE 7-1**  
**Plant No. 2 Pump Station Alternative**

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**FIGURE 7-2**  
**Victoria Street Forcemain Alternative**

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AERIAL SOURCE: Bing Maps

Southwest Costa Mesa Trunk Sewer Project No. 6-19 - Draft EIR

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**FIGURE 7-3**  
**Victoria Street Gravity Alternative**

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## CHAPTER 8 REFERENCES

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### 1, Executive Summary

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### 2, Introduction

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### 3, Project Description

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

OCSD (Orange County Sanitation District). 2006. *Strategic Plan Update*.

### 4, Environmental Analysis

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#### 4.1, Aesthetics

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California Streets and Highways Code, Sections 260–284. State Scenic Highways.

Caltrans (California Department of Transportation). 2013. California Scenic Highway Mapping System, Orange County. Accessed July 12, 2013. [http://www.dot.ca.gov/hq/LandArch/scenic\\_highways/index.htm](http://www.dot.ca.gov/hq/LandArch/scenic_highways/index.htm).

City of Costa Mesa. 2002. City of Costa Mesa 2000 *General Plan, Chapter 6: Conservation Element*. Adopted January 2002.

City of Huntington Beach. 2011. *City of Huntington Beach General Plan, Chapter IV: Natural Resources—Coastal Element*. Amended October 2011.

City of Newport Beach. 2006. *City of Newport Beach General Plan, Chapter 10: Natural Resources Element*. Adopted July 25, 2006.

City of Newport Beach 2009. *Coastal Land Use Plan*. February 2009.

City of Newport Beach Municipal Code, Chapter 20.30: Property Development Standards.

County of Orange. 2011. *County of Orange General Plan, Chapter IV: Transportation Element*. Adopted in 2005; updated on March 22, 2011. Accessed July 15, 2013. <http://ocplanning.net/planning/generalplan2005>.

PRC, Section 30251. Division 20, California Coastal Act, Chapter 3, Coastal Resources Planning and Management Policies, Sections 30250–30255, Development.

## **4.2, Air Quality**

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

CARB (California Air Resources Board). 2013a. “Ambient Air Quality Standards.” June 4, 2013. <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

CARB. 2013b. *California Air Resources Board Glossary of Air Pollutant Terms*. <http://www.arb.ca.gov/html/gloss.htm>.

CARB. 2013c. “2012 State Area Designations.” Area Designations Maps / State and National. Page last reviewed April 2013. Accessed May 2013. <http://www.arb.ca.gov/desig/adm/adm.htm>.

CARB. 2013d. “Air Quality Data Statistics.” Accessed June 2013. <http://arb.ca.gov/adam>.

City-Data.com. 2013. “Costa Mesa, California.” Accessed July 2013. <http://www.city-data.com/city/Costa-Mesa-California.html>.

EPA (U.S. Environmental Protection Agency). 2012. “Six Common Air Pollutants.” Last updated April 2012. Accessed June 2013. <http://www.epa.gov/oaqps001/urbanair/>.

EPA. 2013a. “Region 9: Air Programs, Air Quality Maps.” Last updated April 2013. Accessed May 2013. [http://www.epa.gov/region9/air/maps/maps\\_top.html](http://www.epa.gov/region9/air/maps/maps_top.html).

EPA. 2013b. “AirData: Access to Air Pollution Data.” Last updated May 2013. Accessed June 2013. [http://www.epa.gov/airdata/ad\\_rep\\_mon.html](http://www.epa.gov/airdata/ad_rep_mon.html).

SCAQMD (South Coast Air Quality Management District). 1993. “SCAQMD Air Quality Significance Thresholds.” Originally published in CEQA Air Quality Handbook, Table A9-11-A. Revised March 2011. <http://www.aqmd.gov/ceqa/handbook/signthres.pdf>.

SCAQMD. 2003. *Final Air Quality Management Plan*. August 2003.

SCAQMD. 2007. *Final Air Quality Management Plan*. June 2007.

SCAQMD. 2011. *CEQA Air Quality Handbook Supplemental Information*.

SCAQMD. 2013. *Final 2012 Air Quality Management Plan*. Revised February 2013.

#### **4.3, Biological Resources**

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 703–712. Migratory Bird Treaty Act.

16 U.S.C. 1531–1544. Endangered Species Act of 1973.

33 U.S.C. 401–430. Rivers and Harbors Act of 1899.

33 U.S.C. 1251–1376. Water Pollution Control Act Amendments of 1972.

50 CFR 10.12. Definitions.

50 CFR 10.13. List of Migratory Birds.

50 CFR 21.11. General Permit Requirements.

ACOE (U.S. Army Corps of Engineers). 1987. *Corps of Engineers Wetland Delineation Manual*. Online ed. Environmental Laboratory, Wetlands Research Program Technical Report Y-87-1. Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station. January 1987. Accessed September 1, 2010. [http://www.fedcenter.gov/Bookmarks/index.cfm?id=6403&pge\\_id=1606](http://www.fedcenter.gov/Bookmarks/index.cfm?id=6403&pge_id=1606).

