Oceanside Sewer Improvements Program

Program Environmental Impact Report

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Prepared for:

City of Oceanside
Water Utilities Department
300 North Coast Highway
Oceanside, CA 92054

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADA	Americans with Disabilities Act
ALUCP	Airport Land Use Compatibility Plan
APCD	air pollution control district
APE	Area of Potential Effect
APN	Assessor's Parcel Number
AQIS	Air Quality Impact Assessment
USACE	U.S. Army Corps of Engineers
BCLA	biological core and linkage area
BMP	Best Management Practice
BP	Before Present
BTU	British thermal units
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CED	California Energy Demand
CEQA	California Environmental Quality Act
CERLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFG Code	California Fish and Game Code
CFR	Code of Federal Regulations
CFWO	Carlsbad Fish and Wildlife Office
CGP	Construction General Permit
CH_4	methane
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Program
City	Oceanside, City of
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency

CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPUC	California Public Utility Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CUPA	Certified Unified Program Agencies
CWA	Clean Water Act
dB	decibels
dBA	A-weighted decibels
DEHQ	Department of Environment Health and Quality
DIP	Ductile Iron Pipe
DOC	Department of Conservation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EAP	Energy Action Plan
E-CAP	Energy and Climate Action Element
EIA	U.S Energy Information Administration
EO	Executive Order
EPCRA	Emergency Planning Community Right-to-Know Act
EPIC	Energy Policy Initiative Center
FAA	Federal Airport Administration
FESA	Federal Endangered Species Act
FM	Force Main
FPA	Focused Planning Area
GHG	Greenhouse Gas
GWDR	General Waste Discharge Requirements
GWh	gigawatt hour
GWP	global warming potential
H_2S	hydrogen sulfide
HDD	horizontal directional drilling
HDPE	high-density polyethylene
HFC	hydrofluorocarbon
HMBP	Hazardous Materials Business Plan
HRA	health risk assessment
HRS	Hazard Ranking System
HZ	Hertz
I-	Interstate
IBC	International Building Code
ID	inside diameter
IEPR	Integrated Energy Policy Report

IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resource Planning
IRWM	Integrated Regional Water Management
ITP	Incidental Take Permit
JRMP	Jurisdictional Runoff Management Plan
kW	kilowatt
kWh	kilowatt hour
L_{DN}	Day-Night Sound Level
L_{EQ}	Equivalent Sound Level
LCFS	Low Carbon Fuel Standard
LCP	Local Coastal Program
LF	linear feet
LSE	load-serving entities
LSWWTP	La Salina Wastewater Treatment Plant
LUST	leaking underground storage tank
MALS	Mission Avenue Lift Station
MBGPF	Mission Basin Groundwater Purification Facility
MBTA	Migratory Bord Treaty Act
MGD	million-gallons-per-day
MHCP	Multiple Habitat Conservation Program
MMBTU	million British thermal unit
MMRP	Mitigation Monitoring and Reporting Program
MMT	million metric tons
MPO	Metropolitan Planning Organization
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System
MT	metric tons
MWh	megawatt hour
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NASA	National Aeronautics and Space Administration
NCCP	Natural Communities Conservation Planning
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NRHP	National Register of Historic Places
NSLU	noise sensitive land use

O_3	ozone
OHP	Office of Historic Preservation
OLO	Oceanside Land Outfall
OMG	Oceanside Mesa Garisson
OMZ	Off-Site Mitigation Zone
OOO	Oceanside Ocean Outfall
PAMA	Pre-approved Mitigation Areas
Pb	lead
PEIR	Program Environmental Impact Report
PFC	perfluorocarbons
PG&E	Pacific Gas and Electric
PI	Principal Investigator
PM_{10}	particulate matter 10 microns or less in diameter
$PM_{2.5}$	particulate matter 2.5 microns or less in diameter
ppm	parts per million
PRC	Public Resources Code
Program	Oceanside Sewer Improvements Program
PRPA	Paleontological Resources Preservation Act
RAQS	Regional Air Quality Strategy
RCP	Regional Comprehensive Plan
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Plan
RMWD	Rainbow Municipal Water District
ROG	reactive organic gas
RPS	Renewable Portfolio Standard
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SAF	State Alternative Fuels
SANDAG	San Diego Association of Governments
SAP	Subarea Plan
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCIC	South Coastal Information Center
SCS	Sustainable Communities Strategy
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDCRAA	San Diego County Regional Airport Authority
SDG&E	San Diego Gas and Electric
SF_6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SLR	San Luis Rey
SLRWRF	San Luis Rey Water Reclamation Facility

SO_2	sulfur dioxide
SOC	Statement of Overriding Considerations
SoCalGas	Southern California Gas
SP	service population
SWPPP	Stormwater Pollution Prevention Plan
SR	State Route
State Water Board	State Water Resources Control Board
TAC	toxic air contaminant
TCA	Traditionally and Culturally Affiliated
TCP	Traffic Control Plan
TDM	transportation demand management
USD	University of San Diego
USEPA	U.S. Environmental protection Agency
USFWS	U.S. Fish and Wildlife Service
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles travelled
VOC	volatile organic compound
WCPZ	Wildlife Corridor Planning Zone
WIFIA	Water Infrastructure Finance and Innovation Act
WQIP	Water Quality Improvement Plan

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This Program Environmental Impact Report (PEIR) assesses the potential environmental effects of the proposed Oceanside Sewer Improvements Program (Program) and was prepared in accordance with the California Environmental Quality Act (CEQA) and its implementing guidelines. The City of Oceanside (City) is serving as the CEQA lead agency in preparation of this PEIR. Responsible agencies include the State Water Resources Control Board (State Water Board), California Department of Transportation (Caltrans), California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB), and San Diego County Air Pollution Control District (APCD). The PEIR is intended to inform governmental decision makers and the public about the potential environmental impacts associated with construction and operation of the Program, and to identify ways that potentially significant impacts can be avoided or reduced by making changes to the Program, selecting an alternative, and/or adopting feasible mitigation measures.

ES.2 ENVIRONMENTAL REVIEW PROCESS

On March 9, 2021, the City circulated a Notice of Preparation (NOP) of the PEIR for agency and public review. The NOP generally described the Program's components and summarized the potential environmental effects of the Program that would be addressed by the PEIR. The NOP was published in The San Diego Union Tribune newspaper and on the City's website and submitted to the State Clearinghouse for distribution to relevant state agencies.

During the 45-day scoping period, nine comment letters were received. Based on comments and known information about the Program's components, it was determined the PEIR EIR should analyze potential impacts associated with the following environmental resource topics: air quality, biological resources, cultural and tribal cultural resources, geology and soils, energy, greenhouse gas (GHG) emissions, hazards and hazardous materials, noise, and transportation.

As required by CEQA, this Draft PEIR will be circulated for public review and comment for a minimum of 45 days. Following the close of the public review period, the City will respond to comments received and prepare a Final PEIR, which will consist of the following: the Draft PEIR, supporting materials, and technical appendices – including any corrections, clarifications, or amplifications of the analysis included in those documents; comments on the Draft PEIR; responses to comments on the Draft PEIR; and a mitigation monitoring and reporting program for the Program.

As the decision-making body for the lead agency, the City Council will consider whether to certify the Final PEIR. To do so, the City Council must find that the Final PEIR has been completed in compliance with CEQA, that the City Council has reviewed and considered the information in the Final PEIR, and that the Final PEIR represents its independent judgment and analysis. Once certified, the City and other public agencies will consider and rely on the information in the Final PEIR prior to approving, permitting, or taking other discretionary actions related to the Program. As required under CEQA, any such approval, permit, or action would be accompanied by certain findings of facts regarding the significant impacts of the Program, a statement of overriding considerations for any impacts that cannot be mitigated to a less than significant level, and a notice of determination, where appropriate.

The State Clearinghouse reference number for the Program is **SCH No. 2021030277**, and all CEQA postings regarding this Program can be found at: https://ceqanet.lci.ca.gov/. In addition, a copy of the Draft PEIR and supporting appendices can be accessed at: https://www.ci.oceanside.ca.us/government/development-services/planning/environmental-documents-ceqa.

ES.3 PROGRAM DESCRIPTION

ES.3.1 Program Components

The Program would implement wastewater utility improvement projects identified in the City's Capital Improvement Program (CIP) and Sewer Master Plan to address existing deficiencies within the City's wastewater treatment infrastructure and accommodate service for future growth. These projects, which include underground improvements and the construction of a new lift station, span a linear alignment from the San Luis Rey Water Reclamation Facility (SLRWRF) to the terminus of the Oceanside Land Outfall (OLO) at the La Salina Wastewater Treatment Plant (LSWWTP). Specific improvement projects part of the Program are briefly described as follows.

ES.3.1.1 Oceanside Mesa Garrison (OMG) Lift Station Project

The OMG Lift Station Project would construct a new sewer lift station within the 11.2-acre permanently closed Garrison Elementary School property, located at the intersection of Mesa Drive and Garrison Street. This new station would have a capacity of five-million-gallons-per-day (MGD) and receive flows from Mesa Drive and Garrison Street through a 24-inch gravity sewer main, which would be sent north to the SLRWFR. Development would occur within 3 acres of the site and include an access road and other associated operation components.

ES.3.1.2 Oceanside Mesa Garrison Force Main (OMG FM) Project

The OMG FM Project would construct approximately 16,100 linear feet (LF) of new 36-inch sewer force main to transport wastewater from the proposed OMG Lift Station, as well as flows from the existing Buena Vista FM, to the SLRWRF. The route would mainly follow city easements outside paved roadways, moving north from the OMG Lift Station along Garrison Street until it intersects with Mesa Drive, where the connection with the Buena Vista FM would occur. It would continue through Mesa Drive and the San Diego Gas and Electric (SDG&E)/Kinder Morgan corridor, across the San Luis Rey River, and up to the SLRWRF.

The OMG FM would run parallel to the Buena Vista FM and utilize its existing 800 LF tunnel (Tunnel) segment, near the SDG&E/Kinder Morgan transmission corridor west of El Camino Real and north of Mesa Drive, without replacing the pipe there. Once the OMG FM is operational, the Buena vista FM can be decommissioned for inspection and rehabilitation as a backup pipeline. Additionally, a 22-inch high-density polyethylene (HDPE) pipe may be upgraded to provide redundancy in the tunnel section, with approximately 1,000 LF of lined gravity pipe north of the tunnel to be replaced. In addition, an approximately 800-LF extension of the OMG FM is proposed to be constructed south of the OMG Lift Station to accommodate future system expansion and improved reliability.

ES.3.1.3 Land Outfall Replacement Project

The Land Outfall Replacement Project involves upsizing approximately 27,000 LF of the existing 24-inch OLO to 36-inch pipe between the SLRWRF and LSWWTP in various segments. Approximately 19,000 LF of this Project aligns with a corridor already planned for the proposed OMG FM, though an 800-foot tunnel section near El Camino Real would remain unchanged. This upgrade is critical from an operational standpoint to accommodate future increased flows and provide spill control measures at SLRWRF. Of the remaining 10,000 LF of pipe to be replaced, 4,000 LF near the North County Transit District Railroad right-of-way was found in poor condition and needs replacement, while the last 6,000 LF, though unassessed, would benefit from upsizing to improve operations. The OLO replacement components are as follows:

- Part A: Replacement of approximately 11,000 LF of 24-inch pipe with new 36-inch HDPE pipe between SLRWRF and Mission Basin Groundwater Purification Facility (MBGPF).
- Part B: Replacement of approximately 5,600 LF of existing 24-inch Ductile Iron Pipe (DIP) pipe with new 36-inch HDPE pipe between MBGPF and the Tunnel north of Mesa Drive.
- Part C1: Replacement of approximately 1,350 LF of 24-inch pipe with new 36-inch HDPE pipe in Garrison Street from Garrison Elementary School to Oceanside Boulevard.
- Part C2: Replacement of approximately 4,500 LF of 24-inch pipe with new 36-inch HDPE pipe along Oceanside Boulevard between Garrison Street westward to the existing 36-inch HDPE OLO at Canyon Drive.
- Part D: Replacement of approximately 4,000 LF of 24-inch pipe with new 36-inch HDPE pipe in Oceanside Boulevard from the westerly terminus of 36-inch HDPE pipe to the LSWWTP.

ES.3.1.4 Mission Avenue Lift Station Force Main (MALS FM) Replacement Project

The MALS FM Replacement Project involves the replacement of approximately 13,000 LF of the existing 24-inch sewer force main from the existing Mission Avenue Lift Station to SLRWRF with a new parallel pipeline. The new force main would run through future proposed residential development, follow public easements, cross under the San Luis Rey River, and continue toward SLRWRF. After completion, the existing pipeline may be taken offline, cleaned, assessed, and repaired to serve as a backup FM to improve the reliability of the City's sewer system.

ES.3.1.5 Mission Avenue Gravity Sewer Lining and Replacement Project

The Mission Avenue Gravity Sewer Lining and Replacement Project would rehabilitate approximately 600 LF of 24-inch sewer pipe with cured-in-place lining, starting at 3560 Mission Avenue and extending west to Fireside Street. Additionally, 1,600 LF of the same pipeline would be upsized to 30- and/or 36-inch pipe. Since the current sewer runs through private easements in a commercial area and undeveloped parcels, the replacement pipe would likely be relocated into Mission Avenue, where feasible. The Ocean KAMP project is conditioned to upsize the sewer line fronting the development property.

ES.3.2 Program Phasing and Construction

Program implementation would be phased as subject to funding availability, potential constructability concerns during construction, soils conditions, and materials availability. Construction is anticipated to begin in May 2026 and extend through February 2030, with some co-located components implemented concurrently to minimize cost and community disturbance.

Construction of the Program components would include both below and above-ground elements. The pipelines would be constructed primarily on off-road, disturbed City easement areas, with some sections near existing residential neighborhoods. The pipelines would be constructed primarily using open-cut construction methods; selected portions of the proposed pipelines would be constructed using trenchless construction methods such as horizontal directional drilling (HDD), microtunneling, and/or pipe ramming to minimize environmental and community impacts or to avoid certain facility/utility crossings. Staging areas would be identified by the construction contractor(s) and located within developed/disturbed locations where ground disturbance would not be required and would be outside of areas that support native habitat or sensitive species.

ES.4 PROGRAM OBJECTIVES

The following objectives have been identified for the proposed Program:

- Implement projects identified in the City's CIP and Sewer Master Plan to ensure that wastewater facilities are adequately maintained and upgraded and that capital improvements are scheduled and completed in a timely and cost-effective manner.

- Provide for overall system reliability with construction of system's new components and bring appropriate existing facilities up to latest safety requirements, and regulatory and technical standards by allowing for the inspection, maintenance, repair, and replacement of aging infrastructure.

- Provide adequate system capacity to meet the needs of the growing population, serve anticipated land use changes, and accommodate future wastewater demand and flow conditions through their lifespan.

- Centralize wastewater flows to the SLRWRF for the City's recycled water production and indirect potable reuse, thus increasing the local water supply.

- Provide support for emerging recycled water reuse and biosolids beneficial use opportunities.

- Ensure compliance with State General Waste Discharge Requirements (GWDR) for wastewater collection agencies by providing adequate capacity within the regional wastewater conveyance system to convey wastewater flows and prevent sanitary sewer overflows.

ES.5 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

During the 30-day public review and comment period for the NOP, a total of nine communications were received from the California Department of Fish and Wildlife (CDFW), California Department of Transportation (Caltrans), State Water Board, Native American Heritage Commission (NAHC), Rincon

Band of Luiseño Indians, Viejas Band of Kumeyaay Indians, San Diego County Archeological Society, City of Carlsbad and SDG&E. Areas of concern raised in response to the NOP include comments related to required public actions and approvals, the project prescription, aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, geology and soils, hydrology and water quality, land use and planning, transportation, tribal cultural resources, utilities and services systems, and NEPA documentation. Issues raised within these letters are summarized in Chapter 1.0 and evaluated in Chapters 2.0 through 7.0 of this PEIR.

ES.6 SUMMARY OF ALTERNATIVES

As required by CEQA, a reasonable range of alternatives to the Program is considered and discussed in this PEIR. Those alternatives are set forth in detail in Chapter 7.0, and they were developed with the goal of identifying potentially feasible means of attaining the basic Program objectives, while avoiding or substantially lessening potentially significant environmental effects. The alternatives considered in detail include each of the following:

- **Alternative 1: No Project Alternative**: As required by CEQA, the PEIR presents what would be reasonably expected to occur in the foreseeable future if the Oceanside Sewer Improvements Program is not constructed and operated.

- **Alternative 2: OMG FM Los Arbolitos Boulevard Alternative**: The OMG FM Los Arbolitos Boulevard Alternative would involve the same OMG FM alignment as proposed under the Program, except the section of alignment south of Pala Road would run south through Los Arbolitos Boulevard, southwest along Fireside Street, and then west on the south side of Fireside Park back to the shared Land Outfall and MALS FM corridor. The other Program components, including the OMG Lift Station Project, Land Outfall Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project, would remain as proposed in the Program under this alternative.

- **Alternative 3: OMG FM Fireside Street Alternative**: The OMG FM Fireside Alternative would involve the same OMG FM alignment as proposed under the Program, except the section of alignment south of Pala Road would run south through Los Arbolitos Boulevard, southwest and then south along Fireside Street to Heritage Street, where it would then run west back to the shared Land Outfall and MALS FM corridor. The other Program components, including the OMG Lift Station Project, Land Outfall Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project, would remain as proposed in the Program under this alternative.

- **Alternative 4: OMG FM Pala Road Alternative**: The OMG FM Pala Road Alternative would involve the same OMG FM alignment as proposed under the Program, except the northern portion would run south from the SLRWRF straight to Pala Road instead of routing along Whalen Lake Road. The alignment would then run west along Pala Road to the shared Land Outfall and MALS FM corridor. The other Program components, including the OMG Lift Station Project, Land Outfall Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project, would remain as proposed in the Program under this alternative.

ES.7 SUMMARY OF IMPACTS AND MITIGATION MEASURES

This PEIR contains a discussion of the potential environmental effects from implementation of the proposed Program, including information related to existing site conditions, analyses of the type and magnitude of individual and cumulative environmental impacts, and feasible mitigation measures that could reduce or avoid environmental impacts. In accordance with Appendices F and G of the CEQA Guidelines, the potential environmental effects of the proposed Program are analyzed for the following environmental issue areas:

- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Noise
- Transportation
- Tribal Cultural Resources

Table ES-1, *Summary of Environmental Impacts*, presented at the end of this section, provides a summary of the direct and indirect environmental impacts that could result from implementation of the Program and, in the case of direct impacts, feasible mitigation measures that could reduce or avoid environmental impacts. For each environmental issue, Table ES-1 summarizes the impact conclusions from the PEIR, the impact's significance, applicable mitigation measures that were identified to address these impacts, and the impact's significance after the applicable mitigation measure is applied.

Table ES-1
SUMMARY OF ENVIRONMENTAL IMPACTS

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
3.1 Air Quality				
Consistency with Air Quality Plans	The Program would not conflict with or obstruct implementation of the applicable air quality plan.	Less than Significant	No mitigation is required.	Less than Significant
Cumulatively Considerable Net Increase of Nonattainment Criteria Pollutants	The Program would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment.	Less than Significant	No mitigation is required.	Less than Significant
Sensitive Receptors	The Program would not expose sensitive receptors to substantial pollutant concentrations.	Less than Significant	No mitigation is required.	Less than Significant
Odors	The Program would not result in significant objectionable odors adversely affecting a substantial number of people.	Less than Significant	No mitigation is required.	Less than Significant
3.2 Biological Resources				
Special Status Species	The Program contains several special-status plant and animal species that have been observed or have moderate to high potential to occur within its area, in which construction and operation activities have the potential to result in direct and/or indirect impacts to these species. Therefore, the Program would have the potential to	Potentially Significant	**BIO-1a: Rare Plant Avoidance and Mitigation.** The development footprint associated with all sewer improvement projects located within the Program area shall be designed to maximally avoid and minimize impacts to rare plants, especially federally and/or state listed species (i.e., thread-leaved brodiaea), which have been identified within the Program area. Prior to ground-disturbing activities within the areas where rare plants are re-construction surveys shall be implemented prior to ground-disturbing activities to identify precise locations of rare plants to ensure avoidance to the maximum extent feasible, including incorporating all relevant mitigation in this PEIR, including **BIO-5**, **BIO-6**, and **BIO-7**. Based	Less than Significant

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	result in a substantial adverse effect on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.		on the results of the pre-construction survey, a USFWS-approved biologist shall establish the appropriate monitoring buffer for rare plants that have been detected within the construction area. Specific to thread-leaved brodiaea observed near the survey area, a USFWS-approved biologist would be required to be on site during ground disturbing activities occurring within 500 feet of known or potential thread-leaved brodiaea habitat. Specific to Brand's phacelia, Program components proposed for development within areas of known presence shall seek to restrict and minimize impacts to the species populations through project-level design changes and/or construction methods (e.g., walls, fencing, and/or trenchless utilities/technologies). Impacts to federally listed species would require conformance with **BIO-2**.. **BIO-1b: Critical Populations of Species Avoidance and Mitigation.** Prior to approval of final design plans for each Program component, construction footprints shall be designed to maximally avoid and minimize impacts (both direct and indirect) to critical populations of special-status wildlife species (including, but not limited to, least Bell's vireo) as well as designated critical habitat occurring within the survey area. This shall include incorporation of the following avoidance measures during the design phase: • Elimination of direct impacts by shifting the footprint outside of mapped critical populations and designated critical habitat wherever feasible. • Minimization of indirect impacts by reducing ground disturbance, vegetation removal, noise, vibration, and human activity near sensitive areas. Full avoidance of critical populations through limiting the area of disturbance for each future Program component identified within the overall Program area boundaries shall be required to the maximum extent feasible, unless determined in coordination with	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			the City that complete avoidance is infeasible due to engineering, safety, or legal constraints. Infeasibility must be demonstrated through written explanation reviewed and approved by the City of Oceanside (City; Owner) or its Designated Representative(s) prior to final design plan approval. All relevant mitigation in this PEIR, including **BIO-5**, **BIO-6**, and **BIO-7**, shall be implemented to mitigate potential impacts where full avoidance cannot be achieved. **BIO-1c: Sensitive Animal Avoidance and Mitigation.** Before the construction of each Program component, vegetation communities and sensitive resource mapping documented during prior surveys shall be reviewed by a Qualified Biologist to determine if pre-construction protocol level surveys are required to confirm presence/absence and distribution of federally and/or state listed species This measure is applicable to the following species: least Bell's vireo, southwestern willow flycatcher, light-footed Ridgway's rail, burrowing owl, and coastal California gnatcatcher. This condition does not apply to arroyo toad based on negative findings and low/marginal habitat within the survey area. If any of these species are identified as occurring within the Program component construction footprint(s), impacts to the species (including its habitat) shall be restricted and minimized through project-level design changes and/or construction methods (e.g., walls, fencing, scheduling outside of avian breeding seasons) as prescribed by the Qualified Biologist, to the extent feasible. Impacts to federally listed sensitive animal species shall also implement mitigation measure **BIO-2**, which provides for consultation with the USFWS via Section 7 or Section 10, as appropriate. Impacts to state listed species shall also implement mitigation measure **BIO-2**, which provides for consultation with the CDFW via Section 2081(b) Incidental Take Permit or Section 2080.1 Consistency Determination. Indirect impacts within occupied habitat occurring within the breeding season for these	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			species would require additional pre-construction surveys in accordance with **BIO-3**. **BIO-1d: Stephens' Kangaroo Rat Avoidance and Mitigation.** If the development footprint associated with any of the sewer improvement projects associated with the programmatic effort is proposed to occur within the Stephens' kangaroo rat survey area indicated on the Multiple Habitat Conservation Program (MHCP) Database Records Map (near Whelan Lake) and/or if suitable habitat for this species occurs within the development footprint, then a Qualified Biologist possessing a Section 10(a)1(A) research permit for this species shall survey areas containing potentially suitable habitat (open coastal sage scrub, agricultural fields, and grasslands on soils low in clay content) using approved survey protocols (sign surveys for burrows, scats, tracks, trails, followed by protocol trapping to verify species presence) as part of the CEQA review process for Program components, as applicable. Surveys shall occur regardless of location inside or outside of the Focused Planning Area (FPA). If Stephens' kangaroo rat is found present on any of the project sites associated with the proposed Program, consultation with USFWS is required. If construction is allowed to occur in the area based on USFWS consultation, then the following construction measures are proposed to conform with the MHCP: (a) removal of native vegetation and habitat should be avoided and minimized to the maximum extent practicable, (b) implement standard Best Management Practices (BMPs) per Appendix B of the MHCP, (c) construction-related vehicle traffic shall be limited to daylight hours to minimize roadkill, (d) for temporary impacts involving trenching or other excavation, measures shall be taken to prevent Stephens' kangaroo rat from falling into the trench. Excavations shall not be covered (e.g., with metal plates or boards) to exclude rodents, because these may actually attract them to burrow beneath and become entrapped, and (e) to minimize injury or mortality of individuals, the USFWS may authorize qualified biologists to	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			relocate individual Stephens' kangaroo rats to nearby suitable habitat. Proposed minimization/avoidance measures must be approved by the USFWS. If Stephens' kangaroo rats are not present, items (a) and (b) should be implemented within the MHCP Stephens' kangaroo rat survey area and a biological monitor possessing a Section 10(a)1(A) research permit for this species shall be present when construction activities are occurring within the MHCP Stephens' kangaroo rat survey area. **BIO-2: Listed Species Conservation Measures.** Where take of a federally listed species would potentially result from implementation of the proposed Program components (as identified through preconstruction surveys required under **BIO-1c** and **BIO-1d**), then before the issuance of land disturbance, clearing, grubbing, or grading permits for that project, it shall be demonstrated that consultation with the USFWS for the Program has analyzed project-level related significant adverse effects to the applicable listed species, has occurred in accordance with the Federal Endangered Species Act (FESA). Additionally, if the Program would impact a state listed species, then it shall be demonstrated that a Section 2081(b) Incidental Take Permit or Section 2080.1 Consistency Determination for impacts to the applicable species has been issued by CDFW or that none was required. Impacts to listed species' habitat shall be compensated by the implementation of habitat-based mitigation off-site purchase of mitigation credits (see mitigation measures **BIO-8a** and **BIO-8b**). **BIO-3: Listed Species Breeding Season Restrictions.** No clearing, grubbing, grading, or other construction activities shall occur during the breeding season for coastal California gnatcatcher (February 15 to August 31), least Bell's vireo (March 15 to September 15), light-footed Ridgeway's rail (February 15 to	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			September 30), and/or southwestern willow flycatcher (May 1 to September 1). If construction activity is scheduled to occur during the breeding season for these species, a Qualified Biologist, approved by USFWS, will be on site during any construction within 500 feet of known or potential gnatcatcher, vireo, flycatcher, or rail habitat to ensure compliance with all applicable mitigation measures. The biologist will allow direct communication with the Carlsbad Fish and Wildlife Office (CFWO) at any time regarding the proposed Program component. The biologist will be provided with a copy of the Informal Section 7 Consultation Documentation between the USEPA and USFWS and will be available during pre-construction and construction phases to review grading plans, address protection of sensitive biological resources, monitor ongoing work, and maintain communications with the Resident Engineer to ensure that issues relating to the gnatcatcher, vireo, flycatcher, or rail and their habitats are appropriately and lawfully managed. The biologist will perform the following duties: a. Perform a minimum of three focused surveys, on separate days, to determine the presence of gnatcatcher, vireo, flycatcher, or rails nests within 500 feet of construction proposed during their breeding seasons. The surveys will begin a maximum of 7 days prior to construction (including temporary fence installation) and one survey will be conducted the day immediately prior to the initiation of work. Additional surveys will be done once a week during construction in the breeding season. Through coordination with, and concurrence of, the CFWO, these additional surveys may be suspended. The applicant will notify the CFWO at least 7 days prior to the initiation of surveys and within 24 hours of locating any gnatcatcher, vireo, flycatcher, or rail nest.	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			b. If pre-construction surveys determine that these species are not present, work can occur unimpeded. If an active gnatcatcher, vireo, flycatcher, or rail nest is found within 500 feet of construction, the biologist will postpone work within 500 feet of the nest and contact the CFWO to discuss: (i) the best approach to avoid/minimize impacts to nesting vireo or flycatcher (e.g., sound walls, noise monitoring); and (ii) a nest monitoring program acceptable to the CFWO. Subsequent to these discussions, work may be initiated subject to implementation of the agreed upon avoidance/minimization approach and nest monitoring program. Nest monitoring will occur according to a schedule approved by the CFWO. The biologist will determine whether gnatcatcher, vireo, flycatcher, or rail are being disrupted. If the biologist determines that gnatcatcher, vireo, flycatcher, or rail are being disrupted, the applicant will stop work and coordinate with the CFWO to review the avoidance/minimization approach. Upon agreement as to the necessary revisions to the avoidance/minimization approach, work may resume subject to the revisions and continued nest monitoring. Nest monitoring will continue until fledglings have dispersed or the nest is no longer active, as approved by the CFWO. **BIO-4: Avoidance of Nesting Birds and Raptors.** To prevent direct impacts to nesting birds, including raptors, protected under the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG Code), the Program shall comply with the following: Construction activities requiring the removal and/or trimming of vegetation suitable for nesting birds (including clearing, grubbing, trenching, grading, or land disturbances) shall occur outside of the general bird breeding season (January 15 to September 15). This condition may be waived provided that the	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			following additional avoidance measures are taken. If the construction activities cannot avoid the general bird breeding season, a Qualified Biologist shall be retained to conduct a pre-construction nesting bird survey within seven days before the start of the activities to confirm the presence or absence of active bird nests. If no active bird nests are found by the Qualified Biologist, then the activities shall proceed with the reassurance that no violation of the MBTA and CFG Code would occur. If an active bird nest is found by the Qualified Biologist, then vegetation removal and/or trimming activities at the nest location, and within 300 feet for passerine birds and 500 feet for raptors, shall not be allowed to occur until the Qualified Biologist has determined that the nest is no longer active. Buffers may be reduced only at the discretion of the Qualified Biologist depending on the bird species and construction/ vegetation removal activities required in the vicinity of the active nest. **BIO-5: Construction Work Limits Fencing.** Before the issuance of land disturbance, clearing, grubbing, or grading permits for each Program component, the approved grading boundaries and limits of work shall be presented on the Final Construction Drawings, including the limits of work fencing. To help ensure inadvertent/unauthorized impacts to environmentally sensitive areas outside of the approved limits of work are avoided, temporary construction fencing (orange fencing or similar), including silt fencing as appropriate, shall be installed at the edges of the approved impact limits within 500 feet of known thread-leaved brodiaea, coastal California gnatcatcher, least Bell's vireo, light-footed Ridgeway's rail, and southwestern willow flycatcher habitat. This fencing shall be installed before construction and maintained for the duration of construction activity. Fencing shall be installed in a manner that does not impact habitats to be avoided. The City shall submit to the CFWO for approval, at least 5 working days prior to initiating soil-disturbing impacts, the final plans for construction. These final plans will include photographs	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			that show the fenced limits of impact, sediment-trapping devices installed prior to grading (if applicable), and all areas to be avoided. Once fencing is installed, a biological monitor (see **BIO-6**) shall determine the need for additional inspections and monitoring activities throughout the duration of construction. Under no circumstance shall work occur beyond the fenced or demarcated limits of impact. Temporary construction fencing shall be removed upon completion of construction. **BIO-6: Biological Construction Monitoring.** A USFWS-approved biologist shall be retained to monitor construction activities. The monitoring, at minimum, shall include inspection of construction work areas, including staging and storage areas, to confirm that activities are kept within the approved limits and that BMPs are in place. The Qualified Biologist shall regularly monitor construction activities throughout construction and perform the following duties. a. Oversee installation of and inspect temporary fencing and erosion control measures within or up-slope of avoided areas a minimum of once per week during installation and daily during all rain events until established to ensure that any breaks in the fence or erosion control measures are repaired immediately. b. Periodically monitor the work area to ensure that work activities do not generate excessive amounts of dust and that all other conditions are followed. c. Train all contractors and construction personnel a maximum of 14 days prior to construction on the biological resources associated with the Program component(s) and ensure that training is implemented	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			by construction personnel. At a minimum, training will include: (i) the purpose for resource protection; (ii) a description of the gnatcatcher, vireo, flycatcher, and rail and their habitats; (iii) the conservation measures given in this consultation that should be implemented during construction to conserve sensitive resources, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced footprint to avoid sensitive resource areas in the field (i.e., avoided areas delineated on maps or on the project site by fencing); (iv) environmentally responsible construction practices; (v) the protocol to resolve conflicts that may arise at any time during the construction process; and, (vi) the general provisions of the Act, the need to adhere to the provisions of the Act, and the penalties associated with violating the Act. d. Halt work, if necessary, and confer with the CFWO to ensure the proper implementation of species and habitat protection measures. The biologist will report any violation to the CFWO within 24 hours of its occurrence. e. Submit weekly letter reports via electronic mail (email) to the CFWO during construction within 500 feet of avoided brodiaea, gnatcatcher, vireo, flycatcher, or rail habitat, or unless otherwise agreed to by the CFWO. The weekly reports will document that authorized impacts were not exceeded, work did not occur within the 500-foot buffer, or otherwise CFWO-approved setback and general compliance with all CMs. The reports will also outline the duration of vireo, flycatcher, or gnatcatcher monitoring, the location of construction activities, the type of construction that occurred, and equipment used. These reports will specify numbers and locations of gnatcatcher, vireo, flycatcher, or rail and nests, sex of the	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			birds, observed behavior (especially in relation to construction activities), and remedial measures employed to avoid, minimize, and mitigate impacts to vireo, flycatcher, or gnatcatcher and nests. Raw field notes should be available upon request by the CFWO. f. Submit a final report to the CFWO within 60 days of completion of construction that includes: (i) maps of areas within 500 feet of brodiaea, gnatcatcher, vireo, flycatcher, or rail habitat with an overlay of habitat that was impacted and avoided; (ii) photographs of habitat areas that were to be avoided; and iii) summary of all gnatcatcher, vireo, flycatcher, or rail and nest observations; and (iv) other relevant summary information documenting that authorized impacts were not exceeded and that general compliance with all mitigation measures was achieved. If items of non-compliance are identified, the biologist shall notify the on-site construction superintendent and/or other appropriate personnel immediately to discuss and implement corrective actions. If the non-compliance items involve USFWS critical habitat, occupied sensitive species habitat, and/or sensitive species, the biologist has stop work authority. Issues of non-compliance that result in additional impacts to sensitive biological resources shall be documented within 72-hours of identification. Mitigation for unauthorized impacts shall adhere to the applicable measures in this PEIR. **BIO-7: Construction Best Management Practices.** The City shall ensure that the following conditions are implemented during construction of each Program component to minimize potential impacts to sensitive species:	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			a. Employees will strictly limit their activities, vehicles, equipment, and construction materials to the fenced construction footprint and designated staging areas and routes of travel. The construction area(s) will be the minimal area necessary to complete the project and will be specified in construction plans. b. To avoid attracting predators of the gnatcatcher, vireo, flycatcher, and rail, the project site will be kept as clean of debris as possible. All food related trash items will be enclosed in sealed containers and regularly removed from the site. c. Disposal or temporary placement of excess fill, brush, or other debris will not be allowed in waters of the U.S. or on their banks. d. Pets of construction personnel will not be allowed on the construction site. e. Impacts from fugitive dust will be avoided and minimized through watering and other appropriate measures. f. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will occur in designated areas outside of waters of the United States within the fenced construction impact limits. These designated areas will be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering waters of the United States and will be shown on the construction plans. Fueling of equipment will take place within existing paved areas greater than 100 feet from waters of the United States. Contractor equipment will	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			be checked for leaks prior to operation and repaired as necessary. "No-fueling zones" will be designated on construction plans.	
Sensitive Habitats	The Program contains sensitive communities that occur within its area, including a riparian habitat. Therefore, the Program would have the potential to result in a substantial adverse effect on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.	Potentially Significant	**BIO-8a: Compensatory Mitigation for Impacts to Sensitive Natural Communities.** Before the issuance of land disturbance, clearing, grubbing, or grading permits for each proposed Program component, it shall be demonstrated that compensatory mitigation for direct impacts caused by the Program component (including permanent and temporary) to sensitive natural communities has been adequately proposed in accordance with the ratios provided in Table 3.2-3, M*itigation Ratios for Impacts to Sensitive Natural Communities.* Mitigation for permanent impacts shall be secured through the purchase of off-site conservation credits from a City-approved conservation bank in the region. This includes all impacts occurring within City Sewer Easements. Although many of the impacts within these areas would otherwise be considered temporary, the routine maintenance required in these areas and potential for ground disturbance (i.e., associated with a repair) deems these areas unsuitable for restoration. **BIO-7b: Restoration of Temporary Impacts**. Sensitive natural communities identified in Table 3.2-3 of the PEIR that would be temporarily impacted during construction shall be recontoured and/or revegetated immediately (within 12 months) following construction to a pre-construction condition or better, pursuant to the Programmatic Revegetation Plan. This plan shall include clearly defined success criteria and describe the methods to achieve those criteria. Sensitive habitat communities shall be revegetated in-kind to preserve ecological integrity, while temporary impacts to non-sensitive communities shall be restored using a low-fuel native erosion control seed mix. Additionally, all areas within the sewer easement—although considered permanent impacts—shall also be revegetated with	Less than Significant