ACOE. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. ERDC/EL TR-08-28. September 2008. <http://www.usace.army.mil/CECW/Documents/cecwo/reg/trel08-28.pdf>

ACOE and EPA (U.S. Army Corps of Engineers and U.S. Environmental Protection Agency). 2007. Clean Water Act Jurisdiction following the U.S. Supreme Court’s Decision in *Rapanos v. United States & Carabell v. United States*. June 6, 2007.

California Fish and Game Code, Sections 2050–2069. California Endangered Species Act.

California Fish and Game Code, Sections 2800–2835. Natural Community Conservation Planning Act.



California Water Code, Section 13000–14958. Porter-Cologne Water Quality Act of 1969.

CBI (Conservation Biology Institute). 2000. *Review of Potential Edge Effects on the San Fernando Valley Spineflower* (*Chorizanthe parryi* var. *fernandina*). Prepared for Ahmanson Land Company and Beveridge & Diamond LLP. San Diego, CA: CBI. January 19, 2000.

CDFG (California Department of Fish and Game). 2009. “Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities.” November 24, 2009. Accessed June 18, 2012. [http://www.dfg.ca.gov/wildlife/nongame/survey\\_monitor.html](http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html).

CDFG. 2010. *List of Vegetation Alliances and Associations*. Vegetation Classification and Mapping Program. September 2010. Accessed April 2012. <https://nrmsecure.dfg.ca.gov/FileHandler.ashx?DocumentID=24718>.

CDFW (California Department of Fish and Wildlife). 2012. *California Natural Diversity Database (CNDDDB)*. RareFind, Version 4.0 (Commercial Subscription). Sacramento, California: CDFG, Biogeographic Data Branch. <http://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>.

City of Costa Mesa. 2000. *City of Costa Mesa 2000 General Plan, Chapter 6: Conservation Element*. Orange County, California. 2000. Accessed May 1, 2013. <http://www.costamesaca.gov/modules/showdocument.aspx?documentid=6603>.

City of Huntington Beach. 1996. *City of Huntington Beach General Plan, Chapter 4: Natural Resources Element*. Orange County, California. 1996. Accessed May 1, 2013. [http://www.huntingtonbeachca.gov/files/users/planning/environmental\\_resources\\_conservation\\_element.pdf](http://www.huntingtonbeachca.gov/files/users/planning/environmental_resources_conservation_element.pdf).

City of Newport Beach. 2006. *City of Newport Beach General Plan, Chapter 10: Natural Resources Element*. Orange County, California. July 25, 2006. Accessed May 1, 2013. [http://www.newportbeachca.gov/PLN/General\\_Plan/11\\_Ch10\\_NaturalResources\\_web.pdf](http://www.newportbeachca.gov/PLN/General_Plan/11_Ch10_NaturalResources_web.pdf).

City of Newport Beach. 2011. *Newport Banning Ranch Draft Environmental Impact Report*. Prepared by Bon Terra Consulting. September 2011.

CNPS (California Native Plant Society). 2012. *Inventory of Rare and Endangered Plants*. Online ed. Version 8-01a. Sacramento, California: CNPS. Accessed March 2012. <http://www.rareplants.cnps.org/simple.html>.



- County of Orange. 1992. *Habitat Classification System: Natural Resources Geographic Information System (GIS) Project*. Prepared by J. Gray (Dames & Moore) and D. Bramlet (Consulting Biologist) for T.B. Mathews (County of Orange). Santa Ana, California: County of Orange Environmental Management Agency, Planning Department. May 1992.
- County of Orange. 1996. *Natural Community Conservation Plan/Habitat Conservation Plan, County of Orange, Central & Coastal Subregion*. Parts 1, 2, 3, 4: Implementing Agreement, and 5: Map Section (Figures 1 through 73). County of Orange, Environmental Management Agency. Prepared by R.J. Meade Consulting, Inc. December 7, 1996.
- Dudek. 2013a. *Focused Least Bell's Vireo and Southwestern Willow Flycatcher Survey Report for the Orange County Sanitation District Southwest Costa Mesa Trunk Sewer Project*. Prepared for the U.S. Fish and Wildlife Service. June 2013.
- Dudek. 2013b. *2012 Focused Survey for the Presence/Absence of California Gnatcatcher for the Orange County Sanitation District Southwest Costa Mesa Trunk Sewer Project, Orange County, California, Permit No. TE-139634-2*. Prepared for the U.S. Fish and Wildlife Service. June 2013.
- Gray, J., and D. Bramlet. 1992. *Habitat Classification System Natural Resources Geographic Information System (GIS) Project*. Prepared for County of Orange Environmental Management Agency. May 1992.
- Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Nongame-Heritage Program, California Department of Fish and Game. October 1986.
- Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County*. March 2008. Accessed September 12, 2012. <http://www.sdcanyonlands.org/canyon-groups/canyon-group-resources/canyon-enhancement-guide/189-canyon-enhancement-planning-guide-materials>.
- Patten, M.A., and K.F. Campbell. 1998. "Has Cowbird Parasitism Selected for Earlier Nesting by the California Gnatcatcher?" *Western Birds* 29:290–298.
- PRC, Sections 30000–309000. California Coastal Act of 1976.
- USFWS (U.S. Fish and Wildlife Service). 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. Provided by the USFWS Carlsbad Fish and Wildlife Office on July 28, 1997.