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			the same low-fuel native mix to ensure compliance with erosion control standards.	
Wetlands	The Program would have the potential for a substantial adverse effect on state or federally protected jurisdictional aquatic resources.	Potentially Significant	**BIO-9a: Regulatory Permitting.** Before the issuance of land disturbance, clearing, grubbing, or grading permits to impact potentially jurisdictional aquatic resources, the City shall obtain and retain evidence that regulatory permits from the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and/or CDFW as determined to be at that time applicable, have been issued, or that no such permits are required. **BIO-9b: Compensatory Mitigation for Impacts to Jurisdictional Resources.** Permanent and temporary impacts to potentially jurisdictional resources under the regulation of USACE, RWQCB, and/or CDFW that result from any of the construction footprints associated with the proposed Program components shall be mitigated at a 3:1 ratio consisting of a minimum 1:1 creation/establishment and subject to regulatory permitting requirements of the USACE, RWQCB, or CDFW (**BIO-9a**). Mitigation shall be provided through the purchase of appropriate credits from a mitigation bank approved by the USACE, RWQCB, or, CDFW as applicable. Jurisdictional aquatic resources temporarily impacted during construction shall be recontoured and/or revegetated immediately (within 12 months) following construction to a pre-construction condition or better. No revegetation monitoring shall be needed, unless otherwise required by the USACE, RWQCB, or CDFW as applicable.	Less than Significant
Wildlife Movement	The Program's development footprint may be located within an MHCP biological core and linkage area used for wildlife movement, fish, and/or native wildlife nursery sites, while	Potentially Significant	**BIO-1b, BIO-1c, bIO-2 and BIO-5** through **BIO-7**	Less than Significant

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	additional surveyed areas are designated in the Draft Subarea Plan (SAP) as Wildlife Corridor Planning Zones and MHCP hardline and softline preserve areas. Therefore, the Program would have the potential interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory corridors, or impede the use of native wildlife nursery sites.			
Local Policies	The Program would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	No Impact	No mitigation is required.	No Impact
Conservation Planning	The Program is located within the boundaries of the MHCP and specifically within the Draft SAP area. Therefore, the Program has the potential to conflict with an approved local, regional, or state habitat conservation plan.	Potentially Significant	**BIO-1a** through **BiO-9b**	Less than Significant
3.3 Cultural Resources				
Historical Resources	The Program would not cause a substantial adverse change in the significance of a historical	No Impact	No mitigation is required.	No Impact

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	resource pursuant to Section 5064.5.			
Archaeological Resources	The Program's ground-disturbing activities would have the potential to affect archeological resources and thus cause a substantial adverse change in the significance of an archeological resource pursuant to Section 5064.5.	Potentially Significant	**CUL-1:** Before the issuance of the Notice to Proceed for each Project Component, the City of Oceanside (City; Owner) or its Designated Representative(s) shall enter into a pre-excavation agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement (Pre-Excavation Agreement) with the "Traditionally and Culturally Affiliated (TCA) Native American Monitor(s) associated with the TCA Luiseño Tribe(s)." A copy of the Agreement shall be included in the Grading Plan Submittals for the Grading Permit. The purpose of this Agreement shall be to formalize protocols and procedures between the City and the "TCA Native American Monitor(s) associated with the TCA Luiseño Tribe(s)" for the treatment of known cultural resources; the designation, responsibilities, and participation of professional tribal monitors during grading, excavation, and ground disturbing activities; project scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and tribal cultural resources, located and/or discovered through a monitoring program in conjunction with the construction of the proposed project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground-disturbing activities. **CUL-2:** At least 45 days prior to the issuance of the Notice to Proceed for each Project Component, the City of Oceanside Water Utilities Department or its Designated Representative(s) shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Archaeologist and Luiseño Native American Monitor(s) have been retained at the	Less than Significant

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			City or Contractor's expense to implement the monitoring program, as described in the Pre-Excavation Agreement and the project's Cultural Resources Post-Review Discovery and Monitoring Plan prepared for the EPA (HELIX 2026b). The Qualified Archaeologist shall meet the Secretary of the Interior's (SOI) Professional Qualifications Standards (48 Federal Register 44738-39). The archaeological monitor will conduct the construction monitoring under the oversight of the Qualified Archaeologist. **CUL-3:** The Qualified Archaeologist shall maintain ongoing collaborative consultation with the Luiseño Native American monitor(s) during all ground-disturbing activities. The requirement for the monitoring program shall be noted on all applicable construction documents, including demolition plans, grading plans, etc. The Contractor shall notify the City of Oceanside Water Utilities Department of the start and end of all ground-disturbing activities. **CUL-4:** The archaeological monitor and Luiseño Native American Monitor(s) shall attend all applicable pre-construction meetings with the Contractor and/or associated Subcontractors to present a Cultural Resources Awareness and Sensitivity Training and discuss the construction schedule and the protocols for an inadvertent discoveries. The Contractor must give a 48-hour notice of any scheduled pre-construction meetings and monitoring. The archaeological monitor and Luiseño Native American Monitor(s) shall follow the protocols outlined in the project's Cultural Resources Post-Review Discovery and Monitoring Plan prepared for the EPA (HELIX 2026b), and the Pre-Excavation Agreement including: being present on-site full-time during grubbing, grading, and/or other ground-altering activities, including the placement of imported fill materials or fill used from	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			other areas of the project site, to identify any evidence of potential archaeological or tribal cultural resources. All fill materials shall be absent of any and all tribal cultural resources. To ensure that all TCA Luiseño Tribe(s) have an equal opportunity for representation, tribal monitors from each TCA Luiseño Tribe(s), that request to provide monitoring, will be systematically rotated on a schedule established by the City. **CUL-5:** In order for potentially significant archaeological artifact deposits and/or cultural resources to be readily detected during mitigation monitoring, a written "Controlled Grade Procedure" shall be prepared by a Qualified Archaeologist, in consultation with the TCA Luiseño Tribe(s) that have participated in the state-prescribed process for the Program, subject to the approval of the City or its Designated Representative(s), in accordance with the Cultural Resources Post-Review Discovery and Monitoring Plan prepared for the EPA (HELIX 2026b). The Controlled Grade Procedure shall establish requirements for any ground-disturbing work with machinery occurring in and around areas the Qualified Archaeologist and Luiseño Native American monitor(s) determine to be sensitive through the cultural resource mitigation monitoring process. The Controlled Grade Procedure shall include, but not be limited to, appropriate operating pace, increments of removal, weight, and other characteristics of the earth-disturbing equipment. To the extent feasible, grading shall occur within the same trenches as existing pipelines. Where this is not feasible, trench widths should be kept as narrow as feasible to accommodate the new or replacement pipelines. A copy of the Controlled Grade Procedure shall be included in the Engineering Plans for each Program Component prior to construction. **CUL-6:** During the monitoring program, all ground disturbance (trenching/excavation/drilling) occurring within the boundaries of	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			P-37-005445 should be monitored full-time by the archaeological monitor and Luiseño Native American Monitor, with screening of a sample of the soils occurring. The monitors will direct the pace of excavation within the archaeological site in order to allow sufficient time to thoroughly examine the soils and the trench sidewalls. In addition, to minimize impacts to cultural resources, it is recommended that trench widths be kept as narrow as feasible to accommodate the new or replacement pipelines. **CUL-7:** The archaeological monitor or the Luiseño Native American monitor may halt ground-disturbing activities if unknown tribal cultural resources, archaeological artifact deposits, or cultural features are discovered. Ground-disturbing activities shall be directed away from these deposits and at least a 25-foot radius, to allow a determination of potential importance. Isolates and clearly non-significant deposits will be minimally documented in the field, and before grading proceeds, these items shall be secured until they can be repatriated. If items cannot be securely stored on the project site, they may be stored in off-site facilities located in San Diego County. Any newly discovered cultural resource(s) shall be subject to evaluation. If the Qualified Archaeologist and Luiseño Native American monitor(s) determine that the unearthed tribal cultural resource, artifact deposits, or cultural features are considered potentially significant, TCA Luiseño Tribe(s) that have participated in the state-prescribed consultation process for this project shall be notified and consulted regarding the respectful and dignified treatment of those resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance and protection of a significant tribal cultural resource and/or unique archaeological resource is the preferred method of preservation. If, however, it is determined by the City that avoidance of the resource is infeasible, the Qualified Archaeologist and the TCA Luiseño Tribe(s) shall make recommendations to the City on the measures	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			that will be implemented to protect the newly discovered cultural resource(s), including but not limited to, excavation, relocation, and further evaluation of the discoveries in accordance with CEQA. If it is determined that a data recovery plan is necessary by the City as the Lead Agency under CEQA, TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this project shall be notified and consulted regarding the drafting and finalization of any such recovery plan. For significant tribal cultural resources, artifact deposits, or cultural features that are part of a data recovery plan, an adequate artifact sample to address research avenues previously identified for sites in the area will be collected using professional archaeological collection methods. The data recovery plan shall also incorporate and reflect the tribal values of the TCA Luiseño Tribe(s) that have participated in the state-prescribed consultation process for this project. If the Qualified Archaeologist collects such resources, the Luiseño Native American monitor(s) must be present during any testing or cataloging of those resources. Moreover, if the archaeological monitor does not collect the tribal cultural resources that are unearthed during the ground-disturbing activities, the Luiseño Native American monitor, may at their discretion, collect said resources and provide them to the appropriate TCA Luiseño Tribe(s), as determined through the appropriate process, for respectful and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. Ground-disturbing activities shall not resume until the Qualified Archaeologist, in consultation with the Luiseño Native American Monitor, deems the cultural resource or feature has been appropriately documented and/or protected. If the City, the Qualified Archaeologist, and the TCA Tribe(s) cannot agree on the significance or the mitigation for the newly discovered cultural resource(s), these issues will be presented to	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			the City for decision. The City shall make the determination based on the provisions of CEQA with respect to cultural resources and shall take into account the religious beliefs, customs, and practices of the TCA Tribe(s). **CUL-8:** The landowner shall relinquish ownership of all tribal cultural resources unearthed during the cultural resource mitigation monitoring conducted during all ground-disturbing activities, and from any previous archaeological studies or excavations on the project site to the appropriate TCA Luiseño Tribe(s), as determined through the appropriate process, for respectful and dignified treatment and disposition, including reburial at a protected location on-site, in accordance with the TCA Luiseño Tribe(s),'s cultural and spiritual traditions. Excluding sacred items, human remains, and grave goods, project archaeologists will be allowed to retain the cultural resource(s) at their office to document and photograph the cultural resource(s) for inclusion in the final monitoring report. Within 90 days after all monitoring is completed, the Qualified Archaeologist must return all cultural resources to the TCA Tribe(s). During those 90 days, the TCA Tribe(s) will work with the City to select a location for reburial that will be free from any disturbance including but not limited to development, excavation, any landscaping that exceeds the depth of the resources, above- or below-ground utility installation, flooding, etc. Upon return of the cultural resources, the City will allow the TCA Tribe(s) a reasonable timeframe in which to access the agreed upon area. The TCA Tribe(s) will document the reburial location with GPS coordinates, add the data to internal GIS systems, and complete a form for submittal to the Native American Heritage Commission (NAHC). Prior to filing the Notice of Completion, the City and the TCA Tribe(s) shall complete a Long-Term Preservation Plan for the reburial location. This Preservation Plan shall describe the open	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			space easement within which the resources are located, which will be transferred to the TCA Tribe(s). All cultural materials that are associated with burial and/or funerary goods will be repatriated to the Most Likely Descendant as determined by the NAHC per California Public Resources Code Section 5097.98. No tribal cultural resources shall be subject to curation. Any archaeological resources unearth during the monitoring which the TCA Tribe(s) does wish to be given ownership of, such as diagnostic historic archaeological items, should be curated at a curation facility, that meets federal standards per 36 CFR Part 79. Non-diagnostic items do not need to be curated. **CUL-9:** Prior to filing the Notice of Completion, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis, and conclusions of the archaeological monitoring program (e.g., data recovery plan), any associated California Department of Parks and Recreation 523 Forms and/or confidential maps, details of the location of the final disposition of cultural resources, any issues or problems that occurred during monitoring, and any other pertinent information shall be submitted by the Qualified Archaeologist, along with the TCA Tribe(s) monitoring notes and comments, to the City of Oceanside or its Designated Representative(s) for approval. Upon approval by the City, a complete final report shall be submitted to the appropriate Information Center, the TCA Tribe(s), any relevant curation facility, and the landowner, as applicable.	
Human Remains	The Program's ground-disturbing activities would have the potential to disturb human remains.	Potentially Significant	**CUL-10:** As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County	Less than Significant

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			Office of the Medical Examiner by telephone. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains, for at least a 25-foot radius, shall occur until the Medical Examiner has made the necessary findings as to origin and disposition pursuant to California Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected, and consultation and treatment could occur as prescribed by law. If suspected Native American remains are discovered, the remains shall be kept in-situ, or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of a Luiseño Native American monitor. By law, the Medical Examiner will determine within two working days of being notified if the remains are subject to their authority. If the Medical Examiner identifies the remains to be of Native American ancestry, he or she shall contact the NAHC within 24 hours. The NAHC shall make a determination as to the Most Likely Descendent.	
3.4 Energy				
Wasteful, Inefficient, or Unnecessary Energy Consumption	The Program would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.	Less than Significant	No mitigation is required.	Less than Significant
Conflict with Energy Plans	The Program would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less than Significant	No mitigation is required.	Less than Significant

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
3.5 Geology and Soils				
Seismic Hazards	The Program would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides.	Less than Significant	No mitigation is required.	Less than Significant
Erosion and Sedimentation	The Program would not result in substantial soil erosion or the loss of topsoil.	Less than Significant	No mitigation is required.	Less than Significant
Geologic Instability	The Program would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Program, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.	Less than Significant	No mitigation is required.	Less than Significant
Expansive Soil	The Program would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994),	Less than Significant	No mitigation is required.	Less than Significant

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	creating substantial risks to life or property.			
Septic Tanks	The Program does not require the use of septic tanks or alternative waste water disposal systems.	No Impact	No mitigation is required.	No Impact
Paleontological Resources	The Program's construction activities would involve a variety of ground-disturbing activities, including grading, trenching, excavating, and tunneling. The potential for encountering significant paleontological deposits or features during construction activities remains high given the geologic setting of the area, as most of the Program components are within high paleontological sensitivity areas.	Potentially Significant	**GEO 1:** At least 45 days prior to the issuance of the Notice to Proceed for each Project Component, the City of Oceanside Water Utilities Department or its Designated Representative(s) shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Paleontologist been retained at the City or Contractor's expense to implement the paleontological resources monitoring program. A Qualified Paleontologist is defined as an individual with an MS or PhD in paleontology or geology who is familiar with paleontological procedures and techniques and has expertise in local geology, stratigraphy, and biostratigraphy. The Qualified Paleontologist shall perform the following: • Attend the pre-construction meeting and provide worker environmental awareness training at the preconstruction meeting as well as at the jobsite the day grading is to be initiated. In addition, the Qualified Paleontologist shall inform the grading contractor and City Engineer of the paleontological monitoring program methodologies. • Identification of where paleontological monitoring of excavations impacting the San Diego Formation, Old Alluvial Floodplain Deposits, and deep excavations (greater than five feet below the ground surface) in areas underlain by Young Alluvial Floodplain Deposits is required within each Program	Less than Significant

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			component site based on construction plans and/or geotechnical reports. • Procedures for adequate paleontological monitoring (including necessary monitoring equipment), methods for treating fossil discoveries, fossil recovery procedures, and sediment sampling for microvertebrate fossils, including the following requirements: - A paleontological monitor shall be on site at all times during the original cutting of previously undisturbed sediments of moderately to highly sensitive geologic units (e.g., San Diego Formation, Old Alluvial Floodplain Deposits, and excavations below a depth of five feet below the ground surface in areas underlain by Young Alluvial Floodplain Deposits) to inspect cuts for contained fossils. (A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.) The paleontological monitor shall work under the direction of a Qualified Paleontologist. Monitoring is not required during shallow excavations within Young Alluvial Floodplain Deposits. - Paleontological monitoring is not required in areas underlain by Artificial Fill unless grading activities are anticipated to extend beneath the veneer of fill and impact underlying geological units with moderate to high paleontological sensitivity (e.g., San Diego Formation, Old Alluvial Floodplain Deposits, or deeper excavations into Young Alluvial Floodplain Deposits). - If fossils are discovered, the Qualified Paleontologist and/or paleontological monitor shall recover them. The Qualified Paleontologist (or paleontological monitor)	

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			shall be allowed to temporarily direct, divert, or halt grading within 50 feet of the resource to allow recovery of fossil remains. Because of the potential for the recovery of small fossil remains, it may be necessary in certain instances, and at the discretion of the Qualified Paleontologist, to set up a screen-washing operation on the project site. Alternatively, sediment samples can be collected and processed off-site. • Paleontological reporting and collections management: - Prepared fossils along with copies of all pertinent field notes, photos, maps, and the final paleontological monitoring report discussed below shall be deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum within 90 days of completion of monitoring unless the City of Oceanside and the Qualified Paleontologist determine the extent of fossils recovered will require more preparation, stabilization, and/or curatorial time. Curation costs shall be paid for by the City or Contractor. - A final paleontological monitoring report shall be completed. This report shall include discussions of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils, and shall be submitted to the designated scientific institution within 90 days of the completion of monitoring unless the City and the Qualified Paleontologist determine the extent of fossils recovered require more preparation, stabilization, and/or curatorial time.	
3.6 Greenhouse Gas Emissions				

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Greenhouse Gas Emissions	The Program would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	Less than Significant	No mitigation is required.	Less than Significant
Conflict with Plans or Policies	The Program would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.	No Impact	No mitigation is required.	No Impact
3.7 Hazards and Hazardous Materials				
Transport, Use, Disposal, or Accidental Release of Hazardous Materials	The Program would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The Program would not 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.	Less than Significant	No mitigation is required.	Less than Significant
Hazards Near Schools	The Program would not have the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-	Less than Significant	No mitigation is required.	Less than Significant

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	quarter mile of an existing or proposed school.			
Hazardous Materials Sites	The Program would not be located on sites that are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	Less than Significant	No mitigation is required.	Less than Significant
Airport Hazards	The Program would not result in a safety hazard or excessive noise for people residing or working in the Program area.	Less than Significant	No mitigation is required.	Less than Significant
Emergency Response and Evacuation	The Program's construction activities would occur within public roadway rights-of-way and require partial and/or full lane closure, which could interfere with emergency response and evacuation. Therefore, the Program would have the potential to impair the implementation of or physically interfere with the adopted emergency response plan or emergency evacuation plan.	Potentially Significant	**TRA-1: Traffic Control Plan.** Prior to the start of construction of the portions of the facilities that would be located within roadway rights-of-way, the City shall require the construction contractor to prepare a Traffic Control Plan (TCP) and coordinate with the agency of jurisdiction, as applicable, to address vehicular traffic during construction of the project within the public rights-of-way of the affected jurisdiction(s), including bicycle, pedestrian, and transit facilities. The TCP shall show all signage, striping, delineated detours, flagging operations, and any other devices that will be used during construction to guide motorists, bicyclists, and pedestrians safely through the construction area and allow for adequate access and circulation. The TCP shall also ensure that congestion and traffic delay are not substantially increased as a result of the construction activities. Further, the TCP shall include detours and/or alternative routes for bicyclists using on-street bicycle lanes as well as for pedestrians using adjacent sidewalks. The City shall provide written notice at least two weeks prior to the start of construction to owners/occupants along roadways to be affected during construction.	Less than Significant

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			During construction, the City shall maintain continuous vehicular and pedestrian access to affected residential driveways from the public right-of-way to the private property line, except where necessary construction precludes such continuous access for reasonable periods of time. Access shall be reestablished at the end of the workday. If a driveway needs to be closed or interfered with as described above, the City shall notify the owner or occupant of the closure of the driveway at least five working days prior to the closure. The TCP shall include provisions to ensure that the construction of the Program does not interfere unnecessarily with the work of other agencies such as mail delivery, school buses, and municipal waste services. The City shall also notify local emergency responders of planned partial or full lane closures or blocked access to roadways or driveways required for Program construction. Emergency responders include fire departments, police departments, and ambulances that have jurisdiction within the Program area. Written notification and disclosure of lane closure location must be provided at least 30 days prior to the planned closure to allow for emergency response providers adequate time to prepare for lane closures.	
Wildland Fires	The Program would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	Less than Significant	No mitigation is required.	Less than Significant
3.8 Noise				
Increase in Ambient Noise	The Program's construction activities and operation of the OMG Lift Station would have the potential to result in the generation of substantial	Potentially Significant	**NOI-1: Construction Management Plan.** A Construction Noise Management Plan(s) shall be prepared to reduce noise at noise-sensitive land uses (NSLUs; e.g., residences, public and private educational facilities, hospitals, convalescent homes, hotels/motels, daycare centers, and passive recreational parks)	Significant and Unavoidable (Construction Only)

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
	temporary and permanent increases in ambient noise levels in excess of applicable standards.		from construction of the Program components. The plan(s) shall be prepared by the Contractor and approved by the City of Oceanside or its Designated Representative(s). The plan(s) shall include noise control measures to achieve the following standards, to the extent feasible, and allow for completion of the Program in light of necessary work methods and the physical constraints of available work areas: • Noise from construction activities shall comply with the thresholds and hours specified by the City of Oceanside. • Construction noise shall not exceed 85 A-weighted decibels Equivalent Sound Level (dBA LEQ) (one hour) when measured at 100 feet from the source at the nearest NSLU. • Construction noise shall not exceed the ambient noise levels of a given area by 10 dBA LEQ (one hour) at the nearest NSLU between 7:00 a.m. and 6:00 p.m. • Construction noise shall not exceed 50 dBA at any property line when equipment is operated within any residential zone or 500 feet from any residential zone between 8:00 p.m. and 7:00 a.m. • Construction noise shall not exceed the ambient noise levels of a given area by 5 dBA LEQ (one hour) at the nearest NSLU between 6:00 p.m. and 7:00 a.m. Appropriate measures shall be implemented to reduce construction noise including, but not limited to, the following: • Construction equipment shall be properly outfitted and maintained with manufacturer-recommended noise-reduction devices.	Less than Significant (Operations Only)

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			• Diesel equipment shall be operated with closed engine doors and equipped with factory-recommended mufflers. • Mobile or fixed "package" equipment (e.g., arc-welders and air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment. • Electrically powered equipment shall be used instead of pneumatic or internal-combustion powered equipment, where feasible. • Unnecessary idling of internal combustion engines (e.g., in excess of 5 minutes) shall be prohibited. • 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 sensitive receptor. • Any truck or equipment equipped with back-up alarm moving within 300 feet of a noise-sensitive land use should have the normal back-up alarm disengaged and safety provided by lights and flagman, or broad-spectrum noise backup alarm (as appropriate for conditions) used in compliance with the Occupational Safety and Health Administration safety guidelines. • Temporary sound barriers or sound blankets shall be installed between construction operations and adjacent noise-sensitive land uses. The project Contractor shall	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			construct a temporary noise barrier at least six feet in height meeting the specifications listed below (or of a Sound Transmission Class 19 rating or better) to attenuate noise. • If a temporary barrier is used instead of a sound blanket, the temporary barrier shall be solid and constructed of wood, plastic, fiberglass, steel, masonry, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove or close butted seams and must be at least ¾-inch thick or have a surface density of at least 3.5 pounds per square-foot. Sheet metal of 18-gauge (minimum) may be used if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are appropriately implemented to provide the required sound attenuation. • Residents within 200 feet of a project's disturbance area shall be notified in writing within one week of any construction activity. The notification shall describe the activities anticipated, provide dates and hours, and provide contact information with a description of a complaint and response procedure. • The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. The on-site construction supervisor shall confirm that all steps identified in this mitigation measure are employed as directed. A clear appeal process for the affected resident shall be established prior to construction commencement to allow for	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			resolution of noise problems that cannot be immediately solved by the site supervisor. **NOI-2: OMG Lift Station Operation Noise Attenuation.** Noise generated by operation of the OMG Lift Station pumps and ventilation system shall comply with the City's sound level limits of 50 A-weighted decibels during the hours of 7:00 a.m. to 10:00 p.m. and 45 dBA during the hours of 10:00 p.m. to 7:00 a.m. at nearby residential property lines. To adequately reduce noise levels, noise attenuating equipment and/or acoustical shielding shall be incorporated into the design plans of the lift station. Such features may include, but not be limited to, acoustical louvers, in-line silencers, and/or noise walls. Prior to building plan approval, planning for the lift station noise sources shall be required to show noise compliance with the relevant daytime limit and nighttime limit at the affected property lines. A final operational test shall be required with the pumps and ventilation system in operation to ensure noise levels are below the required standards. Should the operational test fail to show the required noise attenuation, additional attenuating design features, technologies, or methods shall be employed until the operational test demonstrates the noise levels do not exceed the City's sound level limits. **NOI-3: Generator Noise Attenuation.** Noise generated by the generator during regular testing shall comply with the City's sound level limits of 50 dBA during the hours of 7:00 a.m. to 10:00 p.m. and 45 dBA during the hours of 10:00 p.m. to 7:00 a.m. at nearby residential property lines. To adequately reduce noise levels, noise attenuating equipment and/or acoustical shielding shall be incorporated into the Project design. Such features may include, but not be limited to, noise walls, noise control enclosures, and/or noise absorbing paneling. Prior to building plan approval, planning for the generator shall be required to show noise compliance with the applicable limits at the property	

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
			lines. A final operational test shall be required with the generator in operation to ensure noise levels are below the required standards. Should the operational test fail to show the required noise attenuation, additional attenuating design features, technologies, or methods shall be employed until the operational test demonstrates the noise levels do not exceed the City's sound level limits.	
Vibration	The Program's construction and operation emissions are not expected to generate excessive groundborne vibration or groundborne noise levels.	Less than significant	No mitigation is required.	Less than Significant
Aircraft Noise	The Program would not expose people residing or working in the Program area to excessive aircraft noise levels.	Less than Significant	No mitigation is required.	Less than Significant
3.9 Transportation				
Traffic Circulation	The Program's construction activities would result in a slight increase of vehicular traffic, occur within public roadway rights-of-way, and involve partial and/or full lane closures, which would impact the circulation system. Therefore, the Program has the potential to conflict with standards addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	Potentially Significant	**TRA-1**	Less than Significant
Vehicle Miles Traveled	The Program would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	No Impact	No mitigation is required.	No Impact

Topic	Impact	Significance Before Mitigation	Mitigation Measure(s)	Significance After Mitigation
Hazardous Design Features	The Program's construction activities would occur within public roadway rights-of-way and require partial and/or full lane closure, which could result in hazardous roadway conditions. Therefore, the Program would have the potential to substantially increase hazards due to a geometric design feature or incompatible use.	Potentially Significant	**TRA-1**	Less than Significant
Emergency Access	The Program's construction activities would occur within public roadway rights-of-way and require partial and/or full lane closure, which has the potential to interfere with and result in inadequate emergency access.	Potentially Significant	**TRA-1**	Less than Significant

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1.0 INTRODUCTION

This Program Environmental Impact Report (PEIR) assesses the potential environmental effects associated with the proposed City of Oceanside (City) Oceanside Sewer Improvements Program, referred to herein as "proposed Program" or "Program." The Program proposes to implement several sewer improvements projects ("Program components") to upgrade and supplement existing infrastructure. The specific Program components include the Oceanside Mesa Garrison Force Main (OMG FM), Oceanside Mesa Garrison (OMG) Lift Station, Land Outfall Replacement, Mission Avenue Lift Station Force Main (MALS FM) Replacement, and Mission Avenue Gravity Sewer Lining and Replacement. Collectively, the Program components included in the PEIR would provide necessary improvements to the existing sewer infrastructure, as well as additional infrastructure necessary to accommodate planned growth in the area. Program details are described in Chapter 2.0, *Project Description*.

1.1 PURPOSE AND INTENDED USE OF THE DRAFT PEIR

As described in the California Environmental Quality Act (CEQA) Statutes and Guidelines for Implementation of CEQA (CEQA Guidelines), public agencies are charged with the duty to avoid or substantially lessen significant environmental effects, with consideration of other conditions, including economic, social, technological, legal, and other benefits. This PEIR is an informational document. As required by CEQA, this PEIR:

1. Assesses the potentially significant direct and indirect environmental effects of the proposed Program as well as the potentially significant cumulative impacts that could occur from implementation of the Program;

2. Identifies potential feasible means of avoiding or substantially lessening significant adverse impacts; and

3. Evaluates a range of reasonable and feasible alternatives to the Program that would avoid or substantially lessen significant adverse environmental effects.

The City, as the Lead Agency, has prepared this Draft PEIR in accordance with CEQA, as codified in California Public Resources Code (PRC) Section 21000 et. seq., and the CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15002, 15021, and 15126.4. The PEIR process and the information it generates are used for the following purposes:

- To give responsible and trustee agencies, other governmental bodies, and the public the opportunity to provide input to the decision-making process;

- To provide public agencies with the information necessary for them to determine if they have jurisdiction over some aspect of implementation of the Program, and, if so, to identify any requirements they may have for Program permits, approvals, licenses, or other entitlements;

- To inform the public as well as the decision makers of the potential consequences of the implementation of the Program, and alternatives, and to assist the City in making decisions and taking actions to avoid or reduce environmental effect to a less-than-significant level; and

- To assist the public in understanding the expected environmental effects and how decision-makers plan to respond and mitigate such effects.

Design, location, and environmental impact information for the Program components currently exist at varying levels of detail. As such, this PEIR evaluates potential impacts based on the nature and scope of information available for each facility or component of the Program (CEQA Guidelines Sections 15165 and 15168).

For purposes of this PEIR, the City has conservatively defined the maximum reasonably foreseeable construction envelope associated with implementation of the proposed Program. While individual components identified within the proposed Program may vary in sequencing, staging location, or construction method, all environmental impacts evaluated in this PEIR are based on reasonable worst-case assumptions regarding ground disturbance, construction duration, equipment usage, and geographic extent within the defined Program Area. Accordingly, impact analyses provided within this PEIR are based on conservative assumptions intended to capture the upper bound of potential environmental effects, consistent with CEQA Guidelines Section 15168.

The City and other public agencies will consider and rely on the information in this PEIR prior to taking certain discretionary actions related to implementation of the Program, such as issuing approvals, permits, or licenses; entering into construction contracts or agreements; or providing grants, loans, or other forms of financial assistance. In doing so, any agency relying on this PEIR for a future discretionary action will determine whether the potential environmental impacts associated with that action are addressed in the certified PEIR or, alternatively, whether additional environmental review and analysis are required. The nature and scope of any additional review and analysis will be determined in accordance with the criteria set forth in PRC Section 21166 and CEQA Guidelines Sections 15162, 15163, 15164, and 15168.

The City is pursuing funding through the Water Infrastructure Finance and Innovation Act (WIFIA) Program administered by the U.S. Environmental Protection Agency (USEPA) and is a federal action subject to the National Environmental Policy Act (NEPA). When a project must satisfy both NEPA and CEQA, the environmental document must meet the requirements of each statute; therefore, a "CEQA-plus" approach is required to incorporate federal environmental review elements, such as federal cross-cutting authorities and associated documentation into the CEQA process. This approach aligns with federal and state guidance encouraging joint or integrated NEPA/CEQA reviews for projects requiring both federal and state approvals.