USFWS. 1998. *Draft Recovery Plan for the Least Bell's Vireo (Vireo bellii pusillus)*. Portland, Oregon: USFWS, Region 1. Accessed December 5, 2011. [http://ecos.fws.gov/docs/recovery\\_plan/980506.pdf](http://ecos.fws.gov/docs/recovery_plan/980506.pdf).

#### 4.4, Cultural Resources

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

16 U.S.C. 470 et seq. National Historic Preservation Act.

36 FR 8921. Executive Order 11593, “Protection and Enhancement of the Cultural Environment.”

California Health and Safety Code, Section 7050.5.

City of Costa Mesa. 2012. “Informational Guide to: The City of Costa Mesa Historic Preservation Ordinance.” Accessed July 17, 2013. [http://www.ci.costa-mesa.ca.us/CMOpenPage.htm?pg=MiscPage&hl=Historical%20Ordinance&keepThis=true&TB\\_iframe=true&height=500&width=850](http://www.ci.costa-mesa.ca.us/CMOpenPage.htm?pg=MiscPage&hl=Historical%20Ordinance&keepThis=true&TB_iframe=true&height=500&width=850).

City of Costa Mesa. 2000. “Chapter 11: Historic and Cultural Resources Element.” In *City of Costa Mesa General Plan*.

City of Huntington Beach. 1996. *City of Huntington Beach General Plan: Historic and Cultural Resources Element*. Orange County, California. 1996.

City of Newport Beach. 2006. *City of Newport Beach General Plan Chapter 7: Cultural Resources Element*. Orange County, California. July 25, 2006.

County of Orange. 2005. *County of Orange General Plan, Historic and Cultural Resources Element*, Figure VI-9.

Kowta, Makoto. 1969. “The Sayles Complex: A Late Milling Stone Assemblage from the Cajon Pass and the Ecological Implications of its Scraper Planes.” *University of California Publications in Anthropology* 6:35–69. Berkeley, California.

Langenwalter, Paul E., and James Brock. 1985. *Phase II Archaeological Studies Prado Basin and the Lower Santa Ana River*. Ms. on file at the South Central Coastal Information Center, California State University, Fullerton.

- Leonard, Nelson, and Matthew C. Hall. 1975. *Description and Evaluation of Cultural Resources within the U.S. Army Corps of Engineers Santa Ana River Project*. Ms. on file at the South Central Coastal Information Center, California State University, Fullerton.
- PRC, Sections 5097–5097.6. Archaeological, Paleontological, and Historical Sites.
- U.S. Department of the Interior. 2010. Secretary of the Interior’s Standards for Professional Archaeology.
- Van Horn. 1978. *A Compilation of Archaeological, Historical, and Paleontological Data for the City of Costa Mesa*. Ms. on file at the South Central Coastal Information Center, California State University. Fullerton.
- Wallace. 1955. “A Suggested Chronology for Southern California Coastal Archaeology.” *Southwestern Journal of Anthropology* 11(3):214–230.
- Wallace. 1978. “Post-Pleistocene Archaeology, 9000 to 2000 BC.” In *Handbook of North American Indians*, edited by W. Sturtevant. Vol. 8, *California*, edited by R. Heizer, 25–36. Washington DC: Smithsonian Institution.
- Warren. 1968. “Cultural Tradition and Ecological Adaptation on the Southern California Coast.” In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams, 1–14. Eastern New Mexico University Contributions in Anthropology 1(3).

#### **4.5, Geology and Soils**

- 14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.
- City of Costa Mesa. 2000. “Chapter 8: Safety Element.” In *City of Costa Mesa General Plan*.
- City of Huntington Beach. 1996. *City of Huntington Beach General Plan, Chapter V, Hazards: Environmental Hazards Element*. Orange County, California. 1996.
- City of Huntington Beach Municipal Code, Chapter 17.05, Grading and Excavation.  
[http://www.huntingtonbeachca.gov/files/users/city\\_clerk/MC1705.pdf](http://www.huntingtonbeachca.gov/files/users/city_clerk/MC1705.pdf).
- City of Newport Beach. 2006. *City of Newport Beach General Plan Chapter 11: Safety Element*. Orange County, California. July 25, 2006.
- City of Newport Beach. 2009. *City of Newport Beach Sewer System Management Plan*. Newport Beach, California. July 2009.

City of Newport Beach. 2012. *City of Newport Beach Standard Design Requirements*. Newport Beach, California. July 19, 2012.

City of Newport Beach Municipal Code, Title 15, Buildings and Construction.  
<http://www.codepublishing.com/CA/NewportBeach/html/NewportBeach15/NewportBeach15.html>.

CMSD (Costa Mesa Sanitary District). 2011. *Costa Mesa Sanitary District Sewer System Management Plan*. Certified on October 26, 2009. Amended on June 23, 2011. Costa Mesa California.

OCSD (Orange County Sanitation District). 2012. *Orange County Sanitation District Design and Construction Requirements for Sanitary Sewers*. Orange County, California. October 2012.

OCSD. 2013. *Sewer System Management Plan for Orange County Sanitation District; Volume I*. Orange County, California. January 9, 2013.

PRC. Sections 2621–2630. Alquist-Priolo Earthquake Fault Zoning Act.

PRC. Sections 2690–2699.6. Seismic Hazards Mapping Act.

PRC. Section 2710 et seq. Surface Mining and Reclamation Act of 1975.

SWRCB (State Water Resources Control Board). 2006. “Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.” Order No. 2006-0003-DWQ. May 2, 2006.

#### **4.6, Greenhouse Gas Emissions**

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

CNRA (California Natural Resources Agency). 2009a. Notice of Public Hearings and Notice of Proposed Amendment of Regulations Implementing the California Environmental Quality Act. Sacramento, California: California Natural Resources Agency.  
[http://www.ceres.ca.gov/ceqa/docs/Notice\\_of\\_Proposed\\_Action.pdf](http://www.ceres.ca.gov/ceqa/docs/Notice_of_Proposed_Action.pdf).

CNRA 2009b. Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97. December 2009.

- CAPCOA (California Air Pollution Control Officers Association). 2008. *CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act*. January 2008.
- CARB. 2008. *Climate Change Proposed Scoping Plan: A Framework for Change*. October 2008; approved December 12, 2008. Accessed August 9, 2011. <http://www.arb.ca.gov/cc/scopingplan/document/psp.pdf>.
- CARB. 2013. “California Greenhouse Gas Inventory for 2000–2010: By Category as Defined in the Scoping Plan.” March 21, 2013. [http://www.arb.ca.gov/cc/inventory/data/tables/ghg\\_inventory\\_scopingplan\\_00-10\\_2013-02-19.pdf](http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_00-10_2013-02-19.pdf).
- CAT (Climate Action Team). 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. Sacramento, California: California Environmental Protection Agency, Climate Action Team. March 2006.
- CAT. 2010. *Climate Action Team Biennial Report*. Sacramento, California: California Environmental Protection Agency, Climate Action Team. April 2010.
- CCCC (California Climate Change Center). 2006. *Our Changing Climate: Assessing the Risks to California*. CEC-500-2006-077. July 2006.
- EPA. 2013. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2011*. EPA 430-R-13-001. April 12, 2013.
- IPCC (Intergovernmental Panel on Climate Change). 2007. “Summary for Policymakers.” In *Climate Change 2007: The Physical Science Basis*, edited by S. Solomon, D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller, 1–18. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge, United Kingdom, and New York, New York: Cambridge University Press.
- National Climatic Data Center. 2009. “Global Warming Frequently Asked Questions.” Asheville, North Carolina. Accessed April 30, 2013. <http://www.ncdc.noaa.gov/cmb-faq/globalwarming.html>.
- OPR (California Governor’s Office of Planning and Research). 2008. *CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review*. Technical Advisory.

#### **4.7, Hazards and Hazardous Materials**

- 8 CCR 330–344.90. California Occupational Safety and Health Regulations.
- 14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.
- 15 U.S.C. 2601–2697. Toxic Substances Control Act of 1976.
- 19 CCR 2735.1–2785.1 and Appendix A. California Accidental Release Prevention (CalARP) Program Detailed Analysis
- 22 CCR 66001–69407.2. Environmental Health Standards for the Management of Hazardous Waste.
- 24 CCR, Chapter 9. California Fire Code.
- 40 CFR, Parts 260–299. Implementation of Subtitles C and I of the Resource Conservation and Recovery Act.
- 42 U.S.C. 6901–6992. Resource Conservation and Recovery Act of 1976.
- 42 U.S.C. 9601–9675. Comprehensive Environmental Response, Compensation, and Liability Act of 1980.
- California Government Code, Section 65962.5. “Cortese List” Statute.
- California Government Code, Sections 8550–8668. California Emergency Services Act.
- California Health and Safety Code, Sections 25100–25258.2. Hazardous Waste Control Act.
- California Health and Safety Code, Sections 25500–25543.3. Hazardous Materials Management.
- City of Costa Mesa. 2000. *City of Costa Mesa 2000 General Plan, Chapter 8: Safety Element*. <http://www.costamesaca.gov/modules/showdocument.aspx?documentid=6605>.
- City of Huntington Beach. 2013. City of Huntington Beach Emergency Management & Homeland Security Program. [http://www.huntingtonbeachca.gov/government/departments/Fire/Emergency\\_Preparedness/](http://www.huntingtonbeachca.gov/government/departments/Fire/Emergency_Preparedness/)
- City of Newport Beach. 2006. *City of Newport Beach General Plan Chapter 11: Safety Element*. [http://www.newportbeachca.gov/PLN/General\\_Plan/12\\_Ch11\\_Safety\\_web.pdf](http://www.newportbeachca.gov/PLN/General_Plan/12_Ch11_Safety_web.pdf)

County of Orange. 2013. Emergency Preparedness. Accessed on June 27, 2013.  
<http://ocsd.org/divisions/fieldops/emb>.