1.2 ENVIRONMENTAL REVIEW PROCESS

1.2.1 Lead, Responsible, and Trustee Agencies

The City has the principal responsibility of carrying out or approving the Program and is therefore considered to be the Lead Agency for this PEIR. CEQA requires the Lead Agency to consider the information in the PEIR prior to Program approval and make findings regarding each significant impact identified in the PEIR. Public agencies other than the Lead Agency that have discretionary authority over a project are considered responsible agencies. For example, the State Water Resources Control Board (State Water Board) is considered a responsible agency. Federal agencies are not responsible agencies under CEQA; however, federal agencies may also have discretionary authority over a project. A trustee agency is a state agency that has jurisdiction by law over natural resources affected by a project that are

held in trust for the people of the state of California. As listed in CEQA Guidelines Section 15386, trustee agencies include the California Department of Fish and Wildlife (CDFW), the State Lands Commission, the State Department of Parks and Recreation, and the University of California. For the proposed Program, the applicable trustee agency would be CDFW. For a list of agency permits and approvals for the Program, please see Table 1-2, *Anticipated Regulatory Permits and Approvals.*

1.2.2 Notice of Preparation/Scoping Process for the Draft PEIR

In accordance with Section 15082 of the CEQA Guidelines, the City circulated a Notice of Preparation (NOP) of a Draft PEIR on March 9, 2021, for review by applicable local, state, and federal agencies and the public. The NOP was published in The San Diego Union Tribune newspaper and on the City's website and submitted to the State Clearinghouse for distribution to relevant state agencies. The State Clearinghouse reference number for the Program is **SCH No. 2021030277**, and all CEQA postings regarding the Program can be found at: https://ceqanet.lci.ca.gov/.

The NOP provided a general description of the Program components, a summary of the probable environmental effects of the Program to be addressed in the Draft PEIR, and figures showing the location. The NOP provided the public and interested public agencies with the opportunity to review the components proposed as part of the Program and to provide comments or concerns on the scope and content of the Draft PEIR.

During the scoping period, nine comment letters were received from CDFW, California Department of Transportation (Caltrans), State Water Board, City of Carlsbad, Native American Heritage Commission (NAHC), Rincon Band of Luiseño Indians, Viejas Band of Kumeyaay Indians, San Diego County Archaeological Society, and San Diego Gas and Electric Company (SDG&E). The comment letters are included in Appendix A along with the NOP. The main issues raised in the comment letters, and where they are discussed in the PEIR, are shown in Table 1-1, *NOP Comment Letter Issue Areas*.

Table 1-1
NOP COMMENT LETTER ISSUE AREAS

Commenter	Summary of Issues Raised	Where Addressed in EIR
California Department of Fish and Wildlife (CDFW)	1. The Program may impact environmental resources that are rare or unique to the region. A complete assessment of flora and fauna within the Program footprint should be included with particular emphasis on identifying rare, threatened, endangered, or other sensitive species and their associated habitats.	1. Section 3.2, *Biological Resources*
	2. CDFW recommends that the Program avoid sensitive natural communities found on or adjacent to the Program area.	2. Section 3.2.4.2, *Issue 2: Sensitive Habitats*
	3. The Program may result in direct, indirect, and cumulative impacts to biological resources.	3. Sections 3.2 and 5.4.2, *Biological Resources*

Commenter	Summary of Issues Raised	Where Addressed in EIR
	4. The Program should analyze open space and biological diversity due to the proximity to the San Luis Rey River and Wildlife Corridor Planning Zone.	4. Section 3.2, *Biological Resources*; Section 3.2.4.4, *Issue 4: Wildlife Movement*; Section 3.2.4.6, *Issue 6: Conservation Planning*
	5. The Program should identify mitigation measures that are appropriate and adequate to avoid or minimize potential impacts to biological resources, including fully protected species, sensitive plant communities, California Species of Special Concern, and nesting birds protected under the Migratory Bird Treaty Act (MBTA). Mitigation should empathize avoidance and impact reduction. For unavoidable impacts, habitat restoration, enhancement, and/or preservation should be evaluated and described in detail.	5. Section 3.2.4.1, *Issue 1: Special Status Species*, Section 3.2.4.2, *Issue 2: Sensitive Habitats*
	6. If the Program has the potential to result in "take" of state-listed California Endangered Species Act (CESA) species, a CESA Incidental Take Permit should be obtained.	6. Section 3.2.4.1, *Issue 1: Special Status Species*
California Department of Transportation (Caltrans)	1. The Program should provide hydraulics studies, drainage, and grading plans to Caltrans as well as a pre- and post-development hydraulics and hydrology study per the requested requirements.	1. Section 4.3, *Hydrology and Water Quality*
	2. For the portion of the Program that is located underneath the State Route (SR)-76 bridge, Caltrans requests that a Structures Maintenance and Investigation be completed.	2. Added to list of Program approvals, Table 1-2.
	3. The Program may impact floodplains, which should be identified.	3. Section 4.3, *Hydrology and Water Quality*
	4. A traffic control plan should be submitted to Caltrans discussing potential impacts to the highway facilities (SR-76) and traveling public from the detour, demolition and other construction activities.	4. Section 3.9.4.1, *Issue 1: Traffic Circulation*
	5. The Program would require an encroachment permit with Caltrans.	5. Section 1.3, *Required Public Actions and Approvals*
	6. The Program EIR should specifically identify and assesses potential impacts caused by the projects or impacts from mitigation efforts	6. Section 3.9, *Transportation*

Commenter	Summary of Issues Raised	Where Addressed in EIR
	that occur within Caltrans' right-of-way that includes impacts to the natural environment, infrastructure (including but not limited to highways, roadways, on-ramps and off-ramps) and appurtenant features (including but not limited to lighting, signage, drainage, guardrail, and slopes).	
State Water Resources Control Board (State Water Board)	1. The Program requires CEQA Plus review as detailed by the Clean Water State Revolving Fund Program.	1. NEPA Documentation
	2. The Program must obtain Section 7 clearance from the United States Department of the Interior, Fish and Wildlife Service (USFWS), and/or the United States Department of Commerce National Oceanic and Atmospheric Administration, National Marine Fisheries Service for any potential effects to special-status species.	2. NEPA Documentation
	3. The Program may involve direct effects from construction activities, or indirect effects such as growth inducement, that may affect federally listed threatened, endangered, or candidate species that are known, or have potential to occur in the Program area. If so, applicable conservation measures should be identified to reduce such effects.	3. Section 3.2.4.1, Issue 1: *Special Status Species*
	4. For the preparation of the EIR, a consultant that meets the Secretary of the Interior's Professional Qualifications Standards should be obtained to prepare a Section 106 compliance report.	4. NEPA Documentation
	5. The Program should identify an area of potential effects (APE) that includes construction and staging areas, and the depth of any excavation.	5. Section 3.3, *Cultural Resources*
	6. The Program should adhere to the Federal environmental requirements pertinent to the Program.	6. Section 3.1.4.1, Issue 1: *Conflicts with Air Quality Plans*; Section 3.2.4.1, Issue 1: *Sensitive Species*; Section 3.2.4.3, Issue 3: *Wetlands*; Section 3.5, *Geology and* Soils, Section 4.1, *Aesthetics*; Section 4.2, *Agriculture and Forestry Resources*;

Commenter	Summary of Issues Raised	Where Addressed in EIR
		Section 4.4, *Land Use and Planning*
City of Carlsbad	1. The City of Carlsbad notes the lack of inclusion of Oceanside's lift station on the south side of SR-78 and west of El Camino Real, and requests the inclusion of the project in the Program.	1. Chapter 2.0, *Project Description*
Native American Heritage Commission (NAHC)	1. The Program could impact tribal cultural resources, in which case it would be considered to have a significant effect on the environment. 2. The Program will be subject to Assembly Bill (AB) 52 and Senate Bill (SB) 18. Consultation per AB 52 and SB 18 with California Native American tribes that are traditionally and culturally affiliated with the geographic area of the is recommended to occur as early as possible to avoid inadvertent discoveries of human remains and best protect tribal cultural resources. 3. The Program should perform a cultural resources assessment that includes an archaeological records search at the California Historical Research Information System (CHRIS); a report detailing the findings and recommendations of the records search and field survey; a Sacred Lands File Search; and a mitigation and monitoring reporting program plan.	1. Section 3.3.4.2, *Issue 2: Archaeological Resources,* and Section 3.10.4.1, Issue 1: *Tribal Cultural Resources* 2. Section 3.10, *Tribal Cultural Resources* 3. Section 3.3, *Cultural Resources*, and Appendix D
Rincon Band of Luiseño Indians	1. The Program area is within the Traditional Use Area of the Luiseño people and within the Band's specific Area of Historic Interest. As such, Rincon is traditionally and culturally affiliated to the Program area. 2. The Program has potential to impact tribal cultural resources, in which case it would be considered to have a significant effect on the environment. 3. The Program would require consultation with the Rincon Band of Luiseño Indians.	1. Section 3.3.1, *Environmental Setting* 2. Section 3.10.4.1, Issue 1: *Tribal Cultural Resources* 3. Section 3.10.4.1, Issue 1: *Tribal Cultural Resources*
Viejas Band of Kumeyaay Indians	1. The Program area has cultural significance to the Kumeyaay Nation, and the San Pasqual	1. Section 3.10.1, *Environmental Setting*

Commenter	Summary of Issues Raised	Where Addressed in EIR
	Band of Mission Indians should be contacted for consultation. 2. The Program has potential to impact tribal cultural resources, in which case it would be considered to have a significant effect on the environment. 3. San Pasqual will be immediately contacted on any changes or inadvertent discoveries as part of the Program.	 2. Section 3.10.4.1, Issue 1: *Tribal Cultural Resources* 3. Section 3.10.4.1, Issue 1: *Tribal Cultural Resources*
San Diego County Archaeological Society	1. The Program could impact historical resources, in which case it would be considered to have a significant effect on the environment.	1. Section 3.3.4.1, Issue 1: *Historical Resources*
San Diego Gas and Electric Company (SDG&E)	1. The Program has the potential to impact SDG&E fee owned property locations. 2. SDG&E requests that the PEIR adequately addresses potential impacts to public utilities, such as adjacent land uses and relocation or alteration of SDG&E facilities.	1. Section 4.9, *Utilities and Service Systems* 2. Section 4.9*, Utilities and Service Systems*

During preparation of this Draft PEIR, the City reviewed all scoping comments submitted in response to the NOP and expanded the scope of analysis where comments identified potentially significant environmental effects requiring further study. Accordingly, the PEIR incorporates additional technical evaluation for those issue areas raised by the public that relate to reasonably foreseeable impacts of the proposed Program on the environment.

Based on the anticipated nature, scope, and locations of the Program components and the comments received during public review of the NOP, it was determined that the PEIR should analyze in detail potential impacts with respect to the following environmental resource categories:

- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Noise
- Transportation
- Tribal Cultural Resources

1.2.3 Assembly Bill 52 Consultation

The City initiated AB 52 consultation on March 24, 2021, by mailing letters, pursuant to PCR Section 21083.3.1 to the following Native American Tribes that have requested notification of City projects in the geographic area in which they are traditionally or culturally affiliated:

- Barona Group of the Capitan Grande
- Campo Band of Diegueño Mission Indians
- Ewiiaapaayp Band of Kumeyaay Indians
- Iipay Nation of Santa Ysabel
- Inaja-Cosmit Band of Indians
- Jamul Indian Village
- Juaneño Band of Mission Indians - Acjachemen Nation
- Kwaaymii Laguna Band of Mission Indians
- La Jolla Band of Luiseño Indians
- La Posta Band of Diegueño Mission Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Diegueño Mission Indians
- Pala Band of Mission Indians
- Pauma Band of Luiseño Indians
- Pechanga Band of Luiseño Indians
- Rincon Band of Luiseño Indians
- San Luis Rey Band of Mission Indians
- San Pasqual Band of Diegueño Mission Indians
- Soboba Band of Luiseño Indians
- Sycuan Band of the Kumeyaay Nation
- Viejas Band of Kumeyaay Indians

The City is undertaking consultation under AB 52 with the three tribes who replied affirmatively to request consultation: Rincon Band of Luiseño Indians (Rincon), San Luis Rey Band, and San Pasqual. Information resulting from these consultations has been used to help assess Program impacts and is incorporated into the Program's *Cultural Resources Technical Report* (HELIX 2026; Appendix D to this PEIR), as appropriate (only non-confidential material will be included). Additional details regarding consultation with Native American tribes pursuant to AB 52 is provided in Section 3.10, *Tribal Cultural Resources*, of this PEIR.

1.2.4 Public Review of the Draft PEIR

When a Draft PEIR is submitted to the State Clearinghouse for review by state agencies, the public review period shall not be less than 45 days, unless the State Clearinghouse approves a shorter period (PRC Section 21091). During public review, the Draft PEIR is circulated to responsible agencies and trustee agencies with resources affected by the Program, state agencies with jurisdiction by law, federal agencies, and interested parties and individuals. The purpose of public and agency review of the Draft PEIR includes sharing expertise, disclosing agency analysis, checking for accuracy, detecting omissions, discovering public concerns, and soliciting comments. In reviewing the Draft PEIR, reviewers should focus on the sufficiency of the document in identifying and analyzing potentially significant effects on the environment and avoiding or mitigating the significant effects on the proposed program.

1.2.5 Final EIR and the Public Hearing Process

Following completion of the public review period for the Draft PEIR, a Final PEIR will be prepared to address the written comments received on the Draft PEIR during the public review period. Responses to comments made by public agencies on the Draft PEIR will be provided by the City at least 10 days prior to the scheduled City Council hearing to consider certification of the Final PEIR and approval or denial of the proposed Program.

As the decision-making body of the Lead Agency, the City Council will consider the Final PEIR for certification per CEQA Guidelines Section 15090. The City Council will certify that it has reviewed and considered the information contained in the Final PEIR, that the Final PEIR reflects the Lead Agency's independent judgement and analysis, and that the Final PEIR has been completed in compliance with CEQA. Once the Final PEIR has been certified, the City may proceed to consider approval of the proposed Program. Prior to approval of the proposed Program, the City must make written findings regarding each significant environmental effect identified in the Draft PEIR in accordance with CEQA Guidelines Section 15091.

CEQA generally prohibits a lead agency from approving or implementing a project unless its significant environmental effects have been avoided or reduced to a less-than-significant level, essentially "eliminating, avoiding, or substantially lessening" the expected impacts. If the lead agency approves the project despite residual significant impacts that cannot be mitigated to a less-than-significant level, the agency must state the reasons for its action in writing in a Statement of Overriding Considerations (SOC). As defined in CEQA Guidelines Section 15093, a SOC balances the benefits of a program against its unavoidable environmental consequences. The SOC must be included in the record of the Program approval.

If the City Council approves the Program, the City will file a Notice of Determination with the San Diego County Clerk and the State Clearinghouse per CEQA Guidelines Section 15094.

1.3 REQUIRED PUBLIC ACTIONS AND APPROVALS

The adoption of the proposed Program requires the affirmative vote from the City Council; however, implementation of the Program may require that the City obtain approval, permits, licenses, certifications, or other entitlements from various state and local agencies. The regulatory permits and approvals that are currently anticipated for the Program are shown in Table 1-2.

Table 1-2
ANTICIPATED REGULATORY PERMITS AND APPROVALS

Agencies	Permit/Approval
Federal	
U.S. Fish and Wildlife Service	Federal Endangered Species Act Section 7 Consultation – Impacts to Federally Listed Species
U.S. Army Corps of Engineers	Clean Water Act (CWA) Section 404 Permit – Impacts to U.S. Wetlands/Waters*
U.S. Environmental Protection Agency	Water Infrastructure Finance and Innovation Act (WIFIA) Loan Administration, Oversight, and Compliance
	Clean Water Act Section 401 Permit – Water Quality Certification (in coordination State Water Quality Board)
CEQA Responsible Agencies	
State	
California Department of Transportation	Encroachment Permit
	Structures Maintenance and Investigation
California Department of Fish and Wildlife	California Fish and Game Code Section 1602*
	Section 2081(b) Incidental Take Permit or Section 2080.1 Consistency Determination*
California State Office of Historic Preservation	WIFIA Program – Section 106
State Water Resources Control Board/ Regional Water Quality Control Board	National Pollutant Discharge Elimination System (NPDES)/CWA Section 402 – Industrial General Permit*, Storm Water Pollution Prevention Plan (SWPPP)
	NPDES/CWA Section 402 – Construction General Permit, SWPPP
	WIFIA Program – CEQA plus
	WIFIA Program – Section 106
	Clean Water Act Section 401 Permit – Water Quality Certification
	Dewatering Water Discharge Permit
Regional	
San Diego County Air Pollution Control District	Air Quality Permit
Local	
City of Oceanside	Grading Permit
	Development Plan*
	Conditional Use Permit*
	Stormwater Quality Management Plan
	Traffic Control Plan
	Right-of-way Permit
	Discharge Permit*
	Coordination of Temporary Easements with Private Property Owner(s)

* if necessary

1.4 ORGANIZATION OF THE PEIR

The content and format of this Draft PEIR are designed to meet the requirements of CEQA. The PEIR includes the following chapters:

- **Executive Summary.** Summarizes the proposed program, environmental impacts that would result from implementation of the Program, recommended mitigation measures that would avoid or reduce impacts, and the levels of significance of impacts both before and after mitigation. Also identifies areas of controversy known to the City and issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects.

- **Chapter 1.0, Introduction.** Provides an introduction and overview describing the purpose and intended use of the PEIR, the PEIR's compliance with CEQA, and the scope and organizational format of the PEIR. This section also includes a list of public actions and approvals that are anticipated to be required to approve the proposed Program by the City as the Lead Agency and other responsible and trustee agencies.

- **Chapter 2.0, Project Description.** Provides a detailed description of the proposed Program, including the Program's background, location, major objectives, purpose and need, components, phasing, and construction methods.

- **Chapter 3.0, Environmental Analysis.** Contains program-level analysis for the various environmental resource topics. The subsection for each environmental resource topic contains a description of the environmental setting/existing conditions, regulatory framework, significance thresholds, and analyses of the potential impacts that would result from implementation of the Program. If applicable, mitigation measures and the level of significance of impact after mitigation are also discussed.

- **Chapter 4.0, Environmental Effects Found Not to be Significant.** Discusses those environmental resource categories for which no significant impacts are anticipated.

- **Chapter 5.0, Cumulative Impact Analysis.** Analyzes cumulative impacts for each environmental resource topic covered in Chapter 3.0.

- **Chapter 6.0, Other CEQA Considerations.** Discusses other topics as required by CEQA Guidelines Sections 15126 and 15128, including growth-inducing impacts, significant environmental effects, and significant irreversible environmental changes that would result from implementation of the proposed Program.

- **Chapter 7.0, Alternatives.** Describes the alternatives screening process, a reasonable range of alternatives to the proposed Program that could avoid or substantially lessen significant effects, and the environmental effects of alternatives in comparison to the proposed Program.

- **Chapter 8.0, List of Preparers.** Provides a list of the PEIR preparers and persons consulted during PEIR preparation.

At the end of each chapter in the PEIR is a list of references to the principal analyses, studies, reports, supporting materials, technical appendices, and other documents that were considered or used in preparing that particular chapter. However, for Chapter 3.0, *Environmental Analysis*, these references are found at the end of each section.

The Final PEIR will be comprised of the following: the Draft PEIR, supporting materials, and technical appendices; the comments received on the Draft PEIR; responses to such comments, including any specific changes or clarifications made to the Draft PEIR; and the Mitigation Monitoring and Reporting Program (MMRP). The CEQA Findings required by Public Resources Code Section 21081 and CEQA Guidelines Section 15091; and, where significant and unavoidable impacts are identified, a Statement of Overriding Considerations prepared pursuant to CEQA Guidelines Section 15093, also will be included with the Final PEIR.

2.0 PROJECT DESCRIPTION

This section provides a description of each component comprising the proposed Program, including discussion of the Program background and context, purpose and need, location, objectives, components, phasing, and construction methods.

2.1 PROGRAM BACKGROUND AND CONTEXT

The City Water Utilities Department is responsible for operating and maintaining the City's wastewater collection and treatment facilities. The system includes over 450 miles of pipelines, two wastewater treatment plants, 34 sewer lift stations, an advanced water purification facility, a recycled water facility, and an industrial waste inspection program (City 2023a). The City has an ongoing Capital Improvement Program (CIP) designed to improve the quality of public facilities and infrastructure and provide City residents with safe and reliable sanitary services. A CIP is a complex community planning and fiscal management methodology utilized by the City to plan and prioritize the location, timing, and financing of capital improvements over a multi-year period that spans up to 10 years. Capital improvements refer to significant, non-recurring physical expenditures such as land, buildings, public utilities, infrastructure, and equipment (CLUE 2008).

Currently, wastewater generated within the City is collected, treated, and disposed of at the San Luis Rey Water Reclamation Facility (SLRWRF) and La Salina Wastewater Treatment Plant (LSWWTP). The wastewater is treated to treatment levels set by the U.S. Environmental Protection Agency (USEPA), using conventional biological treatment followed by clarification. The SLRWRF, constructed in 1972, serves areas east of Interstate 5 (I-5) and treats wastewater from Rainbow Municipal Water District (RMWD) and a portion of the City of Vista. The LSWWTP, constructed in 1949, treats wastewater from areas west of I-5, downtown, and along the coast. Both plants discharge treated effluent through the Oceanside Ocean Outfall (OOO), which extends from the LSWWTP southwest into the Pacific Ocean. The Oceanside Land Outfall (OLO), constructed in 1975, connects the SLRWRF to the OOO at the LSWWTP (see Figure 2-1, *Existing Sewer Facilities*). The OLO is approximately 33,000 linear feet (6.25 miles) of 24inch diameter Ductile Iron Pipe (DIP), with an approximately 6,000-foot section of 36inch inside diameter (ID) High Density Polyethylene (HDPE) Pipe along Oceanside Boulevard near I-5 that was replaced in 2009 as part of an emergency project. There are currently four facilities that discharge treated wastewater or brine into the OLO, which include the SLRWRF, Fallbrook Public Utilities Department, Mission Basin Ground Water Purification Facility (MBGPF), and Genentech. The flows in the OLO are conveyed to the OOO, where they are combined with discharges from the LSWWTP and Marine Corps Base – Camp Pendleton (Camp Pendleton).

2.2 PURPOSE AND NEED OF THE PROPOSED PROGRAM

The purpose of the Program is to implement the projects identified in the City's 2015 Sewer Master Plan and Sewer Capital Program. The City's Sewer Capital Program is focused on centralizing wastewater flows to the SLRWRF to increase the local production of recycled water and indirect potable reuse, enhance supply reliability, reduce imported water purchases, and repair and replace aging infrastructure. The proposed capital improvements are prioritized based on their urgency to mitigate existing deficiencies and condition issues and for servicing future growth. The proposed improvement projects were prioritized based on the following factors:

- Constructing facilities needed to centralize the City's wastewater flows and decommission existing wastewater facilities and infrastructure, which are either outdated or situated near seawater rise and flood prone location.

- Upgrading existing facilities to replace aging infrastructure and to meet current local, state, and federal standards.

- Upgrading existing facilities to accommodate increased wastewater flows associated with the near-term (2027) and long-term (2050) planning years and improving the system reliability by providing redundancy for major sewer pipelines

- Planning for pipeline rehabilitation projects based on remaining useful life to reduce inflow and infiltration

The Program components, which are described in detail below in Section 2.5, are required to ensure that the City's wastewater system can accommodate the City's demand for wastewater conveyance and treatment and convey wastewater flows to the SLRWRF to increase the local water supply.

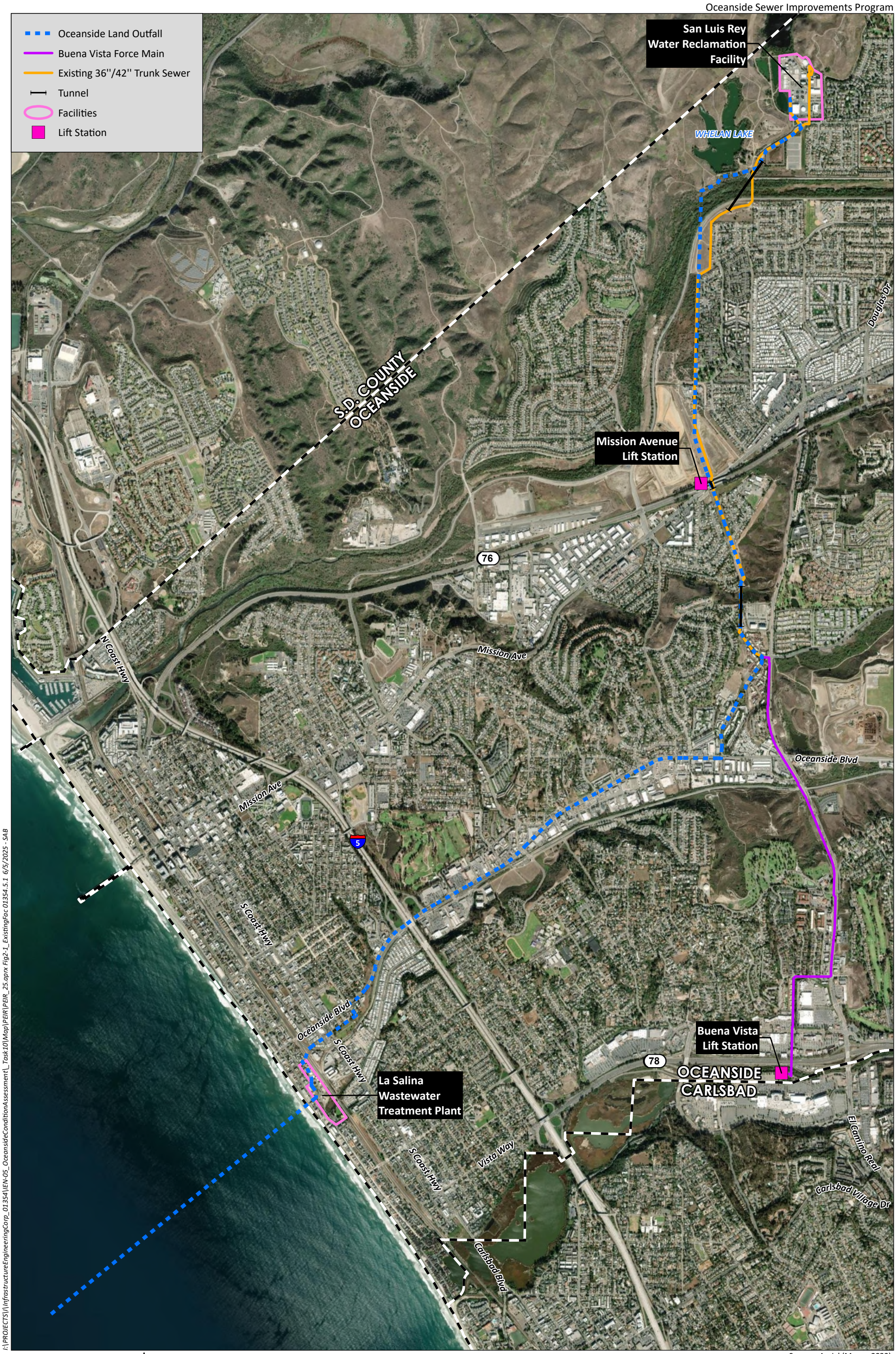
The City would utilize the USEPA's Water Infrastructure Finance and Innovation Act (WIFIA) program to obtain a loan to assist with funding for the proposed infrastructure improvements. The WIFIA program accelerates investment in our nation's water infrastructure by providing long-term, low-cost supplemental loans for regionally and nationally significant projects. Selected projects must submit an application for a WIFIA loan, pass a creditworthiness assessment, negotiate a mutually agreeable term sheet, and execute a credit agreement to receive WIFIA funding. An invitation to apply indicates that the USEPA believes the selected projects will be able to attain WIFIA loans.

The City is also obtaining a State Water Resources Control Board (State Water Board) Integrated Regional Water Management (IRWM) Proposition 1 Round 2 grant fund for a potion one of the sewer conveyance segments.

The preliminary planning of the Program consisted of an Alignment Alternative Analysis, which provided a high-level analysis of the possible alignments considered for the conveyance pipelines. Hydraulic analysis and an existing utility investigation have also been conducted to support the Preliminary Design phase of the Program. The Program components evaluated herein have been developed based on these analyses.

2.3 PROGRAM LOCATION

The Program is located in the City of Oceanside in northwestern San Diego County (Figure 2-2, *Regional Location*). The Program alignment spans approximately seven miles from the existing SLRWRF (located at 3950 North River Road) in the northeast to the existing LSWWTP (located at 1300 S Myers Street) in the southwest. From the SLRWRF, the alignment generally extends southwest along Whalen Lake Road, crosses the San Luis Rey River corridor, continues to the south-southeast, crossing San Luis Rey Mission Expressway (State Route [SR] 76) and Mission Avenue, Hacienda Drive, Las Vegas Drive, and other residential streets, and continues southwest through Garrison Avenue to Oceanside Boulevard. The alignment then follows Oceanside Boulevard southwest for approximately 2.5 miles to the LSWWTP. (see Figure 2-3, *Aerial Photograph*).



0 2,200 Feet

Source: Aerial (Maxar, 2023).

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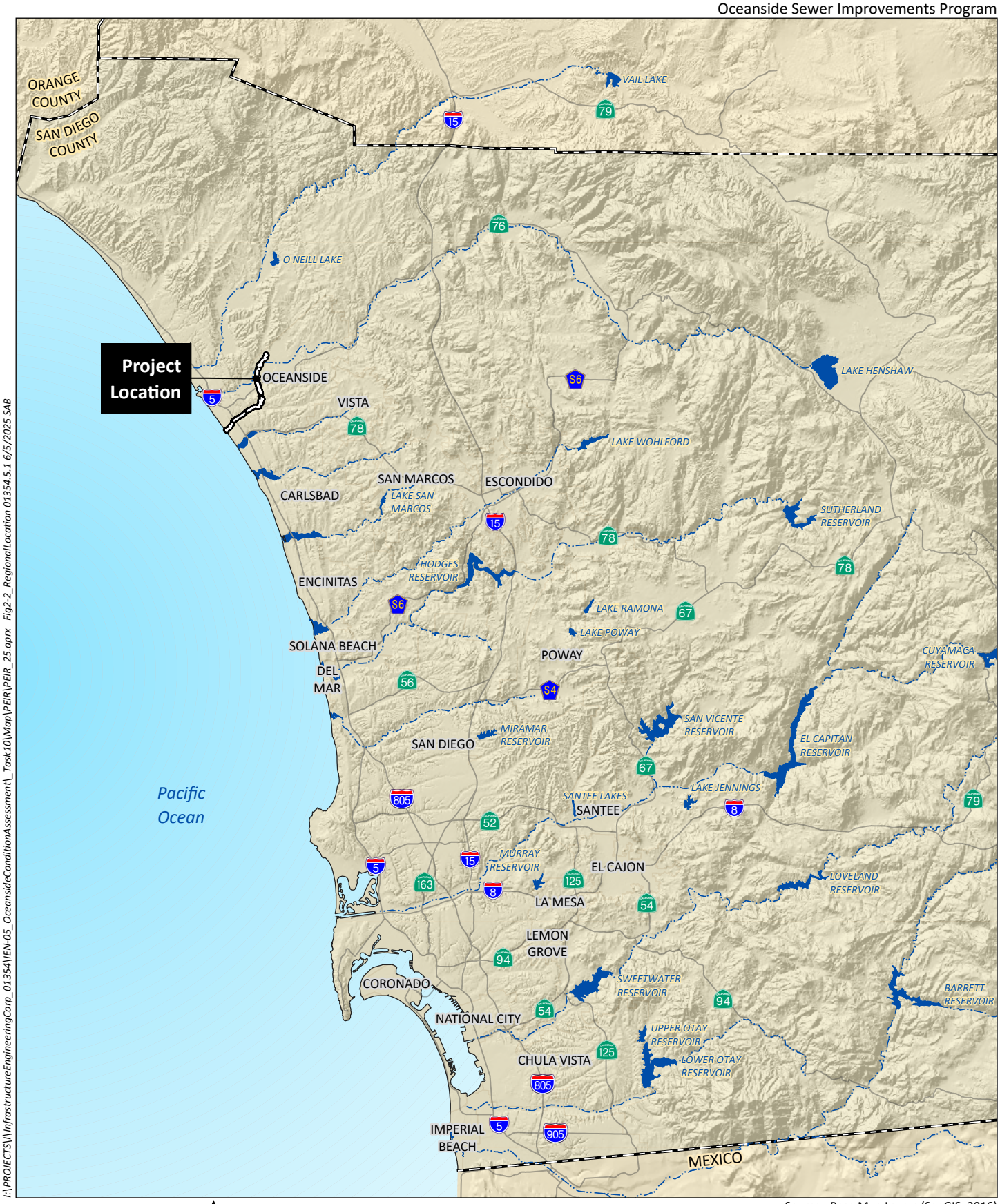
HELIX Environmental Planning

Existing Sewer Facilities

Figure 2-1



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0 8 Miles

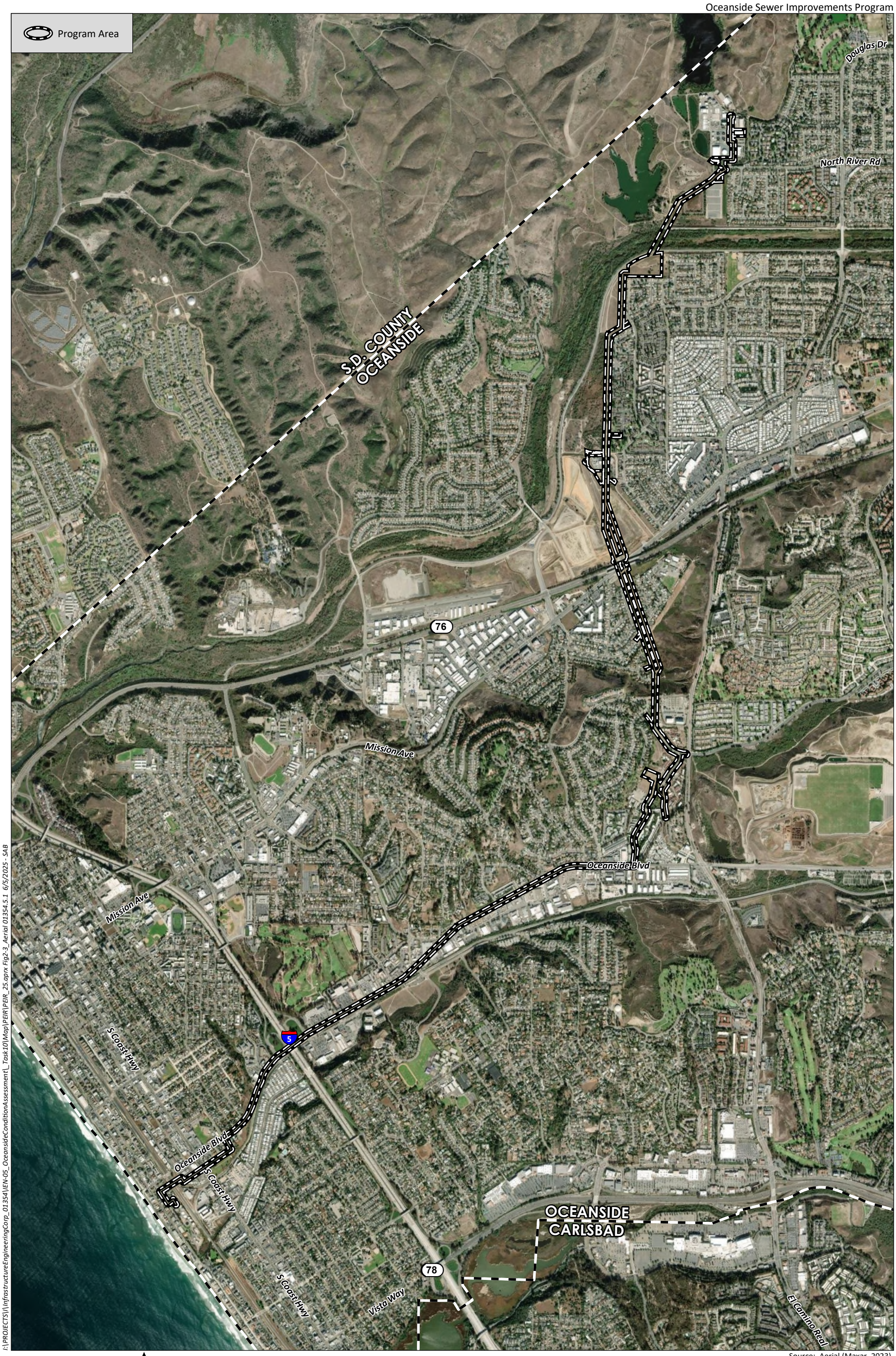
Source: Base Map Layers (SanGIS, 2016)

HELIX Environmental Planning

Regional Location

Figure 2-2

Oceanside Sewer Improvements Program



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Source: Aerial (Maxar, 2023).