EDR (Environmental Data Resources). 2013. Environmental database search performed on May 9, 2013. FEMA (Federal Emergency Management Agency). 1999. Federal Response Plan. 9230.1-PL. April 1999.

ICC (International Code Council). 2012. *International Fire Code*. Country Club Hills, Illinois: International Code Council.

OCFA (Orange County Fire Authority). 2005. Planning and Development Frequently Asked Questions. July 25, 2005. Accessed on July 23, 2013. <http://www.ocfa.org/menu/departments/FirePrevention/PlanningDevelopmentFAQ.aspx>

PL 98-616. Hazardous and Solid Waste Act. November 8, 1984.

SCS Engineers. 2004. *Report of Findings on the Investigation and Assessment of the Newport Terrace Landfill Gas Collection System*. March 19, 2004.

#### **4.8, Hydrology and Water Quality**

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

22 CCR, Division 4, Chapter 15. Domestic Water Quality and Monitoring Regulations.

40 CFR 131.12. Antidegradation Policy.

40 CFR 131.38. California Toxics Rule.

40 CFR 141. National Primary Drinking Water Regulations.

40 CFR 143. National Secondary Drinking Water Regulations.

California Department of Water Resources. 2013a. Groundwater Basin Map, South Coast Hydrologic Region Map. Accessed July 10, 2013.  
<http://www.water.ca.gov/groundwater/bulletin118/maps/SC.pdf>.

California Department of Water Resources. 2013b. “Coastal Plain of Orange County Groundwater Basin.” *California’s Groundwater Bulletin 118*.

City of Costa Mesa. 2002. *City of Costa Mesa 2000 General Plan, Chapter 6: Conservation Element*. Adopted January 2002.

City of Huntington Beach. 1996. *City of Huntington Beach General Plan, Chapter 3: Utilities Element and Chapter 4: Natural Resources—Environmental Resources/Conservation Element*. 1996.

City of Newport Beach. 2006. City of Newport Beach General Plan, Chapter 10: Natural Resources Element. Adopted July 25, 2006.

City of Newport Beach. 2013a. Municipal Code, Chapter 14.36, Water Quality, Section 14.36.040, Control of Urban Runoff. Accessed July 11, 2013.  
<http://www.codepublishing.com/CA/NewportBeach/>.

City of Newport Beach. 2013b. City of Newport Beach, Bay and Water Quality General Information (Local Implementation Plan). Accessed July 11, 2013.  
<http://www.newportbeachca.gov/index.aspx?page=429>.

County of Orange. 2005. *County of Orange General Plan, Chapter 6: Resources Element*.

County of Orange, the Cities of Orange County, and Orange County Flood Control District. 2003. Drainage Area Management Plan. July 1, 2003. <https://media.ocgov.com/gov/pw/watersheds/documents/damp/mapplan.asp>.

FEMA (Federal Emergency Management Agency). 2013a. FEMA Flood Insurance Rate Map (FIRM) Panel 06059C0264J.

FEMA. 2013b. Definition of FEMA Flood Zone Designations. Accessed July 10, 2013.  
<https://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%2520Flood%2520Zone%2520Designations>.

OC Flood (Orange County Flood Division). 2013a. “About Us.” Accessed July 10, 2013.  
<http://ocflood.com/about>.

OC Flood. 2013b. “SARP History.” Accessed July 10, 2013. <http://ocflood.com/sarp/history>.

SWRCB. 2009. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (CGP)*. Order No. 2009-0009-DWQ; NPDES No. CAS000002. Adopted September 2, 2009; effective July 1, 2010.

RWQCB (Regional Water Quality Control Board). 2008. *Water Quality Control Plan for the Santa Ana River Basin*. California Regional Water Quality Control Board, Santa Ana Region. Originally prepared in 1995, updated in February 2008.