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Aerial Photograph

Figure 2-3

2.4 PROGRAM OBJECTIVES

Section 15124(b) of the CEQA Guidelines requires that an EIR include a statement of the project objectives that "include the underlying purpose of the project and may discuss the project benefits." The following objectives have been identified for the proposed Program:

- Implement projects identified in the City's CIP and Sewer Master Plan to ensure that wastewater facilities are adequately maintained and upgraded and that capital improvements are scheduled and completed in a timely and cost-effective manner.

- Provide for overall system reliability with construction of system's new components and bring appropriate existing facilities up to latest safety requirements, and regulatory and technical standards by allowing for the inspection, maintenance, repair, and replacement of aging infrastructure.

- Provide adequate system capacity to meet the needs of the growing population, serve anticipated land use changes, and accommodate future wastewater demand and flow conditions through their lifespan.

- Centralize wastewater flows to the SLRWRF for the City's recycled water production and indirect potable reuse, thus increasing the local water supply.

- Provide support for emerging recycled water reuse and biosolids beneficial use opportunities.

- Ensure compliance with State General Waste Discharge Requirements (GWDR) for wastewater collection agencies by providing adequate capacity within the regional wastewater conveyance system to convey wastewater flows and prevent sanitary sewer overflows.

2.5 DESCRIPTION OF PROPOSED PROGRAM COMPONENTS

The proposed Program consists of individual wastewater utility improvement projects spanning a linear alignment from the SLRWRF to the terminus of the OLO at the LSWWTP. The Program includes underground improvements and above ground construction of a new lift station. Specific utility improvements are currently under design.

Sewer improvement projects that have been identified as part of this programmatic effort thus far include the following:

- Oceanside Mesa Garrison (OMG) Lift Station;

- OMG Force Main (OMG FM);

- Land Outfall Replacement;

- Mission Avenue Lift Station Force Main (MALS FM) Replacement; and

- Mission Avenue Gravity Sewer Lining and Replacement.

Proposed Program components are shown conceptually on Figure 2-4, *Proposed Components*; in greater detail in Figures 2-5a through 2-5h, *Program Area and Vicinity*; and described below.

2.5.1 Oceanside Mesa Garrison Lift Station Project

The proposed OMG Lift Station Project involves the design and construction of a five-million-gallon-per-day (MGD) sewer lift station near the intersection of Mesa Drive and Garrison Street. The new OMG Lift Station would accommodate gravity flows from Mesa Drive and Garrison Street via a 24-inch gravity sewer main. Flows from the OMG Lift Station would be conveyed north to the SLRWRF via the new OMG FM, which is described below in Section 2.5.2.

The City has identified the permanently closed Garrison Elementary School property as the optimal location for the proposed OMG Lift Station due to reduced pumping costs, proximity to the convergence of major sewer pipelines that would connect at the intersection of Mesa Drive and Garrison Street, and avoidance of permanent structures under San Diego Gas & Electric (SDG&E) high voltage power lines. The lift station would be developed within approximately 3 acres of the 11.2-acre property, which includes a 28-foot-wide access road proposed along the eastern property line for future utilities and maintenance access. The access road would also allow vehicle access to the project site from the south and possibly the north because Garrison Street is not a through street between Oceanside Boulevard and Mesa Drive. The remaining former school property would be sold to a prospective developer.

The proposed OMG Lift Station would include construction of the access road and lift station and associated components, including a wet well, emergency storage, future pipelines, parking, training (open area), chemicals storage, and equipment storage.

2.5.2 Oceanside Mesa Garrison Force Main Project

The OMG FM Project involves the design and construction of approximately 16,100 linear feet (LF) of 36-inch sewer force main that would carry wastewater flows from the proposed OMG Lift Station, as well as flows from the existing Buena Vista FM, to the SLRWRF. The existing 36-inch/42-inch Trunk Main carries flows from the Buena Vista Lift Station (located near the Carlsbad Shopping Center at Jefferson Street and SR 78), and gravity flows from the Mesa-Garrison intersection, to SLRWRF.

A substantial portion of the pipeline would occur within existing City's easements outside of paved roadways. The OMG FM would commence at the OMG Lift Station. North of the lift station, the FM would continue north along Garrison Street to the intersection with Mesa Drive. Here, it would connect to and collect flows from the existing Buena Vista FM. The OMG FM would continue northwest along Mesa Drive and then north through the SDG&E/Kinder Morgan transmission corridor, northeast across the San Luis Rey River, and along Whalen Lake Road to the SLRWRF.

The new 36-inch OMG FM would parallel the existing Trunk Main and would utilize the existing Buena Vista FM piping within an approximately 800-LF portion of tunnel ("Tunnel") near the SDG&E Substation that is west of El Camino Real and north of Mesa Drive. Piping within the Tunnel would not be replaced. The Trunk Main has few maintenance/access locations, which limits the City from cleaning and inspecting the pipe. Upon installation of the new OMG FM, the existing Trunk Main can be taken out of service, cleaned, inspected, and rehabilitated to safely serve as a redundant pipeline for the new OMG FM. To provide redundancy for the 36-inch pipe through the Tunnel section, an existing 22-inch HDPE pipe that currently carries Mesa-Garrison gravity flows through the Tunnel may be repurposed to handle

Land Outfall Replacement
Existing Land Outfall (not proposed for replacement)
Gravity Sewer Main to Oceanside Mesa Garrison Lift Station
Mission Avenue Lift Station Force Main Replacement
Oceanside Mesa Garrison Force Main
Oceanside Mesa Garrison Force Main Extension
Oceanside Mesa Garrison Lift Station

Douglas Dr
North River Rd
S.D. COUNTY
OCEANSIDE
76
Oceanside
Mesa Garrison
Lift Station
Mission Ave
Oceanside Blvd
El Camino Real
Mission Ave
5
S Coast Hwy
Oceanside Blvd
S Coast Hwy
OCEANSIDE
CARLSBAD
S Coast Hwy
78
Vista Way

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Source: Aerial (Maxar, 2023).

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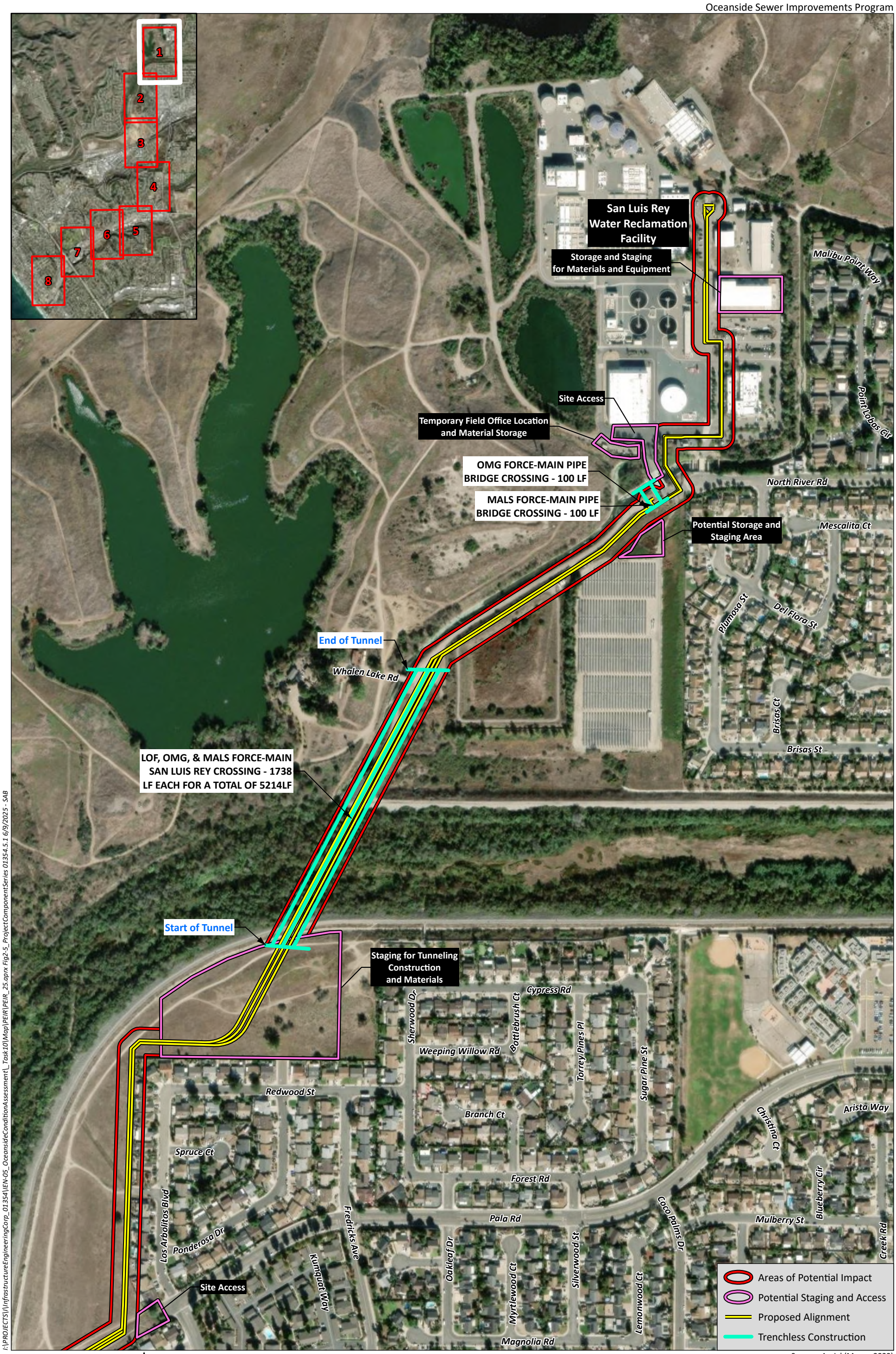
Proposed Components

Figure 2-4



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Source: Aerial (Maxar, 2023)

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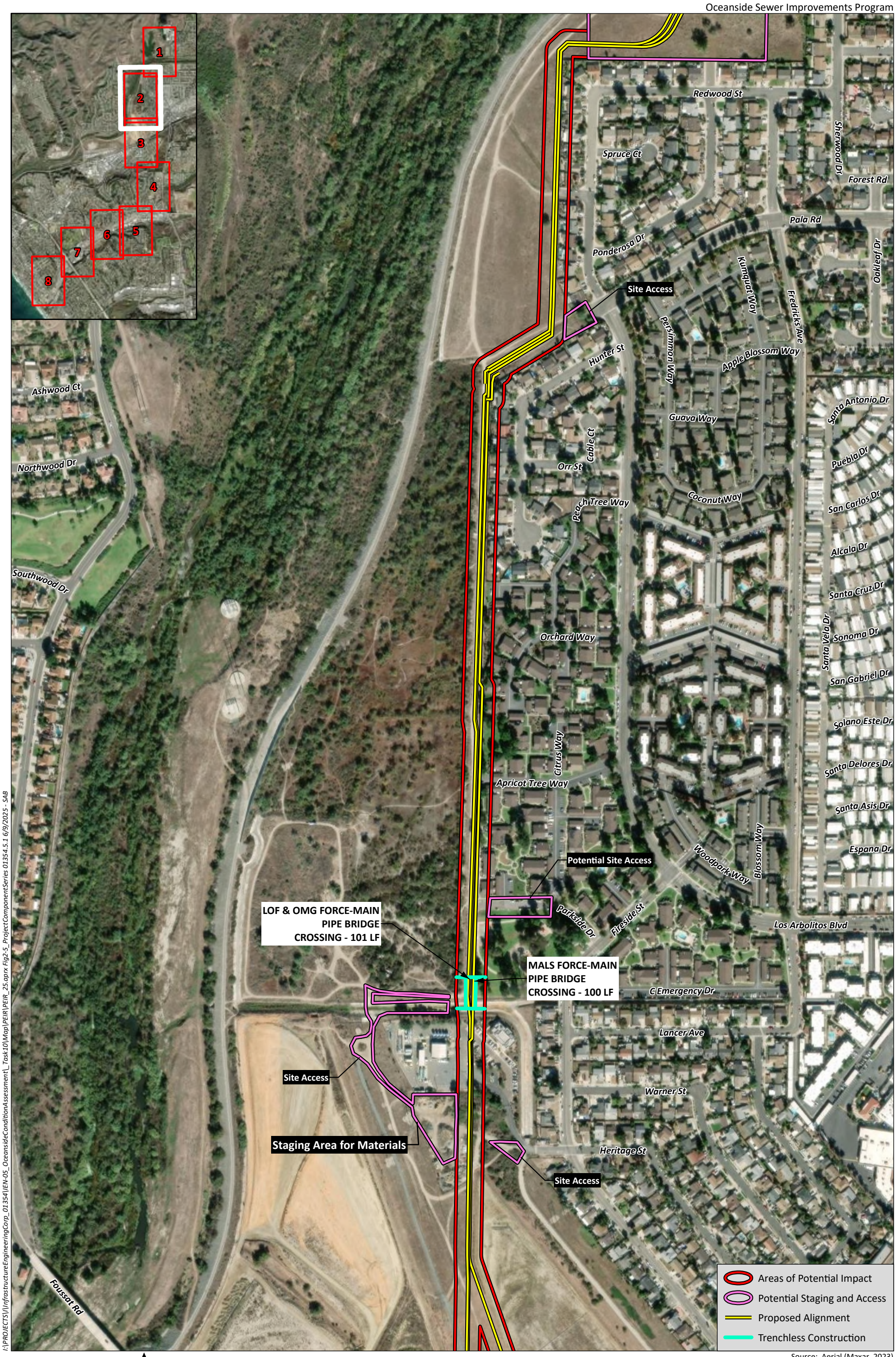
Program Area and Vicinity

Figure 2-5a



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Source: Aerial (Maxar, 2023)

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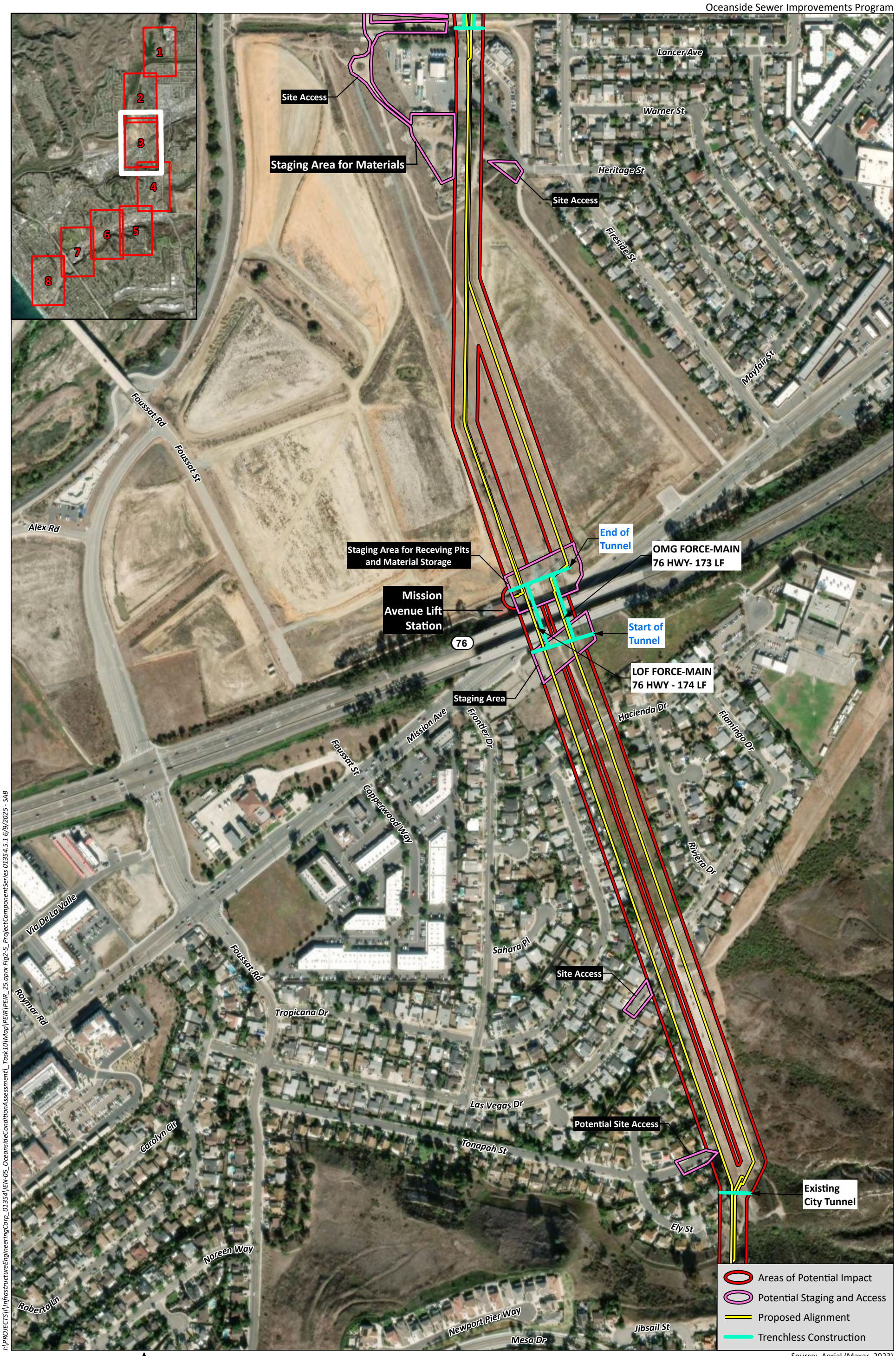
Program Area and Vicinity

Figure 2-5b



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Source: Aerial (Maxar, 2023)

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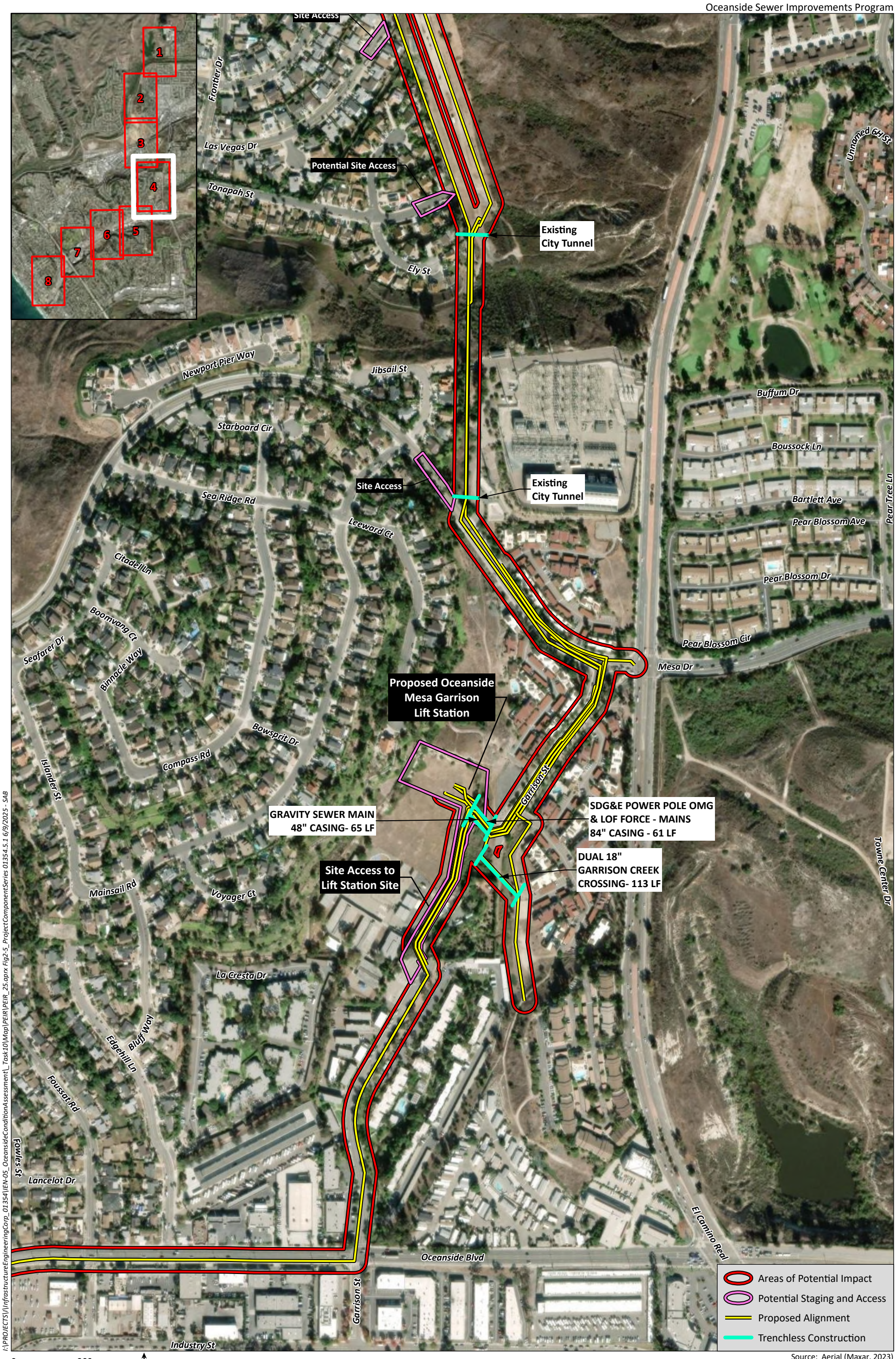
Program Area and Vicinity

Figure 2-5c



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Source: Aerial (Maxar, 2023)

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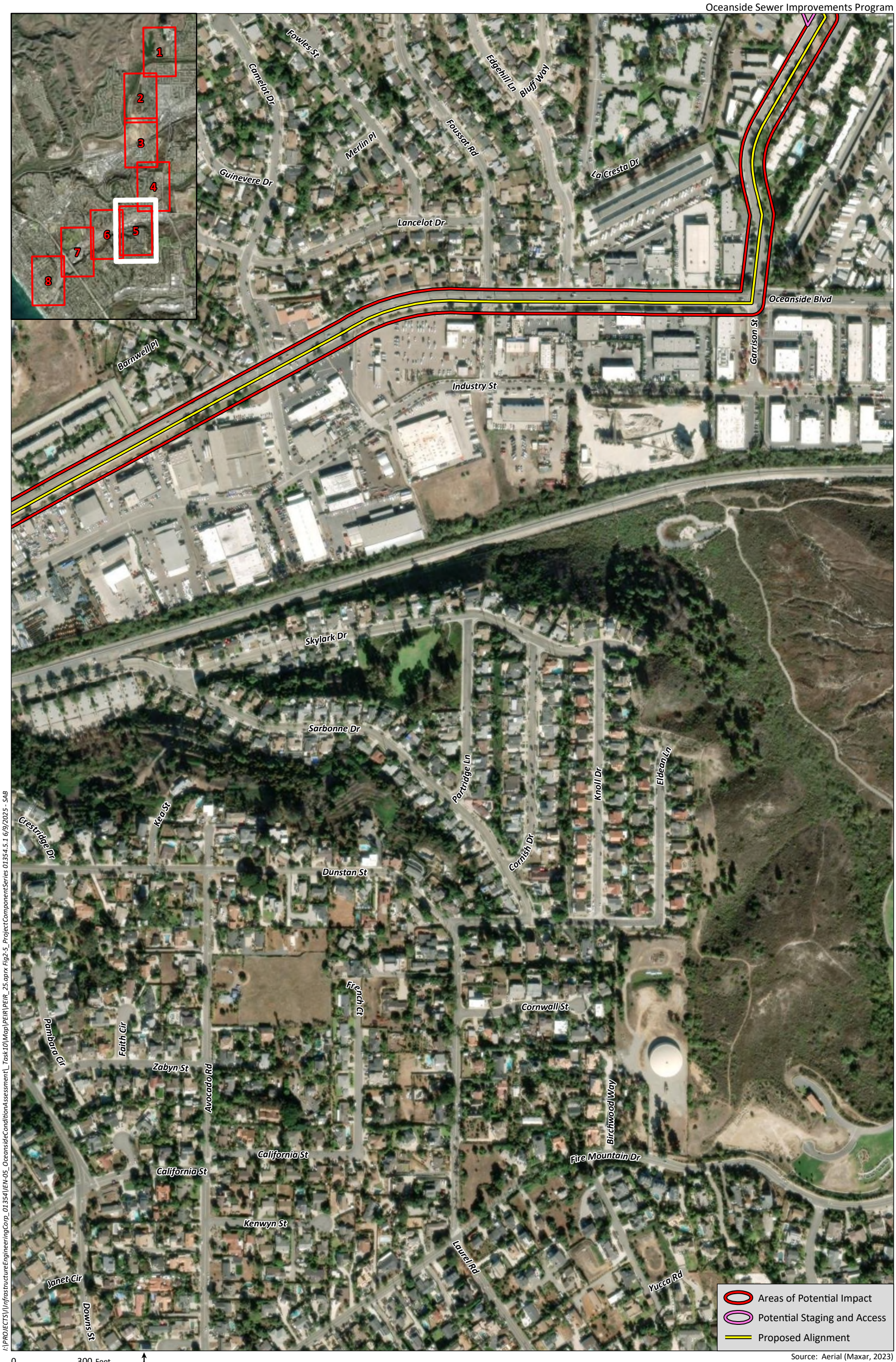
Program Area and Vicinity

Figure 2-5d



Source: Aerial (Maxar, 2023)

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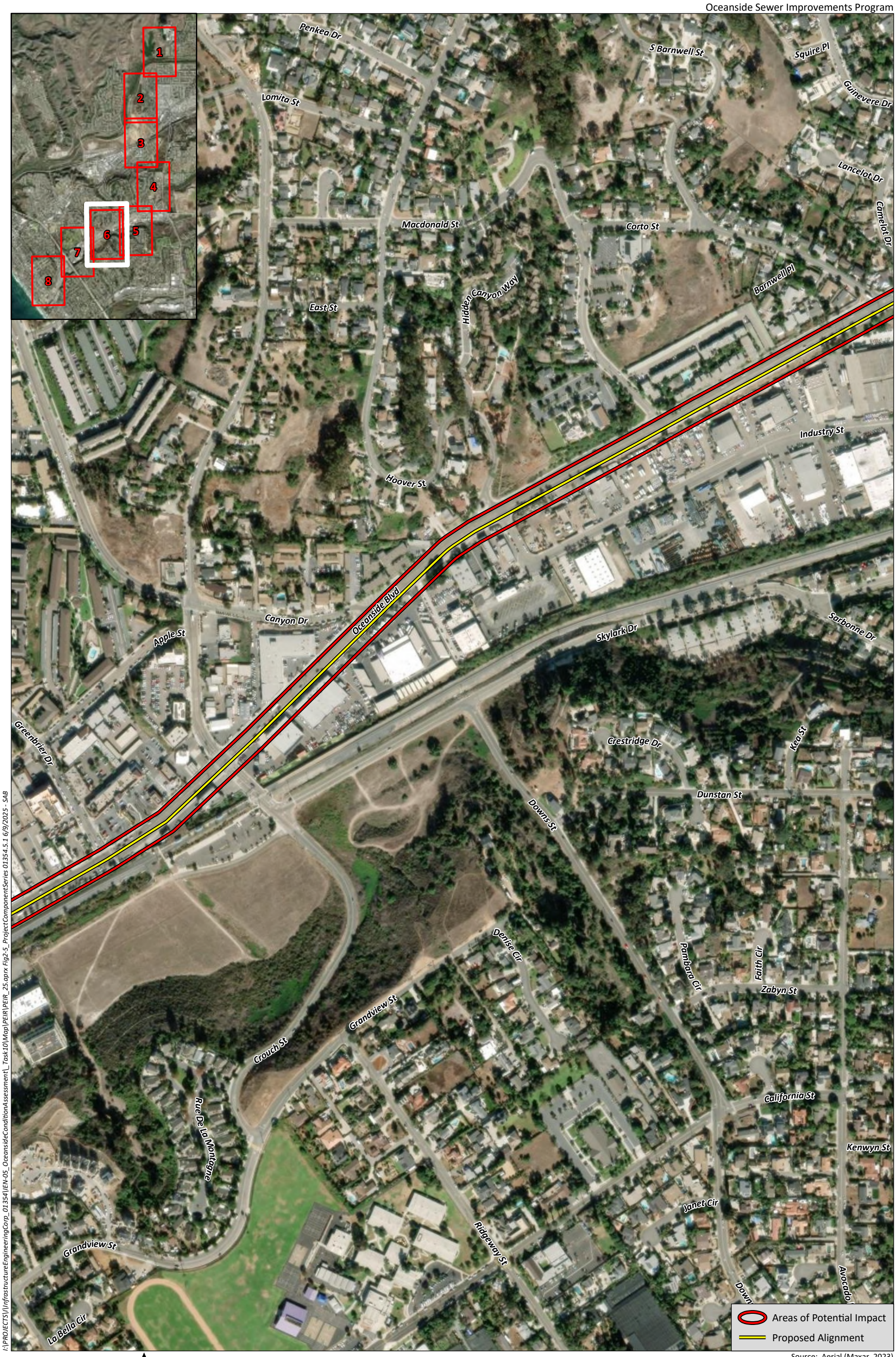
Program Area and Vicinity

Figure 2-5e



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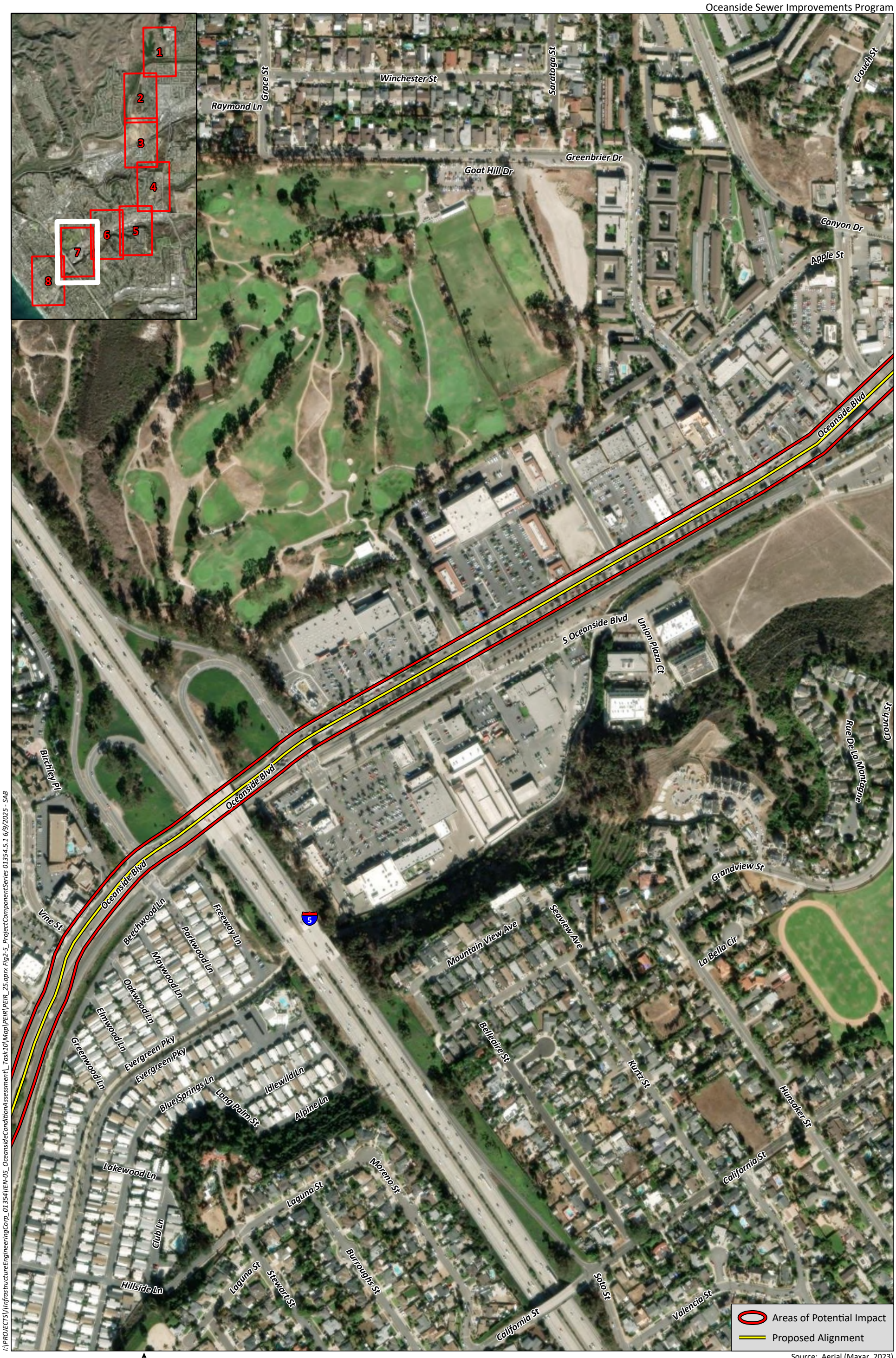
Program Area and Vicinity

Figure 2-5f



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Source: Aerial (Maxar, 2023)

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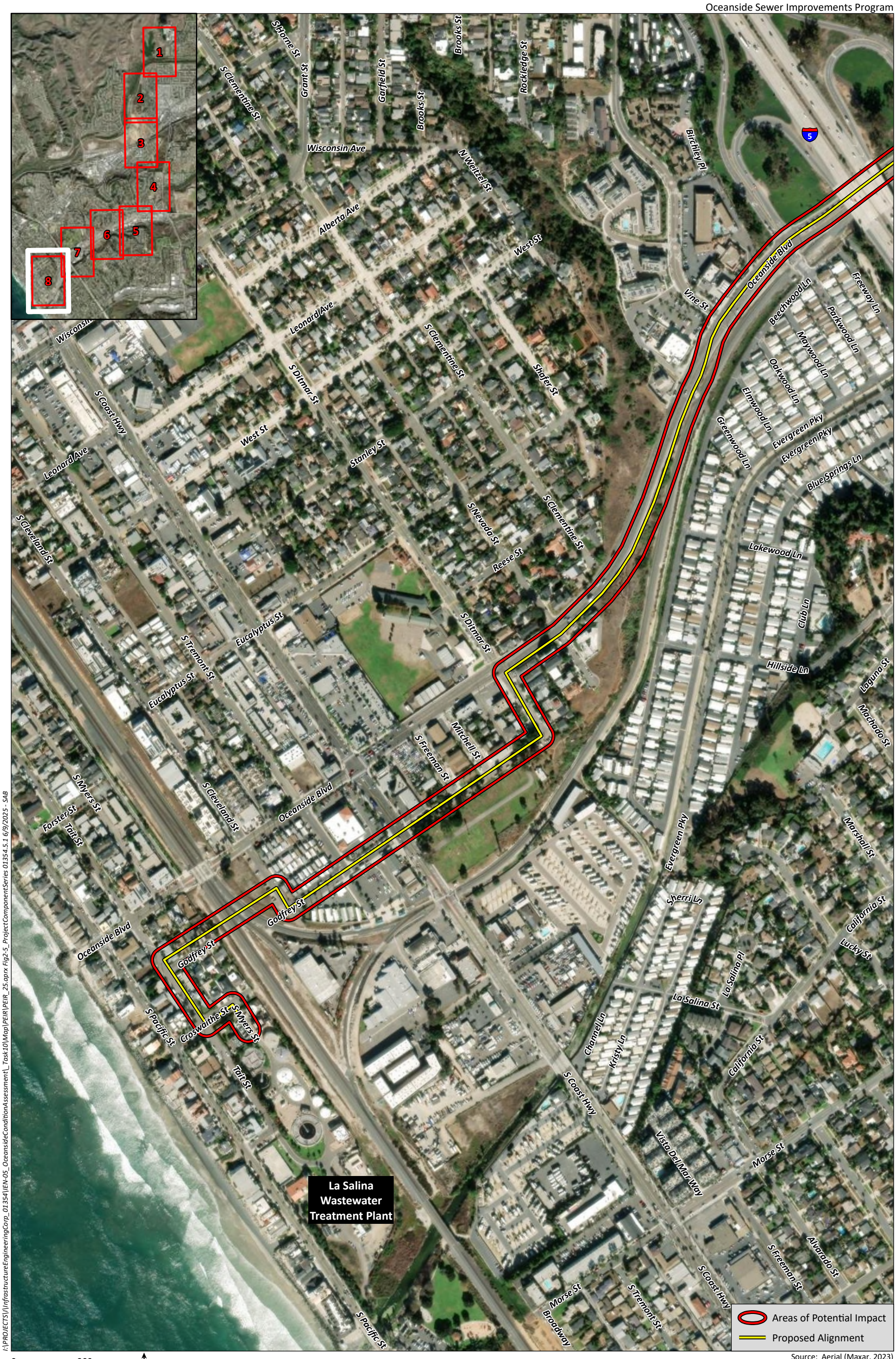
Program Area and Vicinity

Figure 2-5g



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Program Area and Vicinity

Figure 2-5h

the pressurized flow from the new OMG FM. Work would include connecting and installing valves on the 22-inch HDPE pipe and replacing approximately 1,000 LF of lined gravity pipe north of the Tunnel.