- RWQCB. 2009. Fourth Term NPDES Permit. Order No. R8-2009-0030, NPDES No. CAS618030.
- RWQCB. 2011. “2010 Santa Ana Regional 303(d) List of Water Quality Limited Segments.” California Regional Water Quality Control Board, Santa Ana Region.  
[http://www.swrcb.ca.gov/rwqcb8/water\\_issues/programs/tmdl/303d.shtml#2008\\_2010](http://www.swrcb.ca.gov/rwqcb8/water_issues/programs/tmdl/303d.shtml#2008_2010). Accessed July 16, 2013.
- 4.9, Land Use and Planning**
- 14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.
- CCC (California Coastal Commission). 2012. Boundary Determination No. 06-2012, Orange County Sanitation District Southwest Trunk, Project 6-19, Orange County. November 1, 2012.
- CCC. 2013. Notice of Incomplete Application for the Banning Ranch Project (No. 5-13-032). March 1, 2013.
- City of Costa Mesa. 2002. *City of Costa Mesa 2000 General Plan*. Adopted January 2002.
- City of Costa Mesa. n.d. Code of Ordinances, Title 13: Planning, Zoning and Development.  
<http://library.municode.com/index.aspx?clientId=10425>.
- City of Huntington Beach. 1996. *General Plan Land Use, Utilities, and Environmental Resources/Conservation Elements*.
- City of Huntington Beach. 2011. *General Plan Coastal Element*. Certified 2001, last amended October 2011.
- City of Newport Beach. 1972. Use Permit Application No. 1621. July 21, 1972.
- City of Newport Beach. 2006. *City of Newport Beach General Plan*. Adopted July 25, 2006.
- City of Newport Beach. 2012. “City of Newport Beach: Local Coastal Program.” Accessed February 22, 2013. <http://www.newportbeachca.gov/index.aspx?page=177>.
- County of Orange. 2011. *County of Orange General Plan*. March 22, 2011, version.
- PRC, Sections 30000–309000. California Coastal Act of 1976.

#### 4.10, Noise

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

14 CFR, Part 150. “Airport Noise Compatibility Planning.”

23 CFR, Part 772. “Procedures for Abatement of Highway Traffic Noise and Construction Noise.”

42 U.S.C. 4901–4918. Federal Noise Control Act of 1972.

ALUC (Airport Land Use Commission). 2008. *Airport Environs: Land Use Plan for John Wayne Airport*. Amended April 17, 2008. [http://www.ocair.com/Commissions/ALUC/Docs/JWA\\_AELUP-April-17-2008.pdf](http://www.ocair.com/Commissions/ALUC/Docs/JWA_AELUP-April-17-2008.pdf).

California Health and Safety Code, Sections 46000–46080. California Noise Control Act of 1973.

Caltrans (California Department of Transportation). 2004. *Transportation- and Construction-Induced Vibration Guidance Manual*. Sacramento, California: California Department of Transportation, Noise, Vibration, and Hazardous Waste Management Office. Prepared by Jones & Stokes. <http://www.dot.ca.gov/hq/env/noise/pub/vibrationmanFINAL.pdf>.

City of Costa Mesa. 2000. “Chapter 7: Noise Element.” In *City of Costa Mesa General Plan*. Accessed April 30, 2013. <http://www.costamesaca.gov/modules/showdocument.aspx?documentid=6604>.

City of Costa Mesa Zoning Code. 2013. Chapter 13. “Noise Control.” Accessed May 1, 2013. [http://library.municode.com/HTML/10425/level2/TIT13PLZODE\\_CHXIIINOCO.html](http://library.municode.com/HTML/10425/level2/TIT13PLZODE_CHXIIINOCO.html).

City of Huntington Beach. 1996. *City of Huntington Beach General Plan: Noise Element*. Orange County, California. 1996. Accessed April 30, 2013. [http://www.huntingtonbeachca.gov/files/users/planning/noise\\_element.pdf](http://www.huntingtonbeachca.gov/files/users/planning/noise_element.pdf).

City of Huntington Beach Municipal Code. Chapter 8.40. “Noise Control.” [http://www.huntingtonbeachca.gov/files/users/city\\_clerk/MC0840.pdf](http://www.huntingtonbeachca.gov/files/users/city_clerk/MC0840.pdf)

City of Newport Beach. 2006. *City of Newport Beach General Plan Chapter 12: Noise Element*. Orange County, California. July 25, 2006. Accessed April 30, 2013. [http://www.newportbeachca.gov/PLN/General\\_Plan/13\\_Ch12\\_Noise\\_web.pdf](http://www.newportbeachca.gov/PLN/General_Plan/13_Ch12_Noise_web.pdf).

City of Newport Beach Municipal Code. Chapter 10.28. “Loud and Unreasonable Noise.”

FTA (Federal Transit Administration). 2006. *Transit Noise and Vibration Impact Assessment*. FTA-VA-90-1003-06. Washington DC: Federal Transit Administration Office of Planning and Environment. Prepared by Harris Miller Miller & Hanson Inc. May 2006.

Transcontinental Gas Pipe Line Company LLC. 2011. *Resource Report No. 9: Air Quality and Noise—Northeast Supply Link Project*. December 2011. Accessed June 19, 2013. [http://township.clinton.nj.us/transco/Resource%20Reports%20and%20Appendices/NESL\\_RR\\_9%20%20AIR%20QUALITY%20AND%20NOISE.pdf](http://township.clinton.nj.us/transco/Resource%20Reports%20and%20Appendices/NESL_RR_9%20%20AIR%20QUALITY%20AND%20NOISE.pdf).

#### 4.11, Recreation

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

California State Parks (California Department of Parks and Recreation). 2004. California State Parks-Performance Management Report. <http://www.parks.ca.gov/pages/23071/files/03lores.pdf>

City of Costa Mesa. 2002. *City of Costa Mesa 2000 General Plan, Chapter 10: Open Space and Recreation Element*. Orange County, California. Adopted January 2002. Accessed February 22, 2013. [http://www.ci.costa-mesa.ca.us/recreation/master\\_plan.pdf](http://www.ci.costa-mesa.ca.us/recreation/master_plan.pdf).

City of Costa Mesa. 2003. Master Plan: Fairview Park, City of Costa Mesa. Accessed July 9, 2013. <http://www.ci.costa-mesa.ca.us/fairviewpark/docs/RevisedMasterPlan.pdf>.

City of Costa Mesa. 2013. City of Costa Mesa, City Departments, Recreation, Fairview Park. Accessed July 9, 2013. <http://38.106.5.76/index.aspx?page=1213>.

City of Huntington Beach. 1996. *City of Huntington Beach General Plan, Chapter III: Recreation and Community Services Element*. Orange County, California. 1996. Accessed February 22, 2013. [http://www.huntingtonbeachca.gov/files/users/planning/recreation\\_element.pdf](http://www.huntingtonbeachca.gov/files/users/planning/recreation_element.pdf).

City of Newport Beach. 2006. *City of Newport Beach General Plan Chapter 8: Recreation Element*. Orange County, California. 2006. Accessed February 22, 2013. [http://www.newportbeachca.gov/PLN/General\\_Plan/09\\_Ch8\\_Recreation\\_web.pdf](http://www.newportbeachca.gov/PLN/General_Plan/09_Ch8_Recreation_web.pdf).

County of Orange. 2005. “Bikeway Planning and Design.” In *Orange County Highway Design Manual*, Chapter 1000. County of Orange, Orange County Highway Design Manual Committee. June 2005.

County of Orange. 2011. *County of Orange General Plan, Chapter VII: Recreation*.

Zint, Bradley. 2013. “Costa Mesa Picks Up Two Awards.” *Daily Pilot*, July 3, 2013. <http://www.dailypilot.com/news/tn-dpt-me-0704-costa-mesa-awards-20130703,0,3095085.story>.

OC Parks (Orange County Parks). 2013. “Talbert Regional Park.” Accessed July 9, 2013. <http://ocparks.com/parks/talbert/>.

Santa Ana River Trail & Parkway. 2013a. Santa Ana River Trail & Parkway, Interactive Map. Accessed July 9, 2013. <http://santaanarivertrail.org/trail-user-guide/interactive-map.html>.

Santa Ana River Trail & Parkway. 2013b. Santa Ana River Trail & Parkway, Trailheads. Accessed July 9, 2013. <http://santaanarivertrail.org/trail-heads.html>.

#### **4.12, Traffic and Circulation**

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

City of Costa Mesa. 2000. *City of Costa Mesa 2000 General Plan, Chapter 3: Circulation Element*. Orange County, California. 2000. Accessed February 22, 2013. <http://www.costamesaca.gov/modules/showdocument.aspx?documentid=6600>

City of Huntington Beach. 1996. *City of Huntington Beach General Plan, Chapter 3: Circulation Element*. Orange County, California. 1996. Accessed February 22, 2013. [http://www.huntingtonbeachca.gov/files/users/planning/circulation\\_element.pdf](http://www.huntingtonbeachca.gov/files/users/planning/circulation_element.pdf)

City of Newport Beach. 2006. *City of Newport Beach General Plan, Chapter 7: Transportation/Traffic Element*. Orange County, California. July 25, 2006. Accessed February 22, 2013. [http://www.newportbeachca.gov/PLN/General\\_Plan/08\\_Ch7\\_Circulation\\_web.pdf](http://www.newportbeachca.gov/PLN/General_Plan/08_Ch7_Circulation_web.pdf)

County of Orange. 2010. *County of Orange General Plan Chapter 4: Transportation Element*. Orange County, California. March 2010.

FHWA (Federal Highway Administration). 2010. *Most Travelled Urban Highways Average Annual Daily Traffic (AADT) >250,000*. Washington, DC. July 27, 2010. Accessed March 27, 2013. <http://www.fhwa.dot.gov/policyinformation/tables/02.cfm>.

OCTA (Orange County Transportation Authority). 2009. *Orange County Congestion Management Plan*. December 18, 2009. Accessed March 27, 2013. <http://www.octa.net/pdf/cmp09.pdf>.