An approximately 800-LF extension of the OMG FM is proposed to be constructed south of the OMG Lift Station to accommodate future system expansion and improved reliability. The OMG FM Extension would serve as a future system tie-in that could accommodate diversion of flows from the City's sewer collection system into the OMG FM. The OMG FM Extension would be constructed in conjunction with the OMG FM to minimize future construction costs and reduce potential service disruptions.

2.5.3 Land Outfall Replacement Project

The Land Outfall Replacement Project involves upsizing approximately 27,000 LF of the existing 24-inch OLO to 36-inch pipe between the SLRWRF and LSWWTP in various segments. The capacity increase would accommodate additional flows after the Fallbrook Public Utility District's connection to the OLO at Pala Road and future effluent flows diverted from LSWWTP. Approximately 19,000 LF of the OLO from SLRWRF to the proposed OMG Lift Station site generally follow the same corridor as the proposed OMG FM. This segment includes the 800 LF Tunnel section near the SDG&E Substation off El Camino Real north of Mesa Drive that would not be upsized. This upper reach of the Land Outfall that is in parallel with the OMG FM along with the Mission Ave Lift Station Force Main will be part of the Progressive Design-Build Project that is currently in design and expected to start construction in 2026. This upper reach is critical from an operational standpoint to accommodate future increased flows and provide spill control measures at SLRWRF.

The upsized OLO would provide the reliability and capacity to divert effluent flows should the Pure Water (Advanced Water Treatment Facility) and Recycled Water production facilities be taken offline unexpectedly, as well as for maintenance purposes. This would also allow for future wastewater flow increases and potential coordination with nearby agencies that have expressed interest in sending more effluent through the OLO. Of the remaining 10,000 LF of pipe to be replaced, approximately 4,000 LF near the North County Transit District Railroad right-of-way was assessed in July 2021, and the condition was found to be extremely poor and requiring replacement. The other 6,000 LF in Oceanside Boulevard to Garrison Elementary School was not assessed, but upsizing would further alleviate capacity and operational issues. OLO replacement components are as follows:

- Part A: Replacement of approximately 11,000 LF of 24-inch pipe with new 36-inch HDPE pipe between SLRWRF and MBGPF in easements, including San Luis Rey River crossing. Would be constructed in similar corridor as OMG FM.

- Part B: Replacement of approximately 5,600 LF of existing 24-inch DIP pipe with new 36-inch HDPE pipe between MBGPF and the Tunnel north of Mesa Drive, within easements. This includes construction within the existing SDG&E corridor, private development, City facility, California Department of Transportation (Caltrans) right-of-way, and OMG FM corridor.

- Part C1: Replacement of approximately 1,350 LF of 24-inch pipe with new 36-inch HDPE pipe in Garrison Street from Garrison Elementary School to Oceanside Boulevard.

- Part C2: Replacement of approximately 4,500 LF of 24-inch pipe with new 36-inch HDPE pipe along Oceanside Boulevard between Garrison Street westward to the existing 36-inch HDPE OLO

at Canyon Drive, where a segment of the existing 24-inch pipe was replaced in 2015 due to its poor condition.

- Part D: Replacement of approximately 4,000 LF of 24-inch pipe with new 36-inch HDPE pipe in Oceanside Boulevard from the westerly terminus of 36-inch HDPE pipe to the LSWWTP through residential streets, including the North County Transit District crossing.

2.5.4 Mission Avenue Lift Station Force Main Replacement Project

The MALS FM Replacement Project involves the replacement of approximately 13,000 LF of the existing 24-inch sewer force main from the existing Mission Avenue Lift Station to SLRWRF with a new parallel pipeline. The pipeline would commence at the existing lift station near Mission Avenue, where it would run north through the proposed Ocean KAMP development, the SDG&E/Kinder Morgan transmission corridor, the MBGPF, and north in an easement located near the intersection of Pala Road and Los Arbolitos Boulevard adjacent to SLR Fireside Pond under U.S. Army Corps of Engineers (USACE) jurisdiction. The pipeline would continue north in a public easement through unpaved areas, where it would be incorporated into the private streets of the proposed 52-unit Cypress Point residential development at Pala Road before crossing under the San Luis Rey River along with the other proposed pipelines. There, the pipeline would continue to run northeast through unpaved areas, potentially around SLRWRF's holding ponds and to the plant's headworks. Once the new parallel pipe is constructed, the existing 24-inch MALS FM may be taken offline, cleaned, assessed, and repaired to serve as a backup FM to improve the reliability of the City's sewer system.

2.5.5 Mission Avenue Gravity Sewer Lining and Replacement Project

The Mission Avenue Gravity Sewer includes cured-in-place lining of approximately 600 LF of 24-inch gravity sewer pipe starting at 3560 Mission Avenue at the terminus of the Market Place Del Rio Sewer Replacement project west to Fireside Street. From the Fireside Street and Mission Avenue intersection, approximately 1,600 LF of the 24-inch pipe along Mission Avenue to the west would need to be upsized to a 30-inch and/or 36-inch pipe. The existing sewer is located in private easements through a commercial shopping center and undeveloped parcels owned by the Ocean KAMP development. The new replacement pipe would likely be relocated into Mission Avenue, where feasible. The Ocean KAMP development is conditioned to upsize a portion of the sewer in Mission Avenue in front of the development.

2.6 PROGRAM PHASING

Phasing of the Program implementation would be subject to funding availability, potential constructability concerns during construction, soils conditions, and materials availability. An estimated schedule of construction of the Program components is presented in Table 2-1, *Sewer Improvements Program Schedule*.

Table 2-1
SEWER IMPROVEMENTS PROGRAM SCHEDULE

Program Component	Construction	
	Start	End
Oceanside Mesa Garrison Lift Station	May 2026	February 2028
Oceanside Mesa Garrison Force Main	May 2026	December 2027
Land Outfall Replacement Parts A and B (SLRWRF to former Garrison Elementary School Entrance)	May 2026	October 2027
Land Outfall Replacement Part C1 (in Garrison Street from former Garrison Elementary School to Oceanside Boulevard)	October 2027	October 2028
Land Outfall Replacement Part C2 (along Oceanside Boulevard between Garrison Street and Canyon Drive)	June 2028	February 2030
Land Outfall Replacement Part D (along Oceanside Boulevard between Canyon Drive and LSWWTP)	August 2027	February 2029
Mission Avenue Lift Station Force Main Replacement	May 2026	December 2027
Mission Ave Gravity Sewer Lining and Replacement	November 2028	September 2029

*Construction schedules are approximate and subject to change.

2.7 CONSTRUCTION METHODS

Construction of the Program components would include both below and above-ground elements. While individual Program components may vary in construction sequencing, staging location, or construction method, all environmental impacts evaluated in this PEIR are based on reasonable worst-case assumptions regarding ground disturbance, construction duration, equipment usage, and geographic extent within the defined Program Area.

Construction activities would be focused within previously developed and disturbed areas, including rights-of-way, and within existing utility corridors within the Program Area shown in Figures 2-4 and 2-5. A variety of construction equipment would be used throughout Program implementation. Such equipment is anticipated to include, but not be limited to, excavators, loaders, forklifts, pavers, generators, rollers, air compressors, backhoes, dozers, dump trucks, compactors, bore/drill rigs, welders, pumps, and cranes. Construction equipment is anticipated to progress at approximately 80 to 100 feet per day for the proposed Program components that are linear projects. It is expected that construction would occur primarily during daytime hours, but there is potential for construction to occur during nighttime hours as well, for activities such as pipeline installation work within major roadways. Detailed construction methodology is provided below for construction of the pipeline and lift station components, followed by the overall estimated construction schedule and construction features and practices.

Areas that have been preliminary identified as staging and access locations during construction are identified in Figure 2-6, *Potential Staging and Access Areas*. Staging areas would be confirmed by the construction contractor(s) based on locations of developed/disturbed areas within the Program impact limits where ground disturbance would not be required and would be outside of areas that support

native habitat or sensitive species. Upon completion of construction, the staging areas would be returned to their pre-construction condition, as appropriate and pursuant to agreements established between the construction contractor(s) and property owners.

2.7.1 Pipeline Construction

The pipelines would be constructed primarily on off-road, disturbed City easement areas, with some sections near existing residential neighborhoods. The pipelines would be constructed primarily using open-cut construction methods. The depth of installation would generally require a minimum of four (4) feet of cover for all of the mains. Where there are utilities in the same area as the proposed alignments or where pipelines would be installed within roadways, the depth of cover may increase to five or six feet depending upon existing utilities in the area. Depth may need to be deeper if pipelines would need to dive under existing utilities.

Selected portions of the proposed pipelines would be constructed using trenchless construction methods to minimize environmental and community impacts. Trenchless construction creates underground tunnels that are slightly larger than the line that is to be installed. The pipeline or conduit is then placed within these tunnels while the surface remains unaffected. Some of the trenchless construction methods are anticipated to be evaluated for applicability to be horizontal directional drilling (HDD), microtunneling, and pipe ramming, as well as their combinations. HDD involves pipes being installed using a guided, surface-based drilling rig that creates a pathway underground. Tunneling (augering and boring) is always done in a straight line and lends itself to crossings of shorter distances. Pipe ramming combines the advantages of microtunneling and HDD technology to install prefabricated pipelines and excavate the required borehole in one pass (TCG 2022).

Trenchless construction may be required at certain facility/utility crossings. The pipelines may include up to four separate trenchless sections: under SR-76/Mission Avenue, under the San Luis Rey River, under the stormwater channel at the north end of the MBGPF, and south of the Canyon Creek Apartments across Garrison Creek. For the SR-76 and stormwater channel crossings, alternative construction methods, including pipe bridge and open cut with channel restoration, would be analyzed during the final design.

Caltrans typically requires utility crossings within their right-of-way to be constructed using a trenchless construction method. If necessary, deviations from Caltrans Standards would be evaluated, and may be requested to propose open-cut construction for the SR-76 crossing since the freeway is an overpass above Mission Avenue at the proposed crossing location. The SR-76/Mission Avenue undercrossing occurs within a north-south utility easement beneath the two slightly skewed roadways that are nearly parallel and run east-west. Issues for consideration of the proposed pipeline construction at this location include high-voltage overhead electrical line locations, the associated utility towers, the highway columns spaced out over the entire bridge length, and existing utilities.

The anticipated San Luis Rey River crossing ground conditions are an alluvial deposit of mostly clay, silt, and sand with gravel and cobbles. The groundwater is relatively shallow under the river channel. The trenchless method would be carefully selected to address potential groundwater risks. HDD and micro-tunneling methods would be evaluated for cost and performance in this segment of work. The launching and receiving pit locations would require approximately 100 square feet of workspace and would be selected to avoid potentially sensitive habitat to the extent feasible.

Source: Aerial (Maxar, 2023).

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Potential Staging and Access Areas

Figure 2-6

Trenchless construction methods would be evaluated for pipeline crossings at Garrison Creek, which is an open storm drainage channel that typically experiences minimal flows. The trenchless technology would be selected based on suitability for groundwater conditions. Trenchless construction methods would be evaluated for this crossing to minimize the environmental impact and avoid construction schedule limitations around the wet season. If utilized, the trenchless method would be carefully selected to address potential groundwater risks and ensure proper flow hydraulics for the proposed San Luis Rey River crossing and any other below-ground crossings of water ways such as Garrison Creek and Pilgrim Creek. Where possible, above-grade crossings may also be evaluated.

Rock excavation may be required along the pipeline alignments during construction. The ease or difficulty of rock excavation would depend on whether the encountered rock is fractured or not. Rock that is not fractured and has high compressive strength is considered non-rippable and may require mechanical means or controlled blasting to remove. It is anticipated that rock encountered that is non-rippable would be excavated utilizing mechanical means such as a rock breaker, or a rock breaker in combination with a rotary cutting head. Blasting would not be used during construction.

2.7.2 Oceanside Mesa Garrison Lift Station Construction

Construction of the OMG Lift Station would initiate with site clearing and grubbing, site grading and excavation, and shoring. The anticipated construction activities required to construct the lift station include reinforced concrete structural work; mechanical, odor control, electrical, and instrumentation work including equipment, associated piping/ conduits, and appurtenances; work associated with erecting the lift station above-ground structure; architectural work; and site improvements and landscaping.

2.7.3 Construction Schedule

Construction of the Program is estimated to begin in May 2026 and continue until February 2030. Sequencing of individual components may vary, depending on the availability of funding and anticipated demand. Accordingly, impact analyses are based on conservative assumptions intended to capture the upper bound of potential environmental effects, consistent with CEQA Guidelines Sections 15124 and 15168. For the purposes of analysis, an anticipated construction schedule, duration, and equipment list for each project component is provided in Table 2-2, *Construction Schedule and Equipment*.

Table 2-2
CONSTRUCTION SCHEDULE AND EQUIPMENT

Program Component	Activity	Equipment	Estimated Construction Period	
			Start	End
Oceanside Mesa Garrison (OMG) Lift Station	Grading	1 Tractor/Loader/Backhoe, 1 Dozer, 1 Excavator, 1 Grader	May 2026	July 2026
	Construction	2 Tractors/Loaders/Backhoes, 1 Excavator, 1 Crane, 1 Skid-Steer Loader, 1 Plate Compactor, 1 Generator, 1 Roller, 1 Paver	July 2026	February 2028

Program Component	Activity	Equipment	Estimated Construction Period	
			Start	End
Oceanside Mesa Garrison Force Main (OMG FM)	Dewater	1 Generator, 1 Bore/Drill Rig, 1 Tractor/Loader/Backhoe	May 2026	September 2026
	Pavement Removal/ Excavation	1 Concrete Saw, 3 Excavators, 1 Tractor/Loader/Backhoe	May 2026	July 2026
	Pipeline Installation/ Fuse Pipe/ Backfill	1 Excavator, 2 Tractors/Loaders/Backhoes	July 2026	July 2027
	Jacking and Receiving Pit/ Horizontal Directional Drill	1 Bore/Drill Rig, 1 Crane, 1 Generator, 1 Excavator, 1 Tractor/Loader/ Backhoe	July 2026	February 2027
	Connection to Lift Stations	1 Generator, 1 Crane, 1 Excavator, 1 Tractor/Loader/Backhoe, 1 Plate Compactor	July 2027	September 2027
	Pressure Test/Valve Installation	1 Pump, 1 Tractor/Loader/Backhoe, 1 Generator, 1 Crane	September 2027	September 2027
	Paving	1 Paver, 1 Skid-Steer Loader, 1 Sweeper, 2 Rollers	October 2027	December 2027
Land Outfall Replacement Parts A and B (SLRWRF to former Garrison Elementary School Entrance)	Dewatering	1 Bore/Drill Rig, 1 Generator, 1 Excavator, 1 Tractor/Loader/Backhoe	May 2026	September 2026
	Pavement Removal/ Excavation	1 Concrete Saw, 3 Excavators, 2 Tractors/Loaders/Backhoes, 1 Pavement Grinder, 1 Sweeper	May 2026	July 2027
	Pipeline Installation/ Fuse Pipe/ Backfill	2 Excavators, 2 Tractors/Loaders/Backhoes	July 2026	July 2026
	Jacking and Receiving Pit/ Horizontal Directional Drill	1 Bore/Drill Rig, 1 Crane, 1 Excavator, 1 Forklift, 1 Tractor/Loader/Backhoe	July 2026	February 2027
	Pressure Test Pipeline and Valve Installation	1 Pump, 1 Tractor/Loader/Backhoe, 1 Generator, 1 Crane	September 2027	September 2027
	Paving	1 Paving Equipment, 2 Skid-Steer Loaders, 5 Rollers, 2 Street Sweepers	October 2027	October 2027
	Dewatering	1 Bore/Drill Rig, 1 Generator, 1 Excavator, 1 Tractor/Loader/Backhoe	October 2027	October 2028
	Pavement Removal/ Excavation	1 Concrete Saw, 3 Excavators, 2 Tractors/Loaders/Backhoes, 1 Pavement Grinder, 1 Sweeper	October 2027	October 2028

Program Component	Activity	Equipment	Estimated Construction Period	
			Start	End
Land Outfall Replacement Part C1 (in Garrison Street from former Garrison Elementary School to Oceanside Boulevard)	Pipe Installation/ Fuse Pipe/ Backfill	2 Excavators, 2 Tractors/Loaders/Backhoes	October 2027	October 2028
	Trenchless Pipe Installation (Horizontal Directional Drill and/or Jack and Bore)	1 Bore/Drill Rig, 1 Crane, 1 Excavator, 1 Forklift, 1 Tractor/Loader/Backhoe	June 2028	August 2028
	Pressure Test Pipeline and Valve Installation	1 Pump, 1 Tractor/Loader/Backhoe, 1 Generator, 1 Crane	August 2028	September 2028
	Paving	1 Paving Equipment, 2 Skid-Steer Loaders, 5 Rollers, 2 Street Sweepers	September 2028	October 2028
Land Outfall Replacement Part C2 (along Oceanside Boulevard between Garrison Street and Canyon Drive)	Dewatering	1 Bore/Drill Rig, 1 Generator, 1 Excavator, 1 Tractor/Loader/Backhoe	June 2028	August 2028
	Pavement Removal/ Excavation	1 Concrete Saw, 3 Excavators, 2 Tractors/Loaders/Backhoes, 1 Pavement Grinder, 1 Sweeper	July 2028	February 2029
	Pipe Installation/ Fuse/ Backfill	2 Excavators, 2 Tractors/Loaders/Backhoes	August 2028	November 2029
	Trenchless Pipe Installation (Horizontal Directional Drill and/or Jack and Bore)	1 Bore/Drill Rig, 1 Crane, 1 Excavator, 1 Forklift, 1 Tractor/Loader/Backhoe	February 2029	June 2029
	Pressure Test Pipeline and Valve Installation	1 Pump, 1 Tractor/Loader/Backhoe, 1 Generator, 1 Crane	October 2029	November 2029
	Paving	1 Paving Equipment, 2 Skid-Steer Loaders, 5 Rollers, 2 Street Sweepers	November 2029	December 2029
Land Outfall Replacement Part D (along Oceanside Boulevard between Canyon Drive and LSWWTP)	Dewatering	1 Bore/Drill Rig, 1 Generator, 1 Excavator, 1 Tractor/Loader/Backhoe	August 2027	October 2027
	Pavement Removal/ Excavation	1 Concrete Saw, 3 Excavators, 2 Tractors/Loaders/Backhoes, 1 Pavement Grinder, 1 Sweeper	September 2027	November 2027
	Pipe Installation/ Fuse/Backfill	2 Excavators, 2 Tractors/Loaders/Backhoes	October 2027	November 2028
	Trenchless Pipe Installation (Horizontal Directional Drill	1 Bore/Drill Rig, 1 Crane, 1 Excavator, 1 Forklift, 1 Tractor/Loader/Backhoe	April 2028	October 2028

Program Component	Activity	Equipment	Estimated Construction Period	
			Start	End
	and/or Jack and Bore)			
	Pressure Test Pipeline and Valve Installation	1 Pump, 1 Tractor/Loader/Backhoe, 1 Generator, 1 Crane	December 2028	January 2029
	Paving	1 Paving Equipment, 2 Skid-Steer Loaders, 5 Rollers, 2 Street Sweepers	January 2029	February 2029
Mission Avenue Lift Station Force Main Replacement	Dewatering	1 Generator, 1 Bore/Drill Rig, 1 Tractor/Loader/Backhoe	May 2026	September 2028
	Pavement Removal/ Pipeline Excavation	1 Concrete Saw, 1 Excavator, 1 Tractor/Loader/Backhoe, 1 Street Sweeper, 1 Pavement Grinder	May 2026	July 2026
	Pipe Installation/ Fuse/ Backfill	2 Excavators, 1 Tractor/Loader/Backhoe	July 2026	July 2027
	Horizontal Directional Drill	1 Bore/Drill Rig, 1 Crane, 1 Generator, 1 Excavator, 1 Tractor/Loader/Backhoe	July 2026	February 2027
	Pressure Test	1 Pump, 1 Tractor/Loader/Backhoe, 1 Generator	September 2027	September 2027
	Paving	1 Paver, 1 Skid-Steer Loader, 2 Rollers, 1 Street Sweeper	October 2027	December 2027
Mission Ave Gravity Sewer Lining and Replacement	Dewatering	1 Generator, 1 Bore/Drill Rig, 1 Tractor/Loader/Backhoe	November 2028	January 2029
	Pavement Removal/ Pipeline Excavation	1 Concrete Saw, 1 Excavator, 1 Tractor/Loader/Backhoe, 1 Street Sweeper, 1 Pavement Grinder	November 2028	January 2029
	Pipe Installation/Backfill	1 Excavator, 1 Tractor/Loader/Backhoe, 1 Street Sweeper	January 2029	April 2029
	Cured-in-place Lining	1 Generator, 1 Excavator, 1 Welder, 1 Tractor/Loader/Backhoe	January 2029	April 2029
	Connections	1 Generator, 1 Crane, 1 Excavator, 1 Tractor/Loader/Backhoe, 1 Plate Compactor	May 2029	July 2029
	Pipe Testing	1 Pump, 1 Tractor/Loader/Backhoe, 1 Generator	July 2029	August 2029
	Paving	1 Paver, 1 Skid-Steer Loader, 2 Rollers, 1 Street Sweeper	August 2029	September 2029

* For the purposes of the analysis within this PEIR, the parts A and B of the Outfall components are combined, as they are planned to be designed and constructed as one project. Parts C1, C2, and D are evaluated separately, where applicable.

2.7.4 Project Construction Features/Practices

Project construction would include the following features/practices:

- Implement standard dust control measures in accordance with San Diego Air Pollution Control District (SDAPCD) Rule 55, Fugitive Dust Control. Rule 55 requires the following:
    - No person shall engage in construction or demolition activity in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period; and
    - Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall be minimized by the use of effective trackout/ carryout and erosion control measures listed in Rule 55 that apply to the project or operation. These measures include track-out grates or gravel beds at each egress point; wheel-washing at each egress during muddy conditions; soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; watering for dust control; and using secured tarps or cargo covering, watering, or treating of transported material for outbound transport trucks.
- Implement a Storm Water Pollution Prevention Plan (SWPPP) and associated Best Management practices (BMPs) during construction.

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3.0 ENVIRONMENTAL ANALYSIS

Sections 3.1 through 3.10 of this PEIR contain information related to existing environmental conditions, regulatory framework, analyses of the potential impacts that would result from implementation of the Program, and feasible mitigation measures that could avoid or reduce environmental impacts to a less-than-significant level.

The environmental factors listed below would be potentially affected by implementation of the Program:

- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Noise
- Transportation
- Tribal Cultural Resources

The Program would not result in one or more potentially significant impacts on the following environmental factors: aesthetics, agriculture and forestry resources, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, utilities and service systems, and wildfire. The rationale for this determination is described in Chapter 4.0, *Environmental Effects Found Not to Be Significant*, of this PEIR.

The potentially significant environmental effects are analyzed by considering applicable conditions, principles, and standards, and by using the methodology set forth below.

Environmental Setting

As provided in Section 15125 of the CEQA Guidelines, the analysis includes a description of the existing physical environmental conditions in the vicinity of the Program, as of the date that the Notice of Preparation (NOP) of this PEIR was published (March 9, 2021). The environmental baseline is the starting point for the analysis of the Program's environmental effects, and it enables a meaningful assessment of the significance of such effects. For certain issue areas (e.g., biological resources), due to the passage of time and the need to conduct more recent/comprehensive surveys, this analysis uses an updated baseline based on field data collected in through 2023 to provide a more accurate reflection of current environmental conditions.

Regulatory Framework

A summary of applicable federal, state, and local laws, regulations, plans, and policies that are relevant to each environmental factor affected by the Program is provided.

Thresholds of Significance

As the Lead Agency, the City is responsible for determining whether an adverse environmental effect identified in the PEIR is potentially significant or less than significant. Significance standards may vary depending on the nature of the area affected and, as a result, the definition of what is a significant environmental effect must be flexible. In determining standards of significance, lead agencies can obtain assistance from experts, applicable policies, performance standards adopted by regulatory agencies, significance standards recommended by regulatory agencies, and the lead agency's own judgment, among other things. In addition, lead agencies may use the standards set forth in Appendix G to the CEQA Guidelines as a basis for defining significance thresholds in an EIR.

The thresholds of significance used in this analysis are primarily based upon the recommendations provided in Appendix G of the CEQA Guidelines, supplemented where necessary with other applicable and appropriate criteria. The threshold of significance defines the type, amount, and/or extent of impact that would be considered a significant adverse change in the environment. The thresholds of significance for some environmental factors, such as air quality and noise, are quantitative, while those for other topics, such as aesthetics, are qualitative. The thresholds of significance are intended to assist the reader in understanding how and why an EIR determines whether an impact is potentially significant or less than significant.

Program Impacts and Mitigation

Impact Analysis

As required by CEQA Guidelines Section 15126.2, this PEIR identifies and focuses on the potentially significant direct and indirect environmental effects that would be reasonably foreseeable if the proposed Program is implemented. Importantly, the PEIR does not defer identification of environmental impacts to future analysis. Rather, it discloses the types of impacts that may occur, the environmental resources potentially affected, and the maximum extent of disturbance that could result from Program implementation. Subsequent project-level review, where required, would serve to refine mitigation measures and confirm consistency with the impact parameters evaluated in this PEIR, but would not substitute for or reopen program-level impact analysis.

In drawing conclusions concerning an environmental analysis, such as whether a particular environmental effect is significant, CEQA depends upon the accumulation of substantial evidence in the record to support the conclusions, findings, and determinations made by the reviewing agency. In effect, substantial evidence is defined as "enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though another conclusion might also be reached" (CEQA Guidelines Section 15384(a)). Substantial evidence includes facts, reasonable assumptions predicated upon fact, and expert opinion supported by facts; it does not include argument, speculation, conjecture, or unsubstantiated opinion (California Public Resource Code [PRC] Sections 21080(e) and 21082.2(c)).

This PEIR utilizes the following terms to describe the level of significance of impacts identified during the course of the environmental analysis:

- ***Less than Significant:*** This term is used when an environmental effect would not exceed the defined thresholds of significance, namely (1) when the effect is not a substantial or potentially

substantial adverse change to the environment, and (2) when potentially significant impacts are reduced to a level that is less than significant after implementation of mitigation measures.

- ***Potentially Significant:*** This term is used to refer to impacts on the environment resulting from implementation of the Program that exceed the defined thresholds of significance before consideration of mitigation measures. A "significant effect" is defined by Section 15382 of the CEQA Guidelines as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the Program including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment [but] may be considered in determining whether the physical change is significant."

- ***Significant and Unavoidable:*** This term is used to refer to significant impacts resulting from implementation of the proposed Program that cannot be eliminated or reduced to below thresholds of significance through implementation of feasible mitigation measures.

Based on the varying stages of design and planning being undertaken for the proposed Program components, different levels of detail exist for each component. In general, there currently is more detail and certainty with respect to the Oceanside Mesa Garisson (OMG) Lift Station, OMG Force Main (FM), Mission Avenue List Station (MALS) FM Replacement, and the portion of the Land Outfall Replacement that falls north of the former Garrison Elementary School property (Land Outfall Replacement Parts A and B). These Program components are currently undergoing a progressive design development process, with specific elements being refined through ongoing coordination among the City, design team, and relevant agencies. Less detail and certainty is known with respect to the proposed Mission Avenue Gravity Sewer Lining and Replacement and the Land outfall Replacement Parts C1, C2 and D that are located south/west of the former Garrison Elementary School property along Garrison Street and Oceanside Boulevard. As a result, this PEIR assesses potential environmental impacts at different levels depending on the available information.

Where applicable for each environmental resource category, potential impacts are analyzed on a program-level basis for the Program as a whole and analyzed in greater detail where sufficient information is available based on the anticipated location, overall footprint, and construction methodology proposed for the Program components. In accordance with CEQA, Program components that are consistent with the scope and assumptions of the PEIR would be eligible for streamlined environmental review and subject to potential approval and implementation following certification of this PEIR. If a future Program component includes elements not previously analyzed, or if site-specific impacts have the potential to be significant or more severe than disclosed herein, additional environmental documentation—such as a focused or supplemental EIR, or an addendum—may be required to address those impacts (PRC Section 21166; CEQA Guidelines Sections 15162 through 15164, 15168). The level of additional review, if required, will depend on the extent to which the proposed Program component varies from the program-level analysis and whether new significant impacts or mitigation measures would be involved.

Mitigation Measures

Section 15126.4 of the CEQA Guidelines requires an EIR to "describe feasible measures which could minimize significant adverse impacts." The CEQA Guidelines define "feasible" as a quality attributable to an action capable of being accomplished in a successful manner within a reasonable period of time,

taking into account economic, legal, social, technological, or other considerations. The PEIR identifies and describes mitigation measures that could reduce the severity of potentially significant impacts identified as part of the Impact Analysis, which establish enforceable performance standards that must be met by future Program components tiering from this PEIR.

Level of Significance After Mitigation

For impacts where mitigation has been identified, the PEIR determines the level of significance of the impact following implementation of the identified mitigation measure(s).

References

References to the principal analyses, studies, reports, supporting materials, technical appendices, and other documents that were considered or used in preparing each section are provided.

3.1 AIR QUALITY

This section addresses the potential air quality impacts of the proposed Program. The following discussion includes a description of the environmental setting as related to air quality; a summary of applicable regulations; and an evaluation of the proposed Program's potential environmental impacts related to conflicts with an applicable air quality plan, a cumulatively considerable net increase of any criteria pollutant for which the Program region is in nonattainment, exposure of sensitive receptors to substantial pollutant concentrations, and other emissions such as those leading to odors adversely affecting a substantial number of people. This section is based on the *Air Quality, Greenhouse Gas Emissions, and Energy Technical Report* prepared for the proposed Program (HELIX 2026; Appendix B).

3.1.1 Environmental Setting

Air quality is defined by the ambient air concentration of pollutants in relation to their impact on human health. Concentrations of air pollutants are determined by the rate and location of pollutant emissions released by pollution sources, and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, and sunlight. Therefore, ambient air quality conditions within the local air basin are influenced by such natural factors as topography, meteorology, and climate, in addition to the amount of air pollutant emissions released by existing air pollutant sources. This section describes the climate and meteorological conditions that influence regional and local ambient air quality and existing air pollutant conditions within the local air basin.

3.1.1.1 Climate and Meteorology

The Program is located in the northern coastal portion of the San Diego Air Basin (SDAB). The SDAB is the designated air quality management area that includes all of San Diego County. Topography in the SDAB varies greatly, from beaches on the west, to mountains and then desert to the east. The climate of the SDAB is characterized by warm, dry summers and mild winters, and is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast experience moderate temperatures and comfortable humidity.

The predominant wind direction in the vicinity of the Program area is from the west and the average wind speed is approximately four miles per hour (Iowa Environmental Mesonet 2024). The annual average maximum temperature in the Program area is approximately 68°F, and the annual average minimum temperature is approximately 53°F. Total precipitation in the Program area averages approximately 11 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center 2024).

Due to its climate, the SDAB experiences frequent temperature inversions (temperature increases as altitude increases, which is the opposite of general patterns). Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and nitrogen dioxide (NO_2) react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to carbon

monoxide (CO) and NO_2 emissions. High NO_2 levels usually occur during autumn or winter, on days with summer-like conditions.

3.1.1.2 Existing Air Quality

Criteria Air Pollutants

Individual air pollutants at certain concentrations may adversely affect human or animal health, reduce visibility, cause property damage, and reduce the productivity or health of crops and natural vegetation. Air pollutants that have been identified by the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) as being of concern both on a nationwide and statewide level include the following compounds:

- Ozone (O_3)
- Reactive Organic Gases (ROGs) or Volatile Organic Compounds (VOCs)
- Carbon Monoxide (CO)
- Nitrogen Dioxide (NO_2)
- Particulate matter (PM), which is further subdivided into:
  - Respirable PM, 10 microns or less in diameter (PM_{10})
  - Fine PM, 2.5 microns or less in diameter ($PM_{2.5}$)
- Sulfur Dioxide (SO_2)
- Lead (Pb)

These air pollutants are commonly referred to as "criteria air pollutants" because air quality standards are regulated using human health and environmentally based criteria. Criteria pollutants can be emitted directly from sources (primary pollutants; e.g., CO, SO_2, PM_{10}, $PM_{2.5}$, and lead), or they may be formed through chemical and photochemical reactions of precursor pollutants (secondary pollutants; e.g., ozone, NO_2, PM_{10}, and $PM_{2.5}$) in the atmosphere. PM_{10} and $PM_{2.5}$ can be both primary pollutants emitted directly from a source and secondary pollutants formed through chemical reactions in the atmosphere. The principal precursor pollutants of concern are ROGs, also known as VOCs[1] and nitrogen oxides (NO_X).

The descriptions of sources and general health effects for each of the criteria air pollutants are shown in Table 3.1-1, *Summary of Common Sources and Human Health Effects of Criteria Air Pollutants,* based on information provided by CARB (2020a, 2025). Specific adverse health effects to individuals or population groups induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individuals [e.g., age, gender]). Criteria pollutant precursors (ROG and NO_X) affect air quality on a regional scale, typically after significant delay and distance from the pollutant source emissions. Health effects related to ozone and NO_2 are, therefore, the product of emissions generated by numerous sources throughout a region. As such, specific health effects from these criteria pollutant emissions cannot be directly correlated to the incremental contribution from a single project.

[1] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

Table 3.1-1
SUMMARY OF COMMON SOURCES AND HUMAN HEALTH EFFECTS OF CRITERIA AIR POLLUTANTS

Pollutant	Major Man-Made Sources	Human Health Effects
Ozone (O_3)	Formed by a chemical reaction between ROGs and NO_X in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Damages the tissues of the respiratory tract, causing inflammation and irritation, and result in symptoms such as coughing, chest tightness and worsening of asthma symptoms.
Carbon Monoxide (CO)	An odorless, colorless gas produced by incomplete combustion of carbon-containing fuels. Major sources include vehicle exhaust, industrial processes, and residential wood burning.	Reduced oxygen delivery to organs and tissues.
Nitrogen Dioxide (NO_2)	Highly reactive gases formed from emissions from various combustion sources. Major sources include motor vehicles, power plants, and industrial boilers.	Respiratory inflammation and aggravated respiratory issues.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Tiny particles suspended in the air that vary in size, composition, and origin. Major sources include construction sites, unpaved roads, fires, and vehicle exhaust.	Respiratory issues, heart problems, and decreased lung function.
Sulfur Dioxide (SO_2)	Gases produced primarily from fossil fuel combustion at power plants and industrial facilities. Major sources include fuel combustion, industrial processes, and shipping.	Respiratory effects and increased asthma symptoms.
Lead	Toxic metal found in older products and some industrial processes. Major sources include metal processing, aviation fuel, and waste incineration.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CARB 2020a, 2025

Toxic Air Contaminants

Toxic air contaminants (TACs) are a category of air pollutants that have been shown to have an impact on human health but are not classified as criteria pollutants. Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. Air toxics are generated by a number of sources, including stationary ones such as dry cleaners, gas stations, combustion sources, and laboratories; mobile ones such as automobiles; and area sources such as farms, landfills, construction sites, and residential areas. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic (cancer-causing), short-term (acute) noncarcinogenic, or long-term (chronic) noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below

which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

Monitored Air Quality

Air quality in the SDAB is monitored and regulated by the San Diego Air Pollution Control District (SDAPCD). The SDAPCD operates a network of ambient air monitoring stations throughout the County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets state and federal air quality standards. The nearest ambient monitoring station to the Program area is the Camp Pendleton monitoring station. Air quality data for this monitoring station during the years of 2021 through 2023 are shown in Table 3.1-2, *Air Quality Monitoring Data.* As shown in Table 3.1-2, the station measured acceptable levels of NO_2 and $PM_{2.5}$. The federal 8-hour ozone standard was violated once in 2023.

Table 3.1-2
AIR QUALITY MONITORING DATA

Pollutant Standards	2021	2022	2023
Ozone (O_3)			
Maximum 1-hour concentration (ppm)	0.074	0.076	0.090
Days above 1-hour state standard (>0.09 ppm)	0	0	0
Maximum 8-hour concentration (ppm)	0.059	0.067	0.077
Days above 8-hour state standard (>0.070 ppm)	40	0	1
Days above 8-hour federal standard (>0.070 ppm)	50	0	1
Respirable Particulate Matter ($PM_{2.5}$)			
Maximum 24-hour concentration (µg/m^3)	20.7	17.7	26.5
Days above state standard (>50 µg/m^3)	0	0	0
Days above federal standard (>150 µg/m^3)	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration (ppm)	0.059	0.050	0.053
Days above state 1-hour standard (0.18 ppm)	0	0	0

Source: CARB 2021
ppm = parts per million, µg/m^3 = micrograms per cubic meter

3.1.2 Regulatory Framework

3.1.2.1 Federal

Federal Clean Air Act

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA), first enacted in 1963 and amended numerous times in subsequent years (1965, 1967, 1970, 1977, and 1990). The CAA mandates the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for the criteria pollutants introduced in Table 3.1-1. Table 3.1-3, *Ambient Air Quality Standards*, shows the federal and state ambient air quality standards for these pollutants.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants described in Table 3.1-1 through the California Clean Air Act of 1988, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles.

Table 3.1-3
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards Primary[1]	Federal Standards Secondary[2]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	9.0 µg/m^3	15.0 µg/m^3
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
SO_2	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	–	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	No Federal Standards	No Federal Standards
Sulfates	24 Hour	25 µg/m^3	No Federal Standards	No Federal Standards
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	No Federal Standards	No Federal Standards
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	No Federal Standards	No Federal Standards

Source: CARB 2020b; USEPA 2024

[1] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

[2] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

AAM = Annual Arithmetic Mean; CO = carbon monoxide; km = kilometer; mg/m^3 = milligrams per cubic meter; NO_2 = nitrogen dioxide; O_3 = ozone; ppm = parts per million; PM_{10} = respirable particulate matter 10 microns or less in diameter; $PM_{2.5}$ = fine particulate matter 2.5 microns or less in diameter; SO_2 = sulfur dioxide;
– = No Standard; µg/m^3 = micrograms per cubic meter

Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. The USEPA has classified air basins (or portions thereof) as being in "attainment," "nonattainment," or "unclassified" for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for a nonattainment or attainment designation.

The proposed Program is located within the SDAB and, as such, is in an area designated a nonattainment area for certain pollutants that are regulated under the CAA. Table 3.1-4, *San Diego Air Basin Attainment Status*, in Section 3.1.2.3 lists the federal and state attainment status of the SDAB for the criteria pollutants. The USEPA classifies the SDAB as in attainment for CO, $PM_{2.5}$, NO_2, SO_2, and lead; in severe nonattainment for 8-hour ozone; and unclassified for PM_{10} with respect to federal air quality standards.

The CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The SIP is periodically modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The USEPA has the responsibility to review all SIPs to determine whether they conform to the requirements of the CAA.

3.1.2.2 State

California Clean Air Act

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB also has primary responsibility for the development of California's SIP, for which it works closely with the federal government and the local air districts.

Table 3.1-4 lists the state attainment status of the SDAB for the criteria pollutants. Under state designation, the SDAB is currently in attainment for CO, NO_2, SO_2, lead, and sulfates; and in nonattainment for ozone, PM_{10}, and $PM_{2.5}$.

Toxic Air Contaminants

California's air toxics control program began in 1983 with the passage of the Toxic Air Contaminant Identification and Control Act, better known as Assembly Bill (AB) 1807 or the Tanner Bill. The Tanner Bill establishes the framework for California's program to identify and control TACs. When a compound becomes listed as a TAC under the Tanner process, CARB normally establishes minimum statewide emission control measures to be adopted by local air pollution control districts (APCDs). Later legislative amendments (AB 2728) required CARB to incorporate all 189 federal hazardous air pollutants into the state list of TACs.

Supplementing the Tanner process, AB 2588 – the Air Toxics "Hot Spots" Information and Assessment Act of 1987, as amended – currently regulates over 600 air compounds, including all of the Tanner-designated TACs. Under AB 2588, specified facilities must quantify emissions of regulated air toxics and report them to the local APCD. If the APCD determines that a potentially significant public health risk is posed by a given facility, the facility is required to perform a health risk assessment (HRA) and notify the public in the affected area if the calculated risks exceed specified criteria.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a toxic air contaminant based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a significant impact on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2018).

In September 2000, CARB approved the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (Diesel Risk Reduction Plan; CARB 2000). The Diesel Risk Reduction Plan outlined a comprehensive and ambitious program that included the development of numerous new control measures aimed at substantially reducing emissions from new and existing on-road vehicles (e.g., heavy-duty trucks and buses), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps), and stationary engines (e.g., stand-by power generators). These requirements continue to be implemented on a statewide basis.

3.1.2.3 Local

San Diego Air Pollution Control District

The Program is located in San Diego County within the SDAB, where air quality is regulated by the SDAPCD. The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The current regional air quality plan for San Diego County is SDAPCD's 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County (Attainment Plan; SDAPCD 2020). The Attainment Plan, which would be a revision to the SIP, outlines SDAPCD's plans and control measures designed to attain the NAAQS for ozone. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and CARB, and the emissions and reduction strategies related to mobile sources are considered in the Attainment Plan and SIP.

The Attainment Plan relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of their respective general plans. Projects which are consistent with the growth assumptions used in the Attainment Plan and do not conflict with the control measures in the Attainment Plan, and which do not result in criteria pollutant and precursor emissions in excess of the

thresholds adopted by the City (as described in Section 3.1.3, below), would not hinder the goal of the Attainment Plan to bring the SDAB into compliance with the NAAQS and CAAQS for the protection of public health. The current federal and state attainment status for the SDAB is presented in Table 3.1-4.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin.

Table 3.1-4
SAN DIEGO AIR BASIN ATTAINMENT STATUS

Criteria Pollutant	Federal Designation	State Designation
O_3 (1-hour)	(No federal standard)	Nonattainment
O_3 (8-hour)	Severe Nonattainment	Nonattainment
CO	Attainment	Attainment
PM_{10}	Unclassified	Nonattainment
$PM_{2.5}$	Unclassified/Attainment	Nonattainment
NO_2	Unclassified/Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Unclassified/Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassified
Visibility	(No federal standard)	Unclassified

Source: CARB 2019a and USEPA 2021
O_3 = ozone; CO = carbon monoxide; PM_{10} = particulate matter 10 micrometers or less in diameter; $PM_{2.5}$ = particulate matter 2.5 micrometers or less in diameter; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide

3.1.3 Thresholds of Significance

The following criteria from Appendix G of the CEQA Guidelines are used to determine the significance of impacts of the proposed Program as related to air quality. The proposed Program would have a significant impact if it would:

1. Conflict with or obstruct implementation of the applicable air quality plan;

2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;

3. Expose sensitive receptors to substantial pollutant concentrations; or

4. Result in other emissions such as those leading to odors adversely affecting a substantial number of people.

Appendix G of the CEQA Guidelines states that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 for the preparation of Air Quality Impact Assessments.

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in Table 3.1-5, *Screening-level Thresholds for Air Quality Impact Analysis*.

The State of California Health and Safety Code Sections 41700 and 41705, and SDAPCD Rule 51, commonly referred to as public nuisance law, prohibits emissions from any source whatsoever in such quantities of air contaminants or other material, which cause injury, detriment, nuisance, or annoyance to the public health or damage to property. The provisions of these regulations do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals. It is generally accepted that the considerable number of persons requirement in Rule 51 is normally satisfied when 10 different individuals/households have made separate complaints within 90 days. Therefore, odor complaints from a "considerable" number of persons or businesses in the area is considered to be a significant, adverse odor impact.

Table 3.1-5
SCREENING-LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSES

Pollutant	Total Emissions		
Construction Emissions (Pounds per Day)			
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	67		
Oxides of Nitrogen (NO_X)	250		
Oxides of Sulfur (SO_X)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	137		
Operational Emissions			
	Pounds per Hour	**Pounds per Day**	**Tons per Year**
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	67	10
Oxides of Nitrogen (NO_X)	25	250	40
Oxides of Sulfur (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	137	15
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

Source: SDACPD Rule 20.2 and Rule 1210.
T-BACT = Toxics-Best Available Control Technology

3.1.3.1 Impact Analysis Assumptions Used in this PEIR

For purposes of the analysis, all environmental impacts evaluated in this PEIR are based on reasonable worst-case assumptions regarding ground disturbance, construction duration, equipment usage, and geographic extent within the defined Program Area. Construction activities would be focused within previously developed and disturbed areas, including rights-of-way, existing utility corridors, and identified staging areas within the Program Area shown in Figures 2-4 through 2-6. No construction would occur outside these areas.

The impact analysis assumes that construction activities could occur sequentially or concurrently across multiple locations within the Program Area. Accordingly, impact analyses are based on conservative assumptions intended to capture the upper bound of potential environmental effects, while any mitigation measures identified in this section establish enforceable performance standards that must be met by future projects tiering from this PEIR.

3.1.4 Program Impacts and Mitigation

3.1.4.1 Issue 1: Consistency with Air Quality Plans

Would the proposed Program conflict with or obstruct implementation of the applicable air quality plan?

Impact Analysis

The SDAPCD is required, pursuant to the federal CAA, to reduce emissions of criteria pollutants for which the SDAB is in nonattainment. Strategies to achieve these emissions reductions are developed in the Attainment Plan and SIP, prepared by the SDAPCD for the region. Both the Attainment Plan and SIP are based on SANDAG population projections, as well as land use designations and population projections included in general plans for those communities located within the County. Population growth is typically associated with the construction of residential units or large employment centers.

A project would be inconsistent with the Attainment Plan and SIP if it results in population and/or employment growth that exceed growth estimates for the area. The purpose of the Program is to make necessary improvements to the existing sewer infrastructure, as well as additional infrastructure necessary to accommodate projected growth in the area. Achieving these goals would manage the wastewater system in accordance with expected population growth and would not result in population growth beyond estimates for the area. In addition, construction and maintenance jobs for construction and operation of the Program would likely recruit from the local pool of labor and would not create conditions for employment growth that exceeds growth estimates for the area.

Because the Program would not generate population and employment growth beyond the levels assumed for the region based on the City's General Plan and SANDAG population projections, the Program would not conflict with population projections for the region and would, therefore, be consistent with the Attainment Plan and SIP. In addition, the Program would comply with existing and new rules and regulations as they are implemented by the SDAPCD, CARB, and/or USEPA related to emissions generated during construction. Therefore, the Program would not conflict with the applicable air quality attainment plan, and no impacts to regional air quality would occur.

Mitigation Measures

Impacts related to conflict with or obstruction of the applicable air quality plan would not occur; therefore, no mitigation is necessary.

3.1.4.2 Issue 2: Cumulatively Considerable Net Increase of Nonattainment Criteria Pollutants

Would the proposed Program result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Impact Analysis

The Program would generate criteria pollutants in the short-term during construction and the long-term during operation. To determine whether a project would result in a cumulatively considerable net increase in criteria pollutant emissions that would violate an air quality standard or contribute substantially to an existing or projected air quality violation, a project's emissions are evaluated based on the quantitative emission thresholds established by the SDAPCD (as shown in Table 3.1-5). The Program's emissions were estimated using the California Emissions Estimator Model (CalEEMod), Version 2022.1 (California Air Pollution Control Officers Association [CAPCOA] 2022). CalEEMod is a computer model used to estimate criteria air pollutant resulting from construction and operation of land development projects throughout the state of California. CalEEMod was developed by the SCAQMD with the input of several air quality management and pollution control districts. As applicable to this analysis, the model calculates emissions of CO, PM_{10}, $PM_{2.5}$, SO_2 and the ozone precursors VOC and NO_X with the potential to occur during implementation of the Program components. For the full scope of methodology and assumptions used in this analysis, refer to Appendix B.

Construction Emissions

Construction of the Program would result in temporary increases in air pollutant emissions from the use of construction equipment at multiple locations along the pipeline alignments (see Table 2-2 of this PEIR and Table 7 of Appendix B). These emissions would be generated in the form of fugitive dust emissions (PM_{10} and $PM_{2.5}$) and ozone precursor emissions (NO_X, VOC). Operation of heavy equipment and vehicles during the construction phases would generate exhaust emissions from fuel combustion. Excavators, loaders, forklifts, pavers, generators, rollers, air compressors, backhoes, dozers, dump trucks, compactors, bore/drill rigs, welders, pumps, and cranes would be the primary equipment used for Program construction. Fugitive dust emissions would be generated from earth disturbance during site grading, as well as from construction vehicles operating on open fields or dirt roadways within or adjacent to construction sites. The analysis assumed construction of the Program would begin in September 2025 and continue until August 2029. Emissions calculations also assume application of water twice per day during grading, a 15-miles per hour speed limit on unpaved surfaces, and a 12 percent moisture content on unpaved roads.

The results of the calculations for Program construction are shown in Table 3.1-6, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the thresholds identified above in Table 3.1-5. The tables do not present emissions from blasting, as the specifics of blasting are unknown at the current level of design.

Table 3.1-6
MAXIMUM DAILY CONSTRUCTION EMISSIONS

Year	ROG*	NO_X*	CO*	SO_X*	PM_{10}*	$PM_{2.5}$*
2025	55	33	115	<0.5	5	3
2026	54	39	120	<0.5	3	2
2027	53	27	103	<0.5	2	1
2028	54	31	118	<0.5	3	2
2029	1	7	11	<0.5	<0.5	<0.5
Maximum Daily Emissions	**55**	**39**	**120**	**<0.5**	**5**	**3**
Significance Thresholds	*137*	*250*	*550*	*250*	*100*	*67*
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: HELIX 2026
* Pollutant Emissions (pounds per day)
ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_X = sulfur oxides;
PM_{10} = respirable particulate matter 10 microns or less in diameter; $PM_{2.5}$ = fine particulate matter 2.5 microns or less in diameter

As shown in Table 3.1-6, Program emissions of criteria pollutants and ozone precursors during construction would not exceed the SDAPCD daily thresholds. Construction period emissions generated by the Program would therefore result in a less-than-significant impact.

Operational Emissions

Once the Program is complete, there would be no long-term changes to the staffing needs of the new facilities. The addition of the OMG Lift Station, however, would add a new stationary source in the form of an emergency generator and result in the consumption of electricity from operation of the pumps. The electricity use associated with the OMG Lift Station was estimated to be approximately 800 megawatt-hours (MWh) per year. A 450 kilowatt (kW) diesel-powered emergency generator would be used at the OMG Lift Station. Generator emissions were estimated using CalEEMod based on the testing frequency and duration, assumed to be up to 30 minutes per day, once per month, and the power output of the engines.

Table 3.1-7, *Maximum Daily Operational Emissions*, presents the summary of operational emissions for the Program.

Table 3.1-7
MAXIMUM DAILY OPERATIONAL EMISSIONS

Category	ROG*	NO_X*	CO*	SO_2*	PM_{10}*	$PM_{2.5}$*
Stationary	1	2	1	<0.5	<0.5	<0.5
Total Daily Emissions	**1**	**2**	**1**	**<0.5**	**<0.5**	**<0.5**
Significance Thresholds	*137*	*250*	*550*	*250*	*100*	*67*
Significant Impact?	***No***	***No***	***No***	***No***	***No***	***No***

Source: HELIX 2026
* Pollutant Emissions (pounds per day)
ROG = reactive organic gas; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide;
PM_{10} = respirable particulate matter 10 microns or less in diameter; $PM_{2.5}$ = fine particulate matter 2.5 microns or less in diameter

As shown in Table 3.1-7, Program emissions of criteria pollutants and ozone precursors during operation would not exceed the SDAPCD daily thresholds. Operational period emissions generated by the Program would therefore result in a less-than-significant impact.

Mitigation Measures

Impacts related to emissions resulting in a cumulatively considerable net increase of criteria pollutants for which the Program region is nonattainment would be less than significant during construction and operations; therefore, no mitigation is necessary.

3.1.4.3 Issue 3: Sensitive Receptors

Would the proposed Program expose sensitive receptors to substantial pollutant concentrations?

Impact Analysis

Impacts to sensitive receptors are typically analyzed for CO hotspots and exposure to TACs. An analysis of the Program's potential to expose sensitive receptors to these pollutants is provided below.

Carbon Monoxide Hot Spots

A CO hot spot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. Construction of the proposed pipeline alignments would occur within City streets. The Program would be required to submit a Traffic Control Plan (TCP), which would describe specifications for construction within public roadways, including requirements for signage, barricades, traffic control, driveway impairments, flag persons, overnight storage of materials, public noticing of street/lane closures, the use of night lighting and flares, temporary signal timing devices for work within signalized intersections, and ultimate removal and clean-up of construction activities. The TCP would be approved and monitored by the City Traffic Department. Long-term operation of the Program is not anticipated to affect existing traffic patterns or volumes. Therefore, the Program would not expose sensitive receptors to substantial localized concentrations of CO and the impact would be less than significant. The impact would be less than significant.

Toxic Air Contaminants

Construction

Construction activities would result in short-term, Program-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment. CARB identified diesel PM as a TAC in 1998. The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Thus, the risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer time period. According to the Office of Environmental Health Hazard Assessment, HRAs, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 30-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the Program.

The construction period would be relatively short when compared to a 30-year exposure period. In addition, the construction would occur at various locations over a large area, and a large amount of equipment would not occur near a single sensitive receptor for an extended period of time. Combined with the highly dispersive properties of diesel PM and additional reductions in exhaust emissions from improved equipment, construction-related emissions would not expose sensitive receptors to substantial emissions of diesel PM.

Operation

With regard to long-term operations, the backup emergency generator at the OMG Lift Station would represent a new source of TACs. The backup generator would only be used for testing or emergency situations. It is anticipated to be tested for 30 minutes per month, equating to 12 hours of operation per

year. At this length of operation, the generator would emit negligible TACs. As shown in Table 3.1-7, above, operational emissions of PM from stationary sources (which include the generator) would be less one pound per day. Proposed pumps would be electrically powered and would not generate on-site emissions of TACs. Therefore, no significant health risk would occur from Program-related TAC emissions.

Impacts related to exposure of sensitive receptors to substantial pollutant concentrations during Program construction and operation would be less than significant.

Mitigation Measures

Impacts related to the exposure of sensitive receptors to substantial pollutant concentrations would be less than significant; therefore, no mitigation is necessary.

3.1.4.4 Issue 4: Odors

Would the proposed Program result in other emissions such as those leading to odors adversely affecting a substantial number of people?

Impact Analysis

Implementation of the proposed Program would have the potential to generate objectionable odors through construction activities and during operation of certain Program components, as discussed below.

Construction

Construction activities are not a typical source of nuisance odors, although construction could result in minor amounts of odorous compounds associated with diesel heavy equipment exhaust or evaporation of volatile compounds within paint or other coatings. The smell of diesel exhaust is due in most part to the presence of sulfur and the creation of hydrocarbons during combustion (Nett Technologies 2018). As shown above, construction emissions would not result in significant emissions of sulfur oxides. Additionally, construction equipment associated with the Program would be operating at various locations throughout the City's service area and would not take place all at once. Odorous hydrocarbons emissions would dissipate beyond the emissions sources and would only affect receptors in the immediate vicinity of the active construction. Construction-related operations would also be temporary in nature and would cease at the completion of construction. Therefore, construction activities would not result in nuisance odors. Odor impacts associated with construction would be less than significant.

Operation

CARB's Air Quality and Land Use Handbook includes a list of the most common sources of odor complaints received by local air districts (CARB 2005). Typical sources of odor complaints include facilities such as sewage treatment plants, landfills, recycling facilities, petroleum refineries, and livestock operations.

While the proposed Program would include several sewer improvements projects, such projects would upgrade and supplement existing infrastructure. The existing MALS currently implements activated

carbon scrubbing for odor control. Odor control measures would continue to be implemented at MALS and included in the new OMG Lift Station.

Odor control measures for the OMG FM and replaced MALS FM would be implemented to remove odors that may be discharged from air valves installed along the alignments. Air valve odor control treatment would consist of activated carbon canisters installed at the location of each combination air release and air-vacuum valve. The carbon canisters would be placed on the discharge side of the air release or air-vacuum valve. Replacement of the spent carbon canisters would depend on the extent of air leaving the pipeline, with anticipated replacement of the spent carbon canisters every 6 to 12 months.

Additionally, SDAPCD Rule 51 prohibits nuisances, including objectionable odors. The SDAPCD responds to odor complaints by investigating the complaint and determining whether the odor violates SDAPCD Rule 51. The inspector takes enforcement action if the source is not in compliance with the SDAPCD rules and regulations (SDAPCD 2016). In the event of enforcement action, odor-causing impacts must be reduced by appropriate means to minimize or avoid the impacts to sensitive. Such means may include shutdown of odor sources or requirements to control odors using add-on equipment.

Given the aforementioned Program design features and conformance with SDAPCD Rule 51, the proposed Program would not result in significant objectionable odors and impacts would be less than significant.

Mitigation Measures

Impacts related to the Program resulting in other emissions such as those leading to odors adversely affecting a substantial number of people would be less than significant; therefore, no mitigation is necessary.

3.1.5 Level of Significance After Mitigation

Impacts associated with conflicting with or obstructing implementation of the Attainment Plan and SIP, cumulatively considerable net increases in criteria pollutants for which the region is in nonattainment, exposure of sensitive receptors to substantial pollutant concentrations, and other emissions (such as odors) would be **less than significant** with no mitigation required.

3.1.6 References

California Air Pollution Control Officers Association (CAPCOA). 2022. California Emission Estimator Model (CalEEMod) Version 2022.1.

California Air Resources Board (CARB). 2025. What Are Criteria Pollutants? Available at: https://ww2.arb.ca.gov/criteria-pollutants. Accessed May 14, 2025.

2021. iADAM Air Quality Data Statistics. Available at: https://www.arb.ca.gov/adam/topfour/topfour1.php. Accessed on July 26, 2021.

2020a. Health and Environmental Effects of Ozone. Available at: https://ww2.arb.ca.gov/resources/fact-sheets/health-effects-ozone. Accessed May 14, 2025.

2020b. Air Quality Standards. Available at: https://ww2.arb.ca.gov/resources/background-air-quality-standards. Accessed May 14, 2025.

2019a. Area Designations: Activities and Maps. August. Available at: https://www.arb.ca.gov/desig/adm/adm.htm. Accessed July 20, 2021.

2018. Overview: Diesel Exhaust and Health. Available at: https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health.

CARB (cont.)

2005. Air Quality and Land Use Handbook: A Community Health Perspective. April. Available at: https://www.aqmd.gov/docs/default-source/ceqa/handbook/california-air-resources-board-air-quality-and-land-use-handbook-a-community-health-perspective.pdf. Accessed May 14, 2025.

2000. Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. October.

HELIX Environmental Planning, Inc. (HELIX). 2026. Oceanside Sewer Improvements Program Air Quality, Greenhouse Gas Emissions, and Energy Technical Report. January.

Iowa Environmental Mesonet. 2024. San Diego/Gillespie Windrose Plot. Available at: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=OKB&network=CA_ASOS. Accessed December 2024.

Nett Technologies Inc. 2018. Diesel Emissions FAQ: What are diesel emissions? Available at: https://www.nettinc.com/information/emissions-faq/what-are-diesel-emissions. Accessed September 11, 2018.

San Diego County Air Pollution Control District (SDAPCD). 2020. 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County. October.

2016. Nuisance Complaint Program. June 12, 2000. Available at: https://www.sdapcd.org/content/sdapcd/compliance/air-quality-complaints/nuisance-complaint-program.html.

U.S. Environmental Protection Agency (USEPA). 2024. NAAQS Table. Available at: https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed December 2024.

2021. Nonattainment Areas for Criteria Pollutants (Green Book). Last updated July 15. Available at: https://www.epa.gov/green-book. Accessed on July 20, 2021.

Western Regional Climate Center. 2024. Period of Record Monthly Climate Summary, Oceanside Marina, California (046377). Available at: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca6377. Accessed December 2024.

3.2 BIOLOGICAL RESOURCES

This section addresses the potential biological resources impacts of the proposed Program. The following discussion includes a description of environmental setting related to biological resources; a summary of applicable regulations; and an evaluation of potential environmental impacts related to special-status species, sensitive natural communities, wetlands, wildlife movement, and compliance with local policies and plans protecting biological resources.

The section is based on the Biological Technical Report prepared for the proposed Program (HELIX 2026; Appendix C). Information included in the Biological Technical Report was obtained through a literature review related to biological resources, a general biological survey, focused biological surveys, vegetation mapping, and a jurisdictional delineation.

3.2.1 Environmental Setting

3.2.1.1 Survey Area Location

The original survey area encompasses approximately 202.42 acres and 779 Assessor's Parcel Numbers (APNs), which included the proposed lift station site and existing/proposed pipeline alignments. The original biological surveys were conducted in 2020 and 2021. Additional survey areas were included following Program alternatives added in 2022, as well as staging areas and access route locations added in 2023. Survey areas added in 2022 and 2023 are located either adjacent to or within the vicinity of the original survey area, occurring within an additional 1,375 APNs. The total survey area encompasses approximately 413.09 acres. The area of potential impact evaluated in the biological technical report encompasses approximately 107.92 acres, which includes the proposed OMG Lift Station site and existing/proposed pipeline alignments with a 50-foot buffer to allow for alignment variability. An additional 500-foot buffer surrounding the survey area was also evaluated in this report for the bird surveys.

The survey area is located within the boundaries of the Multiple Habitat Conservation Program (MHCP) North County, which was finalized and adopted in 2003. Within the North County MHCP, the survey area is located in the Oceanside subarea (Figure 3.2-1, *Oceanside Draft Subarea Plan*). In addition to the preserve areas, portions of the survey area also occur within a Wildlife Corridor Planning Zone (WCPZ) and Off-Site Mitigation Zone (OMZ) as designated by the draft Subarea Plan (SAP) (Figure 3.2-1). The Oceanside Draft SAP has not been approved or adopted.

Portions of the survey area are located within U.S. Fish and Wildlife Service (USFWS) designated critical habitat for four species: the federally listed as threatened thread-leaved brodiaea (*Brodiaea filifolia*), federally listed as threatened coastal California gnatcatcher (*Polioptila californica californica*), federally listed as endangered least Bell's vireo (*Vireo belli pusillus*), and federally listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*) (see Figure 3.2-2, *Critical Habitat*).

3.2.1.2 Biological Survey Methods

Before conducting the field surveys, relevant maps, databases, and literature pertaining to biological resources known to occur within the survey area and vicinity were reviewed, as well as the biological resources constraints analysis prepared for the proposed Program (HELIX 2021). Biological resources constraints analysis of the survey area was conducted in 2020, 2022, and 2023, as documented in detail

in the Biological Technical Report (HELIX 2026; Appendix C). This included classification and mapping of vegetation communities, land cover types, and other resources; identification of plant and animal species observed or detected; assessment of whether protected habitat and/or sensitive species occur; and mapping of potential jurisdictional aquatic resources. In addition, formal wetland delineations and focused species surveys were conducted, including for rare plants, arroyo toad (*Anaxyrus californicus*), least Bell's vireo, southwestern willow flycatcher, light-footed Ridgeway's rail (*Rallus obsoletus levipes*), burrowing owl (*Athene cunicularia*), coastal California gnatcatcher, and Stephens' kangaroo rat (*Dipodomys stephensi*). Please refer to Section 2.2, Biological Surveys, of the Biological Technical Report for a detailed discussion of the survey dates, methodology, and protocols followed (HELIX 2026; Appendix C).

3.2.1.3 Vegetation Communities/Land Cover Types

The thirteen vegetation communities present within the study area include southern riparian forest, mule fat scrub (including disturbed), southern willow scrub, freshwater marsh, Diegan coastal sage scrub (including disturbed), baccharis scrub, native grassland, salt grass grassland, non-native grassland, non-native vegetation, eucalyptus woodland, disturbed habitat, and developed land. Acreages of each vegetation community/land cover that is present within the study area are shown in Figure 3.2-3, *Vegetation Communities and Sensitive Resources*, and Table 3.2-1, *Vegetation Communities and Land Covers.*

Table 3.2-1
VEGETATION COMMUNITIES AND LAND COVERS[1]

VEGETATION COMMUNITY/ HABITAT TYPE	SURVEY AREA (acres)
Wetland	
Freshwater Marsh	0.05
Southern Riparian Forest	1.73
Mule Fat Scrub (including disturbed)	0.35
Southern Willow Scrub	1.21
Wetland Subtotal:	**3.34**
Upland	
Diegan Coastal Sage Scrub (including disturbed)	2.2
Baccharis Scrub	0.2
Native Grassland	0.2
Salt Grass Grassland	<0.1
Non-native Grassland	24.2
Non-native Vegetation	3.2
Eucalyptus Woodland	0.3
Disturbed Habitat	16.8
Developed	57.5
Upland Subtotal:	**104.6**
TOTAL:	**107.94**

[1] Acres rounded to the nearest 0.01 acre for wetland communities and 0.1 acre for upland communities. As a result, acreage totals vary slightly from the total survey area acreage of 107.92 acres.
Source: HELIX 2026; Appendix C
Note: Totals may not add up exactly due to rounding.