OCTA. 2010. *Orange County Regional Transportation Plan: Destination 2035 “Moving Toward a Greener Tomorrow.”* Orange County, California. <http://www.octa.net/pdf/Irtpexecsum.pdf>.

SCAG (Southern California Association of Governments). 2001. *Congestion Management Plan*. #48601. Los Angeles County, California. May 2001.

#### **4.13, Utilities, Services Systems, and Energy**

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

42 U.S.C. 6901–6992. Resource Conservation and Recovery Act of 1976.

CalRecycle (California Department of Resources Recycling and Recovery). 2010. State Agency Waste Management Requirements: Waste Diversion. AB 75. Last updated June 28, 2010. Accessed May 1, 2013. <http://www.calrecycle.ca.gov/stateagency/Requirements>.

CARB (California Air Resources Board). 2012. “Clean Car Standards – Pavley, Assembly Bill 1493.” California Environmental Protection Agency, California Air Resources Board. Accessed May 3, 2013. <http://www.arb.ca.gov/cc/ccms/ccms.htm>.

CEC (California Energy Commission). 2012a. “SB 1368 Emission Performance Standards.” California Energy Commission. Accessed May 2, 2013. [http://www.energy.ca.gov/emission\\_standards/index.html](http://www.energy.ca.gov/emission_standards/index.html).

CEC. 2012b. *2011 Integrated Energy Policy Report*.

City of Huntington Beach. 2011a. *Energy Action Plan*. April 2011. [http://www.huntingtonbeachca.gov/Residents/green\\_city/hb-eap-adopted.pdf](http://www.huntingtonbeachca.gov/Residents/green_city/hb-eap-adopted.pdf).

City of Huntington Beach. 2011b. *Urban Water Management Plan 2010*. June 2011. [http://www.ci.huntington-beach.ca.us/files/users/public\\_works/urban-water-plan.pdf](http://www.ci.huntington-beach.ca.us/files/users/public_works/urban-water-plan.pdf).

City of Newport Beach. 2010. *Urban Water Management Plan 2010*. [http://www.newportbeachca.gov/Modules/ShowDocument.aspx?documentid=10182\\_](http://www.newportbeachca.gov/Modules/ShowDocument.aspx?documentid=10182_)

County of Orange. 2005. *County of Orange General Plan Chapter VI, Resources Element*. <http://ocplanning.net/civicax/filebank/blobdload.aspx?BlobID=8633>

EPA (U.S. Environmental Protection Agency). 2012. Office of Transportation and Air Quality. *EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks*. August 2012. <http://www.epa.gov/oms/climate/documents/420f12051.pdf>

Mesa (Mesa Consolidated Water District). 2010. *Urban Water Management Plan 2010*. May, 2011. <http://mesawater.org/pdf/Mesa%20Consolidated%20WD%202010%20UWMP.pdf>.

OC Public Works (Orange County Public Works). 2010. *2010 Business Plan*. <http://ocpublicworks.com/civicax/filebank/blobdload.aspx?BlobID=9174>.

RWQCB (Regional Water Quality Control Board). 1994. *Water Quality Control Plan for the San Diego Basin (9)*. September 8, 1994 (with amendments effective prior to April 25, 2007).

## **5, Cumulative Effects**

City of Newport Beach. 2011. *Newport Banning Ranch Draft Environmental Impact Report*. Prepared by Bon Terra Consulting. September 2011.

## **6, Other CEQA Considerations**

California Department of Conservation. 2010. *Guidelines for Classification and Designation of Mineral Lands*. Sacramento, California: California Department of Conservation; State Mining and Geology Board, Division of Mines and Geology. Accessed March 24, 2010. <http://www.conservation.ca.gov/smgb/Guidelines/Pages/guidelines.aspx>.

County of Orange. 2011. *County of Orange General Plan, Chapter VI: Mineral Resources Element*. Figure VI-3, Orange County Mineral Resources. Adopted in 2005; updated on March 22, 2011. Accessed July 15, 2013. <http://ocplanning.net/planning/generalplan2005>.

City of Costa Mesa. 2000. “Chapter 10: Open Space and Recreation.” In *City of Costa Mesa General Plan*. Accessed July 25, 2013. <http://www.costamesaca.gov/modules/showdocument.aspx?documentid=6607>.

City of Huntington Beach. 1996. “Natural Resources Chapter Environmental Resources/Conservation Element.” In *City of Huntington Beach General Plan*.

City of Newport Beach. 2006. “Chapter 10: Natural Resources Element.” In *City of Newport Beach General Plan*. July 25, 2006. Accessed May 1, 2013. [http://www.newportbeachca.gov/PLN/General\\_Plan/11\\_Ch10\\_NaturalResources\\_web.pdf](http://www.newportbeachca.gov/PLN/General_Plan/11_Ch10_NaturalResources_web.pdf).

## **7, Alternatives**

OCSD (Orange County Sanitation District). 2007. *Draft Program Environmental Impact Report: Collection System Improvement Plan*. SCH# 2006101018. March 2007.

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