These vegetation communities/land covers are described below.

Douglas Dr
North River Rd
76
Mission Ave
Oceanside Blvd
Mission Ave
S Coast Hwy
5
Oceanside Blvd
S Coast Hwy
78
S Coast Hwy
Vista Way

Survey Area
Easement
City SAP Designation
Softline Preserve
Hardline Preserve
Wildlife Corridor Planning Zone
Off-site Mitigation Zone
Coastal Zone

0 2,000 Feet

N

Source: Aerial (Maxar, 2023), Preserves and Zones (City of Oceanside 2019).

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HELIX Environmental Planning

Oceanside Draft Subarea Plan

Figure 3.2-1

Survey Area
Easement
USFWS Critical Habitat
Coastal California Gnatcatcher
Thread-leaved_Brodiaea
Southwestern Willow Flycatcher
Least Bell's Vireo

Douglas Dr
North River Rd
76
Mission Ave
Oceanside Blvd
Mission Ave
S Coast Hwy
5
Oceanside Blvd
S Coast Hwy
78
S Coast Hwy
Vista Way
El Camino Real
Carlsbad Village Dr

I:\PROJECTS\I\InfrastructureEngineeringCorp_01354\EN-05_OceansideConditionAssessment_Task10\Map\PEIR_25.aprx Fig3.2-2_CriticalHabitat 01354.5.1 6/5/2025 - SAB

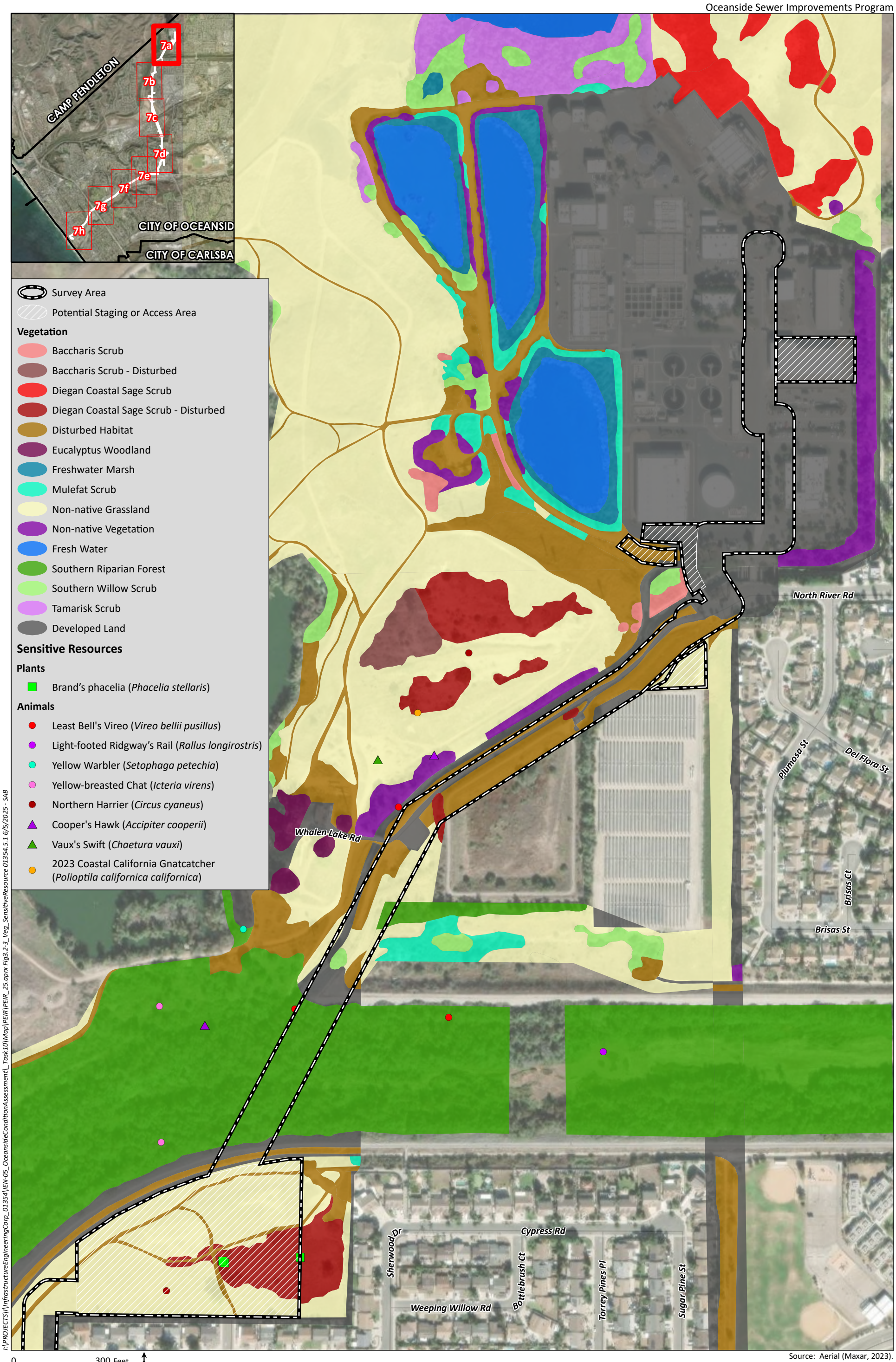
0 2,000 Feet

Source: Aerial (Maxar, 2023), Thread-leaved Brodiaea (USFWS 2011); Least Bell's Vireo (USFWS 1994); Coastal California Gnatcatcher (USFWS 2007); SW Willow Flycatcher 2013)

HELIX Environmental Planning

Critical Habitat

Figure 3.2-2



I:\PROJECTS\\\Infrastructure Engineering Corp_01354\EN-05_OceansideConditionAssessment_Task 10\Map\PEIR\PEIR_25.aprx Fig3.2-3_Veg_SensitiveResource 01354.5.1 6/5/2025 - SAB

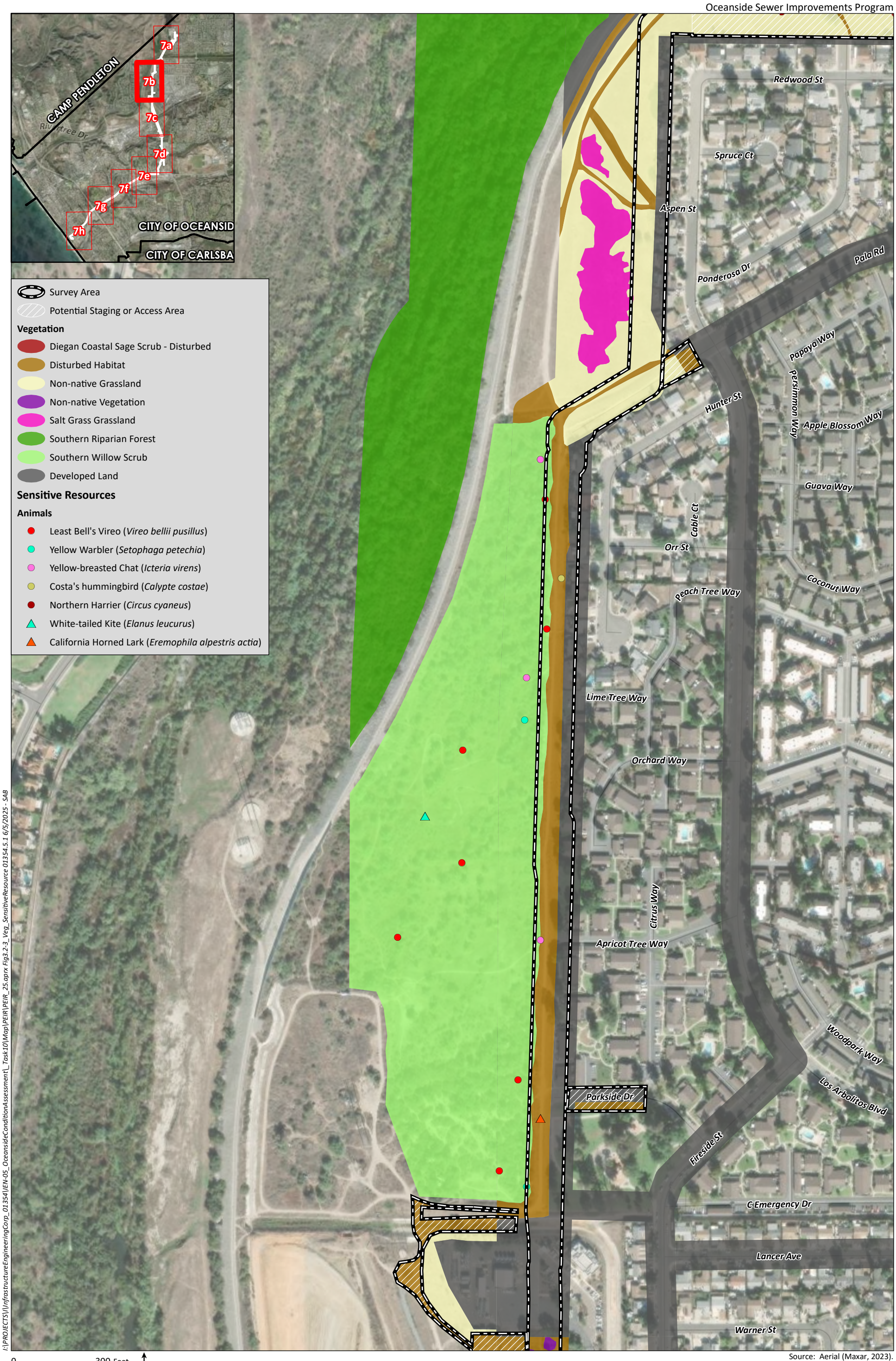
0 300 Feet

Source: Aerial (Maxar, 2023).

HELIX Environmental Planning

Vegetation Communities and Sensitive Resources

Figure 3.2-3a



I:\PROJECTS\Infrastructure Engineering Corp_01354\EN-05_OceansideConditionAssessment_Task10\Map\PEIR\PEIR_25.aprx Fig3.2-3_Veg_SensitiveResource 01354.5.1 6/5/2025 - SAB

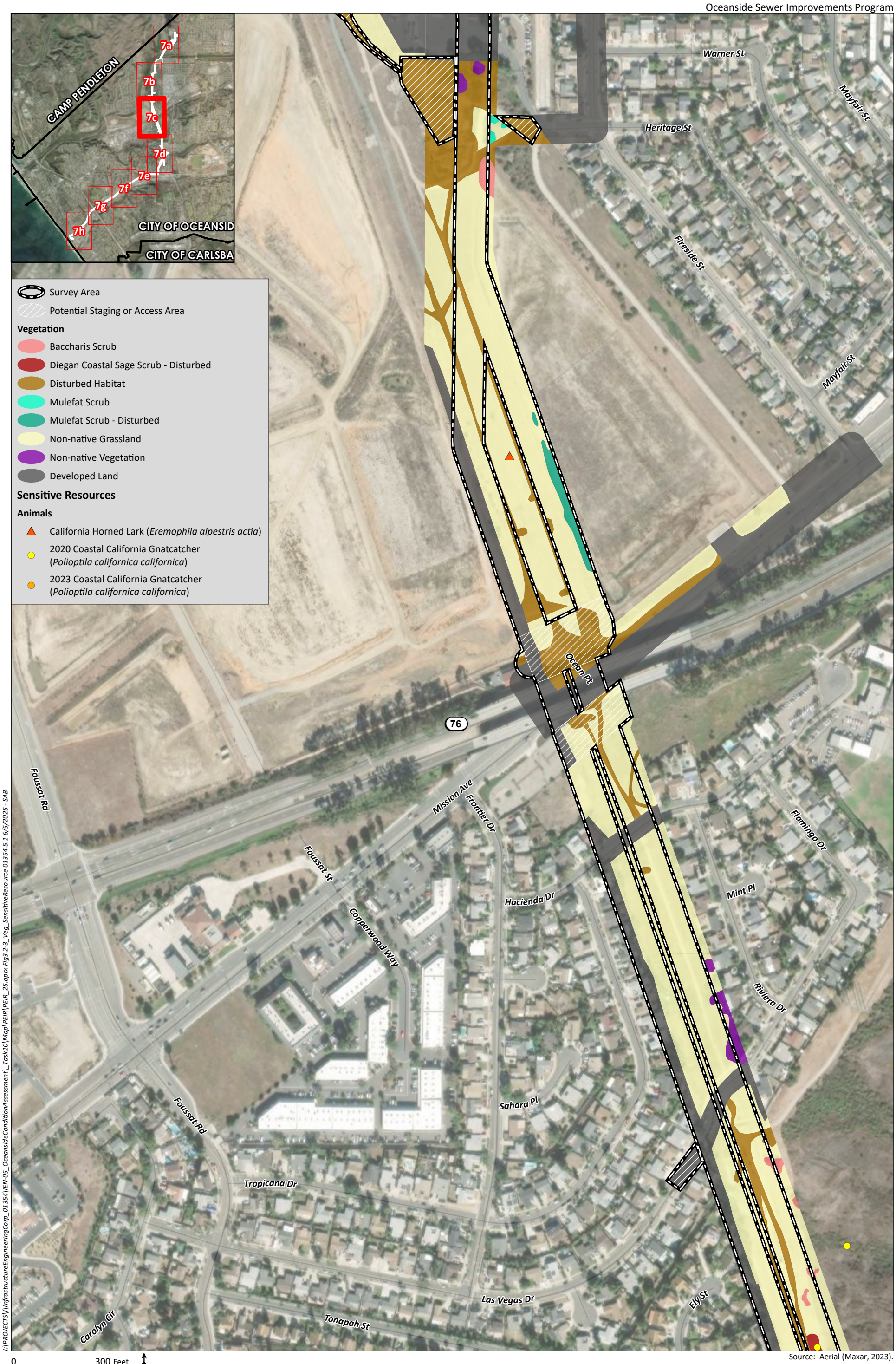
0 300 Feet

Source: Aerial (Maxar, 2023).

HELIX Environmental Planning

Vegetation Communities and Sensitive Resources

Figure 3.2-3b



I:\PROJECTS\\Infrastructure Engineering Corp_01354\EN-05_OceansideConditionAssessment_Task.10\Map\PEIR\PEIR_25.aprx Fig3.2-3_Veg_SensitiveResource 01354.5.1 6/5/2025 - SAB

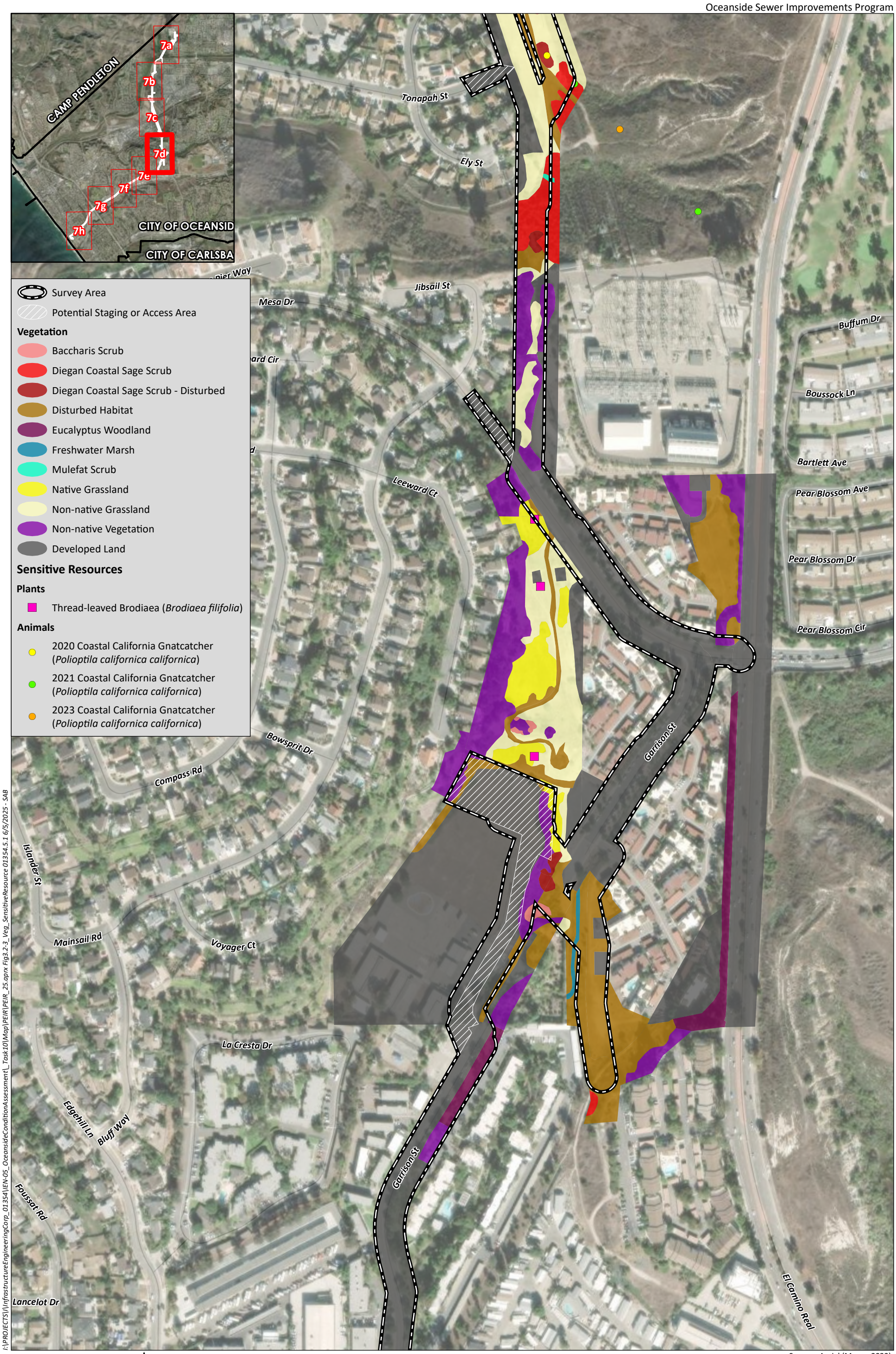
0 300 Feet

Source: Aerial (Maxar, 2023).

HELIX Environmental Planning

Vegetation Communities and Sensitive Resources

Figure 3.2-3c



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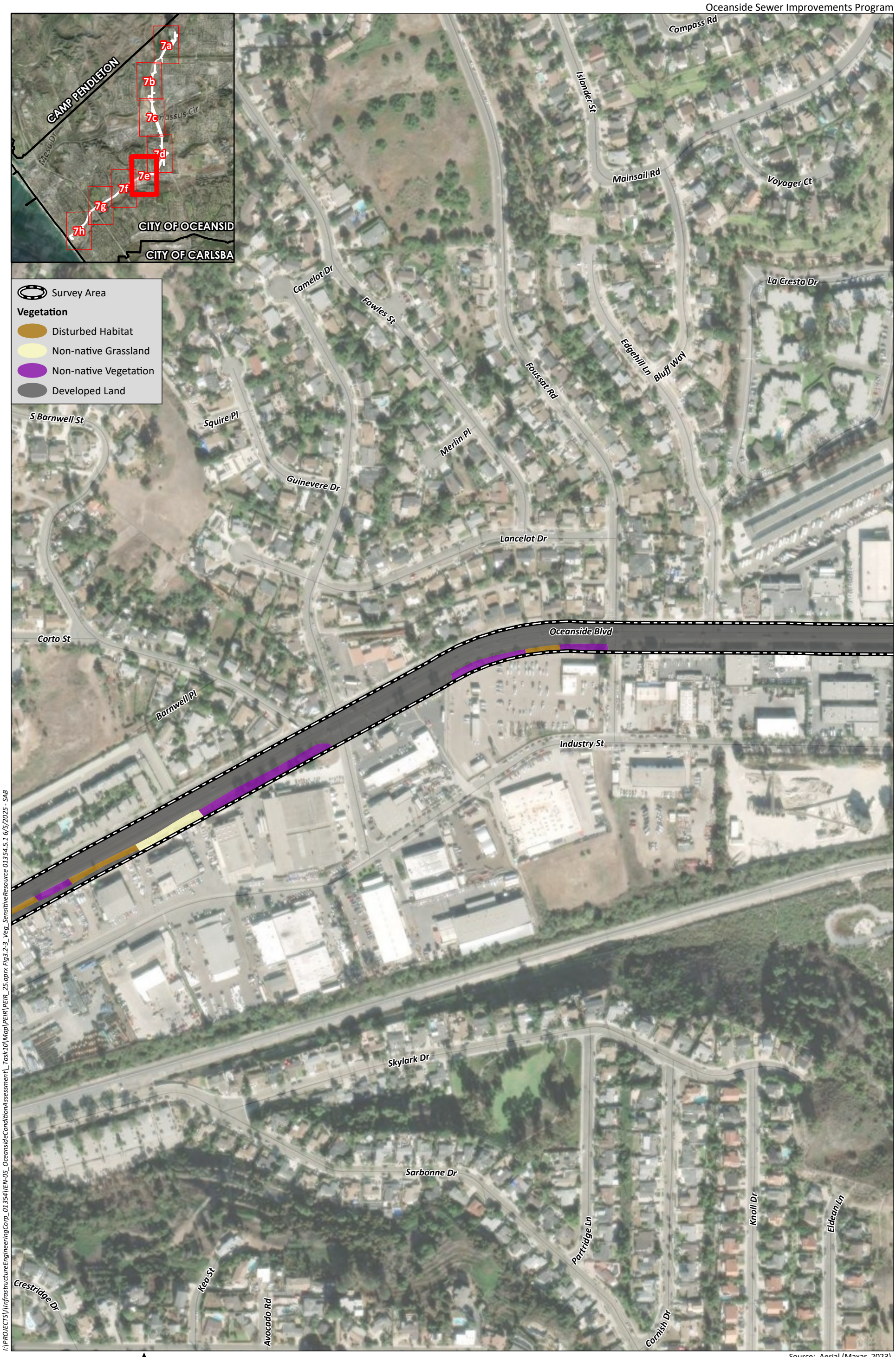
0 300 Feet

Source: Aerial (Maxar, 2023).

HELIX Environmental Planning

Vegetation Communities and Sensitive Resources

Figure 3.2-3d



I:\PROJECTS\\\Infrastructure Engineering Corp_01354\EN-05_OceansideConditionAssessment_Task10\Map\PEIR\PEIR_25.aprx Fig3.2-3_Veg_SensitiveResource 01354.5.1 6/5/2025 - SAB

0 300 Feet

Source: Aerial (Maxar, 2023).

HELIX Environmental Planning

Vegetation Communities and Sensitive Resources

Figure 3.2-3e

I:\PROJECTS\VInfrastructureEngineeringCorp_01354\VEN-05_OceansideConditionAssessment\L_Task10\Map\PEIR\PEIR_25.aprx Fig3.2-3_Veg_SensitiveResource 01354.5.1 6/5/2025 - SAB

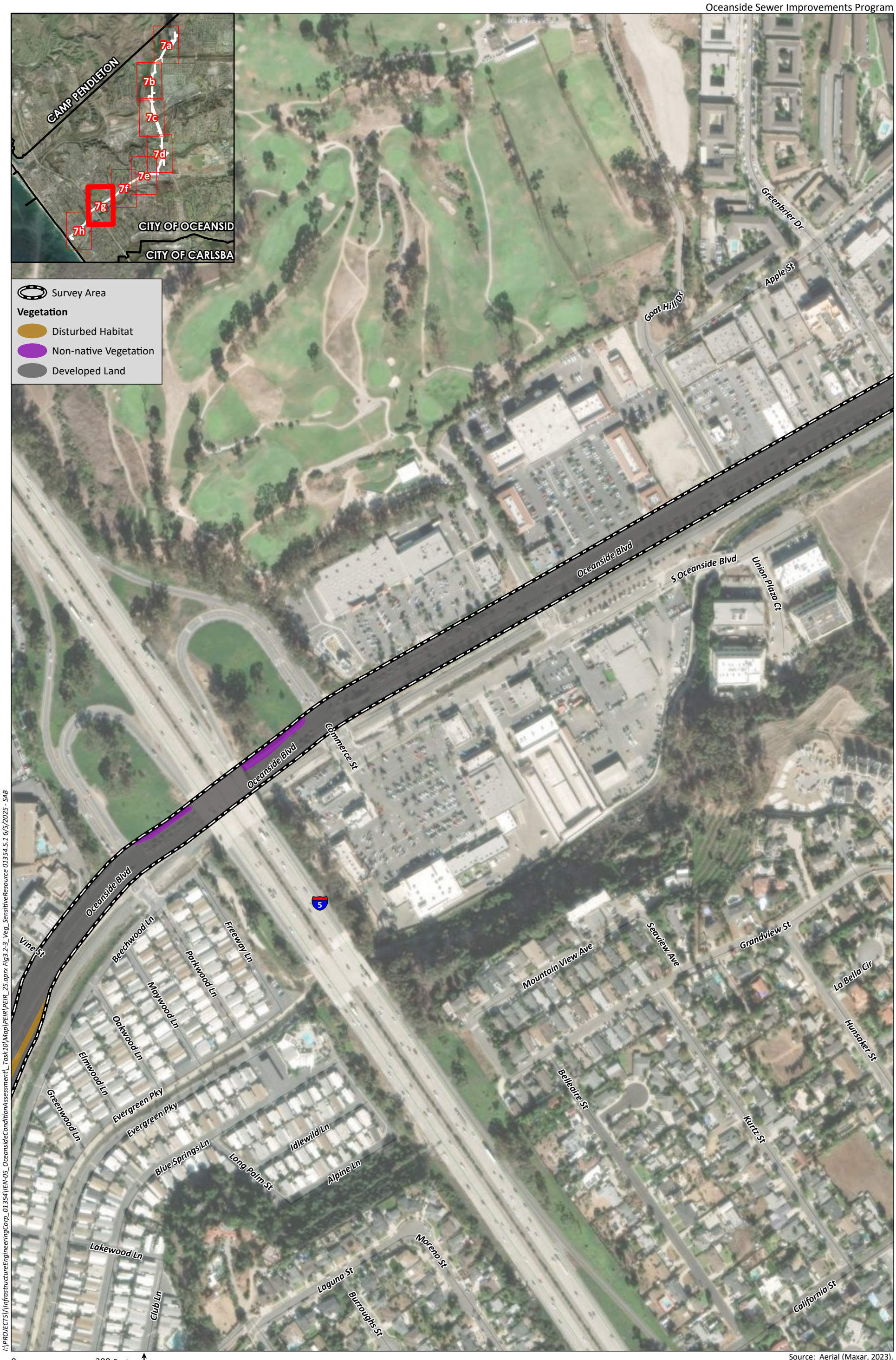
0 300 Feet

Source: Aerial (Maxar, 2023).

HELIX Environmental Planning

Vegetation Communities and Sensitive Resources

Figure 3.2-3f



I:\PROJECTS\Infrastructure Engineering Corp_01354\IEN-05_OceansideConditionAssessment_Task10\Map\PEIR\PEIR_25.aprx Fig3.2-3_Veg_SensitiveResource 01354.5.1 6/5/2025 - SAB

Source: Aerial (Maxar, 2023).

HELIX
Environmental Planning

Vegetation Communities and Sensitive Resources

Figure 3.2-3g

I:\PROJECTS\\Infrastructure Engineering Corp_01354\EN-05_OceansideConditionAssessment_Task10\Map\PEIR\PEIR_25.aprx Fig3.2-3_Veg_SensitiveResource 01354.5.1 6/5/2025 - SAB

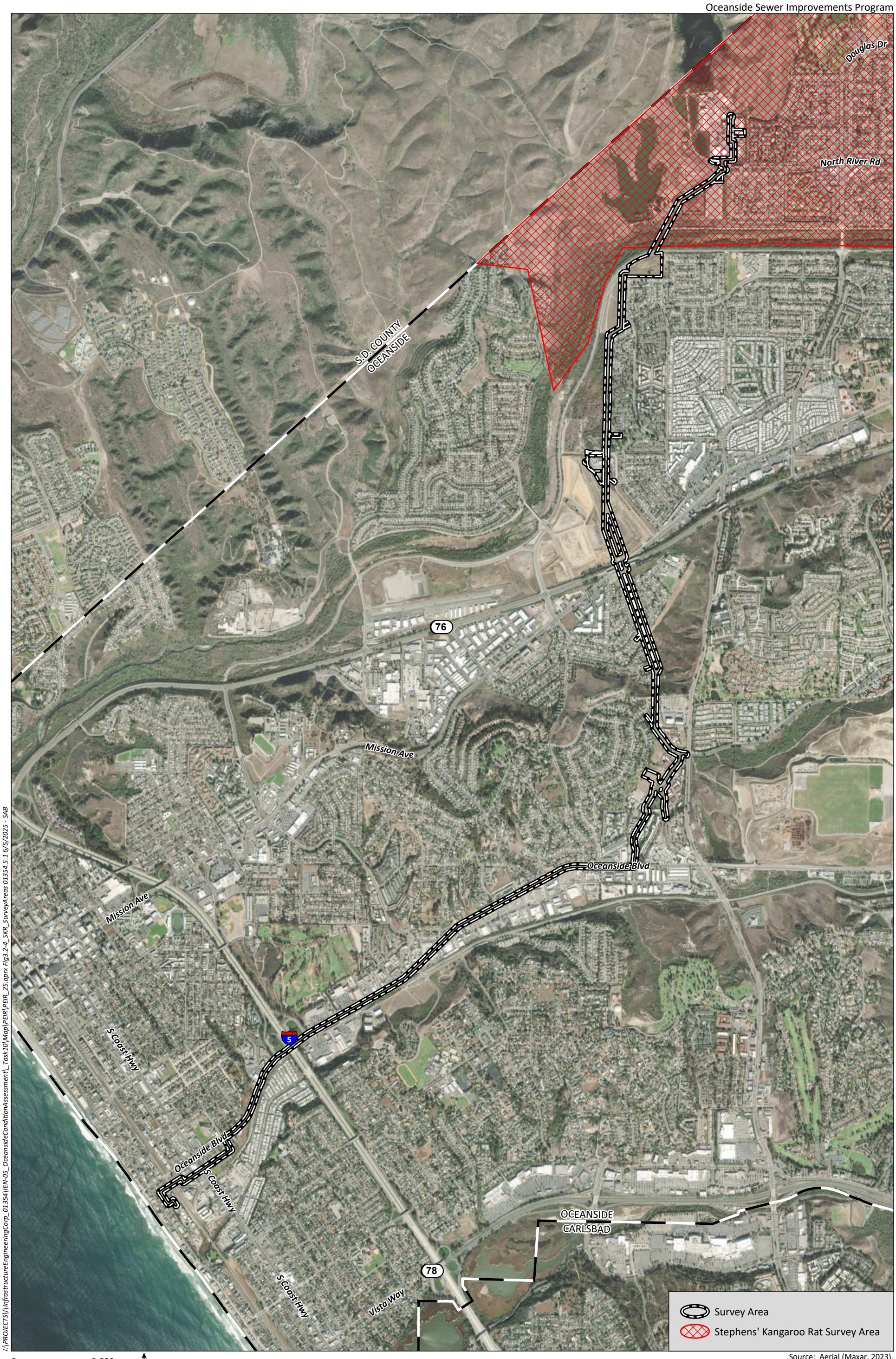
0 300 Feet

Source: Aerial (Maxar, 2023).

HELIX Environmental Planning

Vegetation Communities and Sensitive Resources

Figure 3.2-3h



I:\PROJECTS\I:\InfrastructureEngineeringCorp_01354\EN-05_OceansideConditionAssessment_Task10\Map\PEIR_25.aprx Fig3.2-4_SKR_SurveyAreas 01354.5.1 6/5/2025 - SAB

0 2,000 Feet

Source: Aerial (Maxar, 2023).

HELIX Environmental Planning

Stephens' Kangaroo Rat Survey Area

Figure 3.2-4

Freshwater Marsh

Freshwater marsh is dominated by perennial, emergent monocots, 5 to 13 feet tall, forming incomplete to completely closed canopies. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes, springs, and freshwater or brackish marshes. These areas are semi- or permanently flooded yet lack a significant current (Holland 1986). Dominant species include cattails (*Typha* sp.) and bulrushes (*Schoenoplectus* sp., *Scirpus* sp., and *Bolboschoenus maritimus*), along with umbrella sedges (*Cyperus* sp.), rushes (*Juncus* sp.), and spike-sedge (*Eleocharis* sp.).

This wetland habitat is relatively scarce, and the remaining acreage provides important habitat for migrant birds as well as performing many other functions such as floodwater conveyance and water quality enhancement. Coastal and valley freshwater marsh is considered sensitive by the City and County of San Diego and the California Department of Fish and Wildlife (CDFW) and is protected by the U.S. Army Corps of Engineers (USACE).

Within the survey area, freshwater marsh occurs within a small area located near the former Garrison Elementary School and covers approximately 0.05 acres. Species observed include cattails and flatsedge (*Cyperus erythrorhizos*).

Southern Riparian Forest

Southern riparian woodlands and forests are composed of winter-deciduous trees that require water near the soil surface. Willow (*Salix* sp.), cottonwood (*Populus* sp.), and western sycamore (*Platanus*) form a dense, medium-height woodland or forest in moist canyons and drainage bottoms. Associated understory species include mule fat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica* ssp. *Holosericea*), and wild grape (*Vitis girdiana*; Beauchamp 1986). In forests, the canopies of individual tree species overlap so that a canopy cover exceeding 100 percent may occur in the upper tree stratum. In woodlands, there may be less canopy cover than forests and large canopy gaps within the upper tree stratum.

Within the survey area, southern riparian forest is associated with the San Luis Rey River and covers approximately 1.73 acres. Overstory species observed in this vegetation community include arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), red willow (*Salix laevigata*), western sycamore, Fremont cottonwood (*Populus fremontii*), and coast live oak (*Quercus agrifolia* var. *agrifolia*). Understory species observed include mule fat, western ragweed (*Ambrosia psilostachya*), California mugwort (*Artemisia douglasiana*), and poison oak (*Toxicodendron diversilobum*). Non-native plant species observed include giant reed (*Arundo donax*), saltcedar (*Tamarix ramosissima*), myoporum (*Myoporum laetum*), Peruvian pepper tree (*Schinus molle*), and poison-hemlock (*Conium maculatum*).

Mule Fat Scrub

Mule fat scrub is a depauperate, shrubby riparian scrub community dominated by mule fat and interspersed with small willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This early seral community is maintained by frequent flooding, the absence of which would lead to a cottonwood or sycamore dominated riparian woodland or forest (Holland 1986). In some environments, limited hydrology may favor the persistence of mule fat. Disturbed mule fat scrub contains many of the same shrub species as undisturbed mule fat scrub but has a higher proportion (above 25 percent) of non-native species.

Within the survey area, mule fat scrub generally occurs within small, isolated areas north of SR-76 totaling approximately 0.35 acres. Mule fat is the primary species observed, with weeds present in this vegetation community that include poison-hemlock (*Conium maculatum*), curly dock (*Rumex crispus*), garland daisy (*Glebionis coronaria*), black mustard (*Brassica nigra*), tree tobacco (*Nicotiana glauca*), and non-native grasses.

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows in association with mule fat, and with scattered emergent cottonwood and western sycamores. This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian forest.

Within the survey area, approximately 1.21 acres of southern willow scrub occur adjacent to the San Luis Rey River. Species observed consist of arroyo willow, narrow-leaved willow (*Salix exigua*), mule fat, and coyote brush (*Baccharis pilularis*). Understory species observed include white nightshade (*Solanum americanum*), flatsedge (*Cyperus erythrorhizos*), and tule (*Schoenoplectus* sp.).

Diegan Coastal Sage Scrub (including disturbed)

Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina)*, and black sage (*Salvia mellifera*). Disturbed Diegan coastal sage scrub contains many of the same shrub species as undisturbed Diegan coastal sage scrub but has a higher proportion (above 25 percent) of non-native species.

Within the survey area, Diegan coastal sage scrub (including disturbed) is found in small patches totaling 2.2 acres located between the northern survey area boundary and the former Garrison Elementary School, with the largest area located north of Jabsail Street. Species observed include California sagebrush, California buckwheat, black sage (*Salvia mellifera*), California encelia (*Encelia californica*), deerweed (*Acmispon glaber*), bladderpod (*Peritoma arborea*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), toyon (*Heteromeles arbutifolia*), coastal prickly pear (*Opuntia littoralis*), a variety of native herbs, native and non-native grasses, and herbaceous weeds.

Baccharis Scrub

Baccharis scrub is dominated by coyote brush (*Baccharis pilularis*), with lesser amounts of other typical coastal sage scrub species, such as California sagebrush, California buckwheat, laurel sumac, and black sage. Disturbed baccharis scrub contains many of the same shrub species as undisturbed baccharis scrub but has a higher proportion (above 25 percent) of non-native species.

Within the survey area, baccharis scrub is patchy in distribution occurring between Las Vegas Drive and the former Garrison Elementary School. This vegetation community covers approximately 0.2 acre and is dominated by coyote brush with broom baccharis (*Baccharis sarothroides*) and mule fat. Weeds present in this vegetation community include black mustard and short-pod mustard (*Hirschfeldia incana*).

Native Grassland

Native grassland is a community dominated by perennial bunchgrasses such as purple needlegrass (*Stipa pulchra*) with annual and perennial forbs such as common golden stars (*Bloomeria crocea*) and California blue-eyed grass (*Sisyrinchium bellum*). Native grasslands generally occur on fine-textured soils that exclude the annual, exotic grasses. Almost all of the native grasslands in California have been displaced by non-native grassland dominated by introduced annual species. Native grasslands occur throughout California as small, isolated islands.

Within the survey area, native grassland occurs west of Mesa Drive and adjacent to the northeastern portion of the former Garrison Elementary School and covers approximately 0.2 acre. In the survey area, native grassland occurs as patches of purple needlegrass (*Stipa pulchra*) and foothill needlegrass (*Stipa lepida*) within the greater non-native grassland areas. Goldenbush (*Isocoma menziesii*) and a variety of native herbaceous plants are present within this community, including fascicled tarplant (*Deinandra fasciculata*), fiddleneck (*Amsinckia* spp.), cryptantha (*Cryptantha intermedia*), caterpillar phacelia (*Phacelia cicutaria*), rusty popcorn flower (*Plagiobothrys nothofulvus*), miniature lupine (*Lupinus bicolor*), dwarf plantain (*Plantago erecta*), blue-eyed grass, and blue dicks (*Dichelostemma capitatum*).

Salt Grass Grassland

Salt grass grassland is an area dominated by salt grass (*Distichlis spicata*). This vegetation community may be monotypic, contain bare areas, or contain a variety of other species characteristic of adjacent vegetation communities, including coastal salt marsh, coastal brackish marsh, and uplands. Salt grass grassland may also be alkaline, such as areas where water tends to accumulate (with the evaporating water presumably increasing the alkalinity of the soil). Certain halophytic species, such as salt grass and alkali weed, both of which are hardy plants and tolerant of disturbance, can persist in alkaline areas.

Within the survey area, salt grass grassland occurs west and northwest of the terminus of Pala Road and covers less than 0.1 acre. This vegetation community is dominated by salt grass, but also includes salt heliotrope (*Heliotropium curassavicum*), annual bur-sage (*Ambrosia acanthicarpa*), and garland daisy (*Glebionis coronaria*).

Non-Native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include wild oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut (*Bromus diandrus*), ryegrass (*Festuca* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that comprise the majority of species and biomass within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. These two factors, in addition to intensive grazing and agricultural practices in conjunction with severe droughts, contributed to the successful invasion and establishment of these species and the replacement of native grasslands with an annual dominated non-native grassland (Jackson 1985).

Non-native grassland occurs along much of the survey area north of the former Garrison Elementary School, and a few areas south of the former Garrison Elementary School. Areas south of this location occur adjacent to roadways. In the survey area, this vegetation community covers approximately 24.2 acres and includes an abundance of non-native grasses.

Non-Native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.], peppertree [*Schinus* sp.]), many of which are also used in landscaping.

Non-native vegetation is patchy throughout the survey area, occurring adjacent to roadways and other developed areas and covers approximately 3.2 acres. In the survey area, non-native vegetation was characterized by a variety of non-native shrubs and trees such as freeway iceplant (*Carpobrotus edulis*), mission cactus (*Opuntia ficus-indica*), century plant (*Agave americana*), Mexican fan palm (*Washingtonia robusta*), as well as Mohave yucca (*Yucca schidigera*) and herbaceous weeds.

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus (Eucalyptus sp.), an introduced species that has often been planted purposely for wind-blocking, ornamental, and hardwood production purposes. Most groves are monotypic, with the most common species being either the blue gum (*Eucalyptus gunnii*) or red gum (*E. camaldulensis* ssp. *obtusa*). The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter.

Eucalyptus woodland is patchy throughout the survey area and covers approximately 0.3 acre. In the survey area, eucalyptus woodland is dominated by eucalyptus trees, with an understory of weeds, including common ripgut grass, foxtail chess (*Bromus madritensis*), and short-pod mustard.

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Within the survey area, disturbed habitat covers approximately 16.8 acres and includes unpaved roads and trails, as well as larger areas characterized by bare ground and sparse annual non-native weeds.

Developed

Developed land includes areas that have been constructed upon or otherwise covered with a permanent, unnatural surface and may include, for example, structures, pavement, irrigated landscaping, or hardscape to the extent that no natural land is evident. These areas no longer support native or naturalized vegetation.

Within the survey area developed land covers approximately 57.5 acres and in the survey area consists of roadways/highways/interstate, and residential, commercial, education, and other infrastructure development.

3.2.1.4 Plants

A total of 172 plant species were observed within the survey area during the biological surveys, of which 88 (51 percent) are non-native species (refer to Appendix C for a complete list of plant species observed). The predominance of non-native species is indicative of the high degree of disturbance as a

result of historical and current uses of the study area. Special-status plant species are discussed below under Section 3.2.1.6.

3.2.1.5 Animals

A total of 107 animal species were observed/detected within the study area and surrounding areas during the biological surveys, including four invertebrates, four amphibians, one reptile, 92 bird species, and six mammal species (refer to Appendix C for a complete list of animal species observed or detected). Special-status animal species are discussed below under Section 3.2.1.6.

3.2.1.6 Sensitive Resources

Sensitive Vegetation Communities/Habitats

Sensitive vegetation communities/habitat types are defined as land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the CEQA Guidelines.

Nine sensitive vegetation communities/habitat types were mapped in the survey area: southern riparian forest, mule fat scrub (including disturbed), southern willow scrub, beach, Diegan coastal sage scrub (including disturbed), baccharis scrub (including disturbed), native grassland, salt grass grassland, and non-native grassland (see Figure 3.2-2). The remaining areas in the survey area include non-native vegetation, eucalyptus woodland, disturbed habitat, and urban/developed, which are not considered sensitive.

Special Status Plant Species

Special status plant species have been afforded special status and/or recognition by the USFWS, CDFW, and/or the County, and may also be included in the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants. Their status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size. Sensitive species are those considered unusual or limited in that they are: (1) only found in the region; (2) a local representative of a species or association of species not otherwise found in the region; or (3) severely depleted within their ranges or within the region.

Two special status plant species, thread-leaved brodiaea *(Brodiaea filifolia)* and Brand's phacelia (*Phacelia stellaris*), were observed within the survey area during the general biological and focused species surveys for the proposed Program. Brand's phacelia was located within the survey area, while thread-leaved brodiaea was observed in close proximity to the survey area. Six individuals of thread-leaved brodiaea were observed in non-native grassland and native grassland located north of the former Garrison Elementary School. Locations occur near the survey area, with no observations occurring within the survey area. Six individuals of Brand's phacelia were observed in disturbed Diegan coastal sage scrub south of the San Luis Rey River within the survey area. Except for the two sensitive plant species observed within the survey area, all other special status plant species evaluated either are not expected to occur or have a low potential to occur within the survey area.

Special Status Animal Species

Special status animal species include those that have been afforded special status and/or recognition by the USFWS and/or CDFW. In general, the principal reason an individual taxon (species or subspecies) is given such recognition is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution, resulting in most cases from habitat loss.

Eleven special status animal species were observed in and/or within 500 feet of the study area during the biological surveys, as detailed in Section 3.6.3 of the BTR. Individuals of the following six species were observed in the survey area:

- Least Bell's vireo: Federally and state listed endangered. Covered species under the MHCP. Proposed Covered Species under the Draft SAP.
    - This species was observed in multiple locations in the survey area and within 500 feet of the survey area during focused surveys in 2021 and incidental observations during the general biological survey in 2022. This species was observed throughout the San Luis Rey River and adjacent riparian habitat.
- Coastal California gnatcatcher: Federally listed threatened. State Species of Special Concern. Covered Species under the MHCP. Proposed Covered Species under the Draft SAP.
    - Two pairs of CAGN were detected in the central portion of the survey area during the 2021 protocol survey. One pair and two individual CAGN were detected during the 2023 protocol survey within the same area where CAGN were observed in 2021.
- Costa's hummingbird (*Calypte costae*): USFWS Bird of Conservation Concern with respect to nesting individuals.
    - This species was observed in the survey area during 2021 surveys.
- Light-footed Ridgway's rail: Federally and state-listed endangered. CDFW Fully Protected. Covered Species under the MHCP, Proposed Covered Species under the Draft SAP.
    - One single "kekking" male LFRR was detected within 500 feet of the survey area during focused surveys in 2021. This single male was recorded on two visits in the San Luis Rey River, just south of Whelan Lake.
- California horned lark (*Eremophila alpestris actis*): CDFW Watch List species.
    - This species was observed in the survey area during the 2021 surveys.
- Yellow-breasted chat (*Icteria virens*): CDFW State Species of Special Concern. Covered species under the MHCP. Proposed Covered Species under the Draft SAP.
    - This species was observed within 500 feet of the survey area during the 2021 and 2022 surveys.

Individuals of the following five species were observed within 500 feet of the survey area during 2021 and/or 2022 surveys:

- Cooper's hawk (*Accipiter cooperii*): CDFW Watch List species. Covered species under the MHCP. Proposed Covered Species under the Draft SAP.
- Vaux's swift (*Chaetura vauxi*): CDFW Species of Special Concern with respect to nesting individuals.
- Northern harrier (*Circus hudsonius*): CDFW Species of Special Concern.
- White-tailed kite (*Elanus leucurus*): CDFW Fully Protected.
- Yellow warbler (*Setophaga petechia*): USFWS Bird of Conservation Concern and CDFW species of special concern

Special status animal species that were not observed or otherwise detected, but determined to have some potential to occur on site, are included in Appendix C (HELIX 2026). Eight animal species not detected during biological surveys in 2020, 2021, 2022, and 2023 were determined to have high or moderate potential to occur in the survey area: Monarch butterfly (*Danaus plexippus;* USFWS Species of Special Concern), southern California legless lizard (*Anniella stebbinsi*; Species of Special Concern), California glossy snake (*Arizona elegans occidentalis*; Species of Special Concern), orange-throated whiptail (*Aspidoscelis hyperythra*; Watch List), south coast garter snake (*Thamnophis sirtalis*; Species of Special Concern), pallid bat (*Antrozous pallidus;* Species of Special Concern), Stephens kangaroo rat (*Dipodomys stephensi*; federally listed endangered and state listed threatened), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*; Species of Special Concern). Although no signs of Stephens' kangaroo rat were observed during the site assessment conducted in 2021 within the portion of the Program survey area identified as a Stephens' kangaroo rat survey area in the MHCP (near Whelan Lake; see Figure 3.2-4, *Stephens' Kangaroo Rat Survey Area*), suitable soils for occupancy are present.

Nesting Birds

Habitats within and adjacent to the study area could provide suitable nesting habitat for numerous bird species, including raptors, known to the region.

3.2.1.7 Jurisdictional Waters and Wetlands

In the context of this analysis, jurisdictional waters and wetlands include waters of the U.S., including wetlands regulated by the USACE pursuant to the Clean Water Act (CWA), Section 404; waters of the State regulated by the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act; and/or streambed and riparian habitat regulated by the CDFW pursuant to Sections 1600 *et seq*. of the California Fish and Game Code (CFG Code).

Results of the delineation concluded potentially jurisdictional resources occur in the survey area, consisting of waters of the U.S./State (including wetlands), riparian vegetation, and streambed (see Figure 3.2-5a through 3.2-5h, *Potentially Jurisdictional USACE and RWQCB Wetlands and Waters;* and Figure 3.2-6a through 3.2-6h, *Potentially Jurisdictional CDFW Wetlands and Waters*). In the survey area,

these resources are represented by wetlands located primarily along the San Luis Rey River, as well as unvegetated and concrete-lined channels scattered throughout the survey area north of Oceanside Boulevard. The delineation methodologies for each type of jurisdictional water and wetlands are summarized below and discussed in further detail in Section 3.7, Jurisdictional Aquatic Resources, of the Biological Technical Report (HELIX 2026; Appendix C).

Wetland Waters of the U.S./State

Potential wetland waters of the U.S. identified within the survey area consist of southern riparian forest, southern willow scrub, mule fat scrub, and freshwater marsh. These features were found to support a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. Wetland waters of the U.S. features also represent waters of the State subject to RWQCB jurisdiction pursuant to Section 401 of the CWA. A majority of these areas occur in the northern portion of the survey area associated with the San Luis Rey River.

Non-Wetland Waters of the U.S./State

Potential non-wetland waters of the U.S. that could be subject to regulation by USACE include the various concrete-lined brow ditches or drainages north of Oceanside Boulevard. These features were not dominated by hydrophytic vegetation and did not contain hydric soils; however, evident characteristics of flow (i.e., bed and bank, upstream and downstream culverts) were observed. Except for the beach, the waters of the U.S. also represent waters of the State subject to RWQCB jurisdiction pursuant to Section 401 of the CWA. In addition, drainages within the survey area (that were not concrete-lined) were potential non-wetland waters of the State.

Exclusive Waters of the State

No features were considered potentially jurisdictional as isolated surface waters of the State subject to RWQCB jurisdiction, exclusively, pursuant to the Porter-Cologne Water Quality Control Act.

Streambed and Riparian Habitat

Potential riparian and streambed habitat under the jurisdiction of CDFW within the survey area consists of southern riparian forest, southern willow scrub, mule fat scrub, and various unvegetated and concrete-lined channels north of Oceanside Boulevard. These features could be subject to the jurisdiction of CDFW pursuant to Sections 1600-1603 of the CFG Code.

3.2.1.8 Wildlife Corridor/Core Wildlife Areas

Wildlife corridors connect otherwise isolated pieces of habitat and allow movement or dispersal of plants and animals. Wildlife corridors can be local or regional in scale and may function in different ways depending on species and time of year. Wildlife corridors represent areas where wildlife movement is concentrated due to natural or manufactured constraints. Local corridors provide access to resources such as food, water, and shelter. Animals can use these corridors, such as hillsides and tributary drainages to main drainages, to travel among different habitats (i.e., riparian, and upland habitats). Some animals require riparian habitat for breeding and upland habitat for burrowing. Regional corridors provide these functions and also link two or more large areas of open space. Regional corridors also provide avenues for wildlife dispersal, migration, and contact between otherwise distinct populations. A corridor is a specific route that is used for the movement and migration of species and may be different

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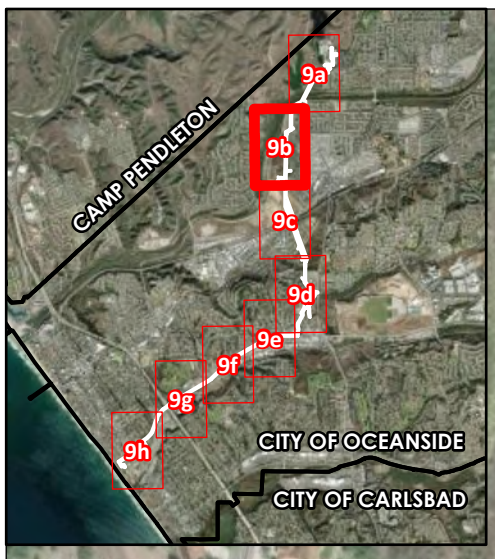
Source: Aerial (Maxar, 2023)

HELIX Environmental Planning

Potentially Jurisdictional USACE and RWQCB Wetlands and Waters

Figure 3.2-5a



Survey Area
Proposed Alignment
Potential Staging or Access Area
Southern Riparian Forest

RWQCB Only Jurisdiction

Unvegetated Channel
Concrete-lined Channel

Other Features (Non-Jurisdictional)

Culvert
Concrete-lined Channel
Man-made Swale

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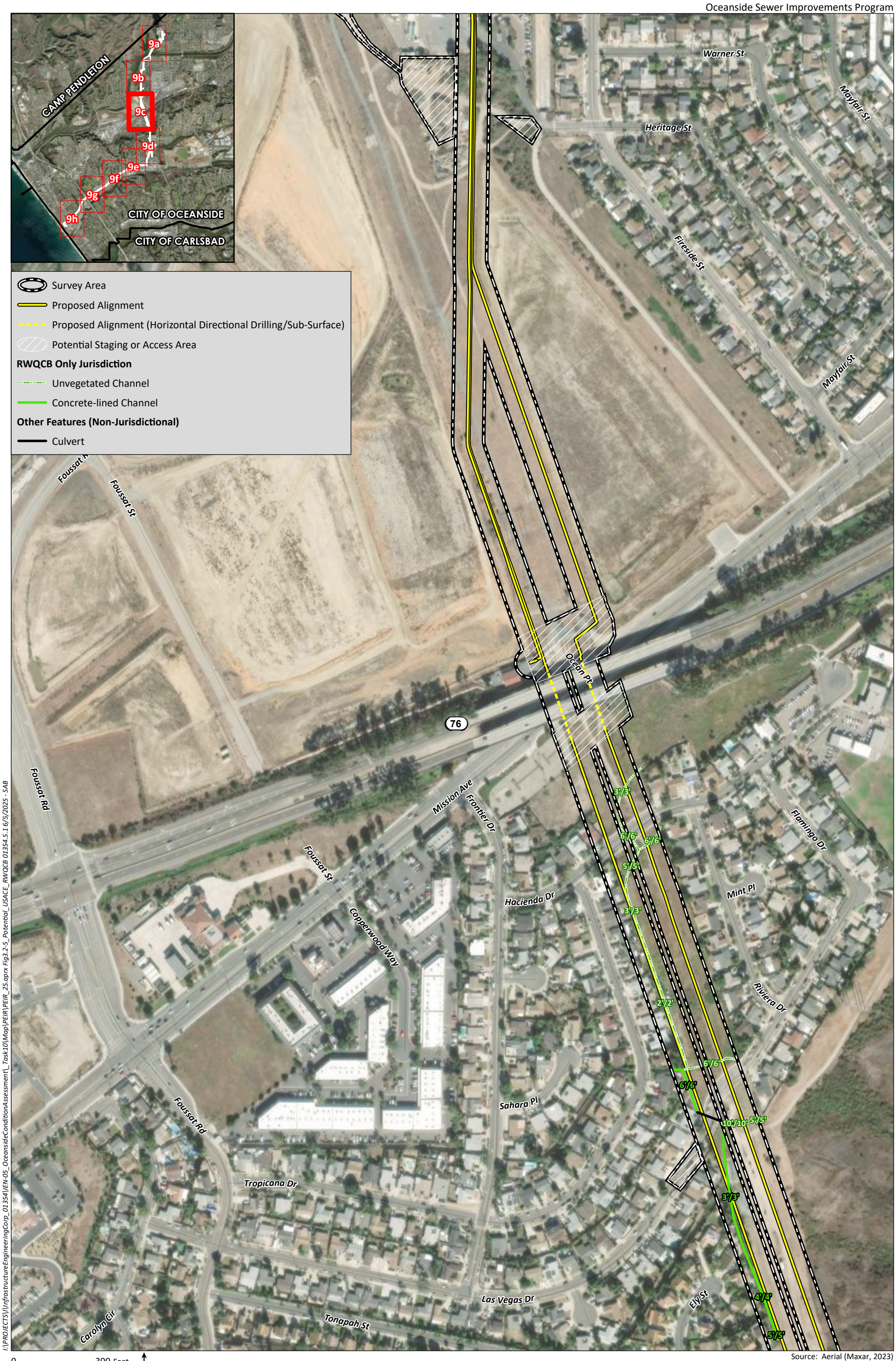
Source: Aerial (Maxar, 2023)

HELIX Environmental Planning

Potentially Jurisdictional USACE and RWQCB Wetlands and Waters

Figure 3.2-5b



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Source: Aerial (Maxar, 2023)

HELIX Environmental Planning

Potentially Jurisdictional USACE and RWQCB Wetlands and Waters

Figure 3.2-5c

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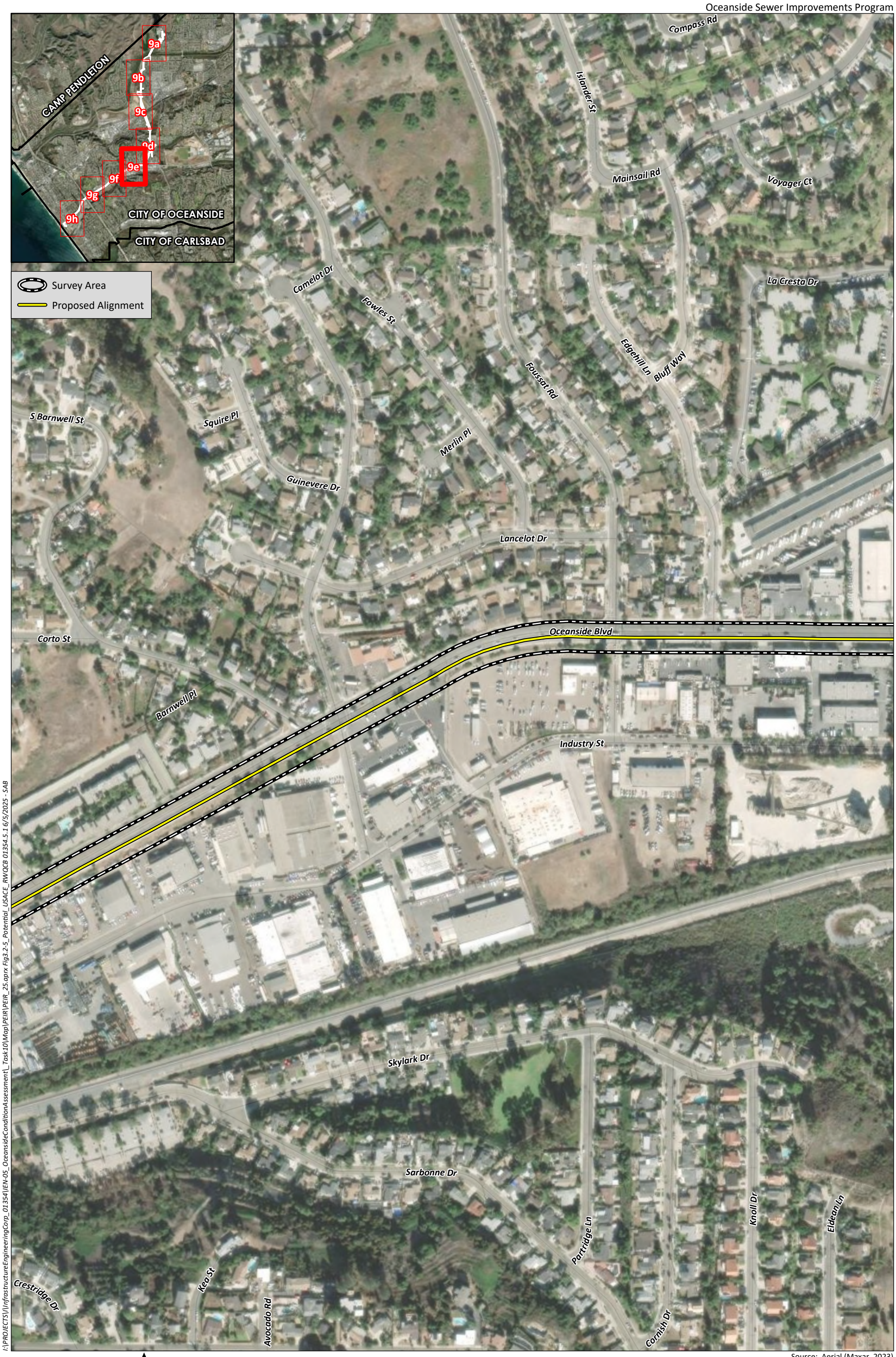
Source: Aerial (Maxar, 2023)

HELIX Environmental Planning

Potentially Jurisdictional USACE and RWQCB Wetlands and Waters

Figure 3.2-5d



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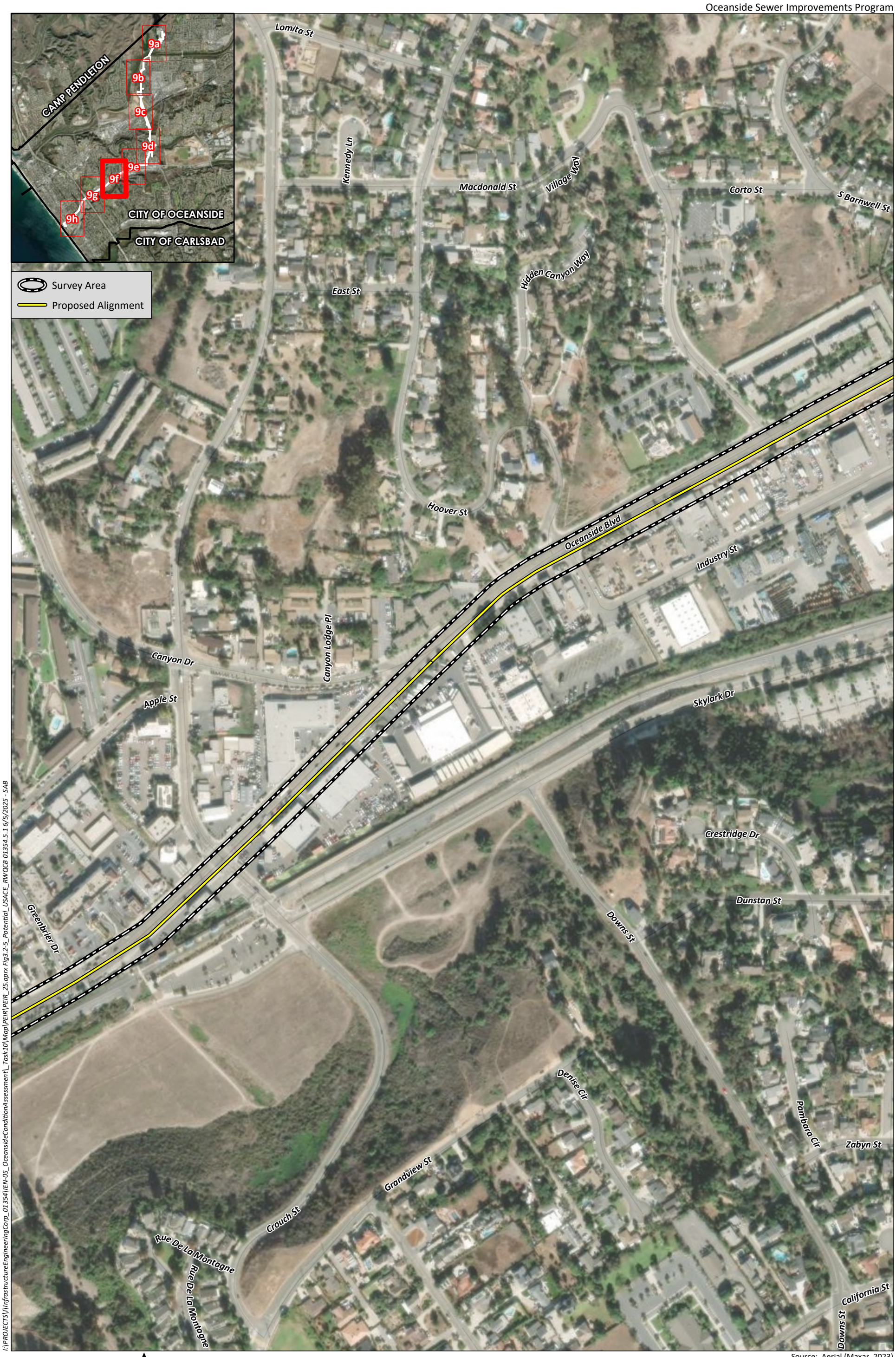
Source: Aerial (Maxar, 2023)

HELIX
Environmental Planning

Potentially Jurisdictional USACE and RWQCB Wetlands and Waters

Figure 3.2-5e



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Source: Aerial (Maxar, 2023)

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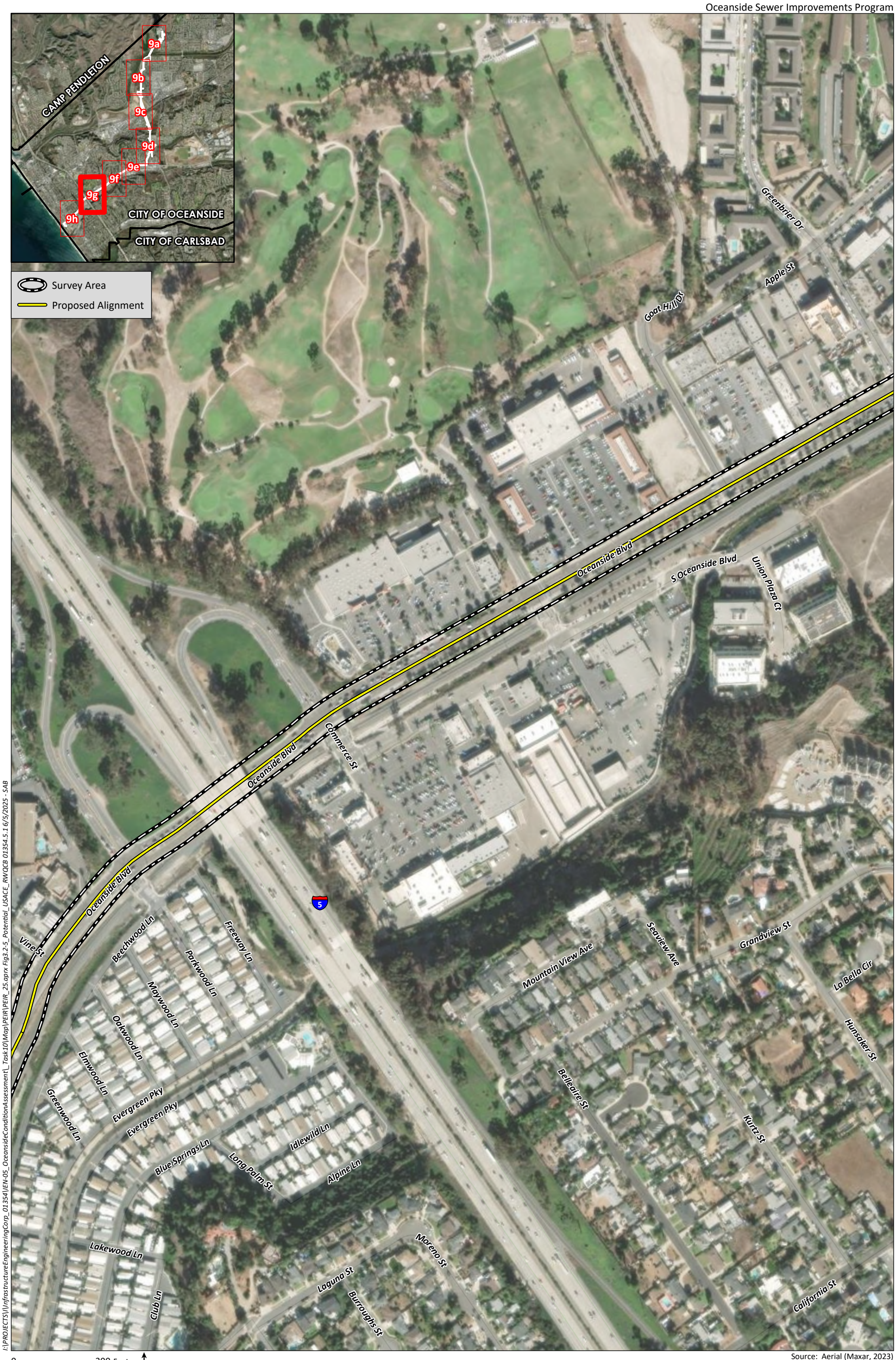
Potentially Jurisdictional USACE and RWQCB Wetlands and Waters

Figure 3.2-5f



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Source: Aerial (Maxar, 2023)

HELIX Environmental Planning

Potentially Jurisdictional USACE and RWQCB Wetlands and Waters

Figure 3.2-5g

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Source: Aerial (Maxar, 2023)

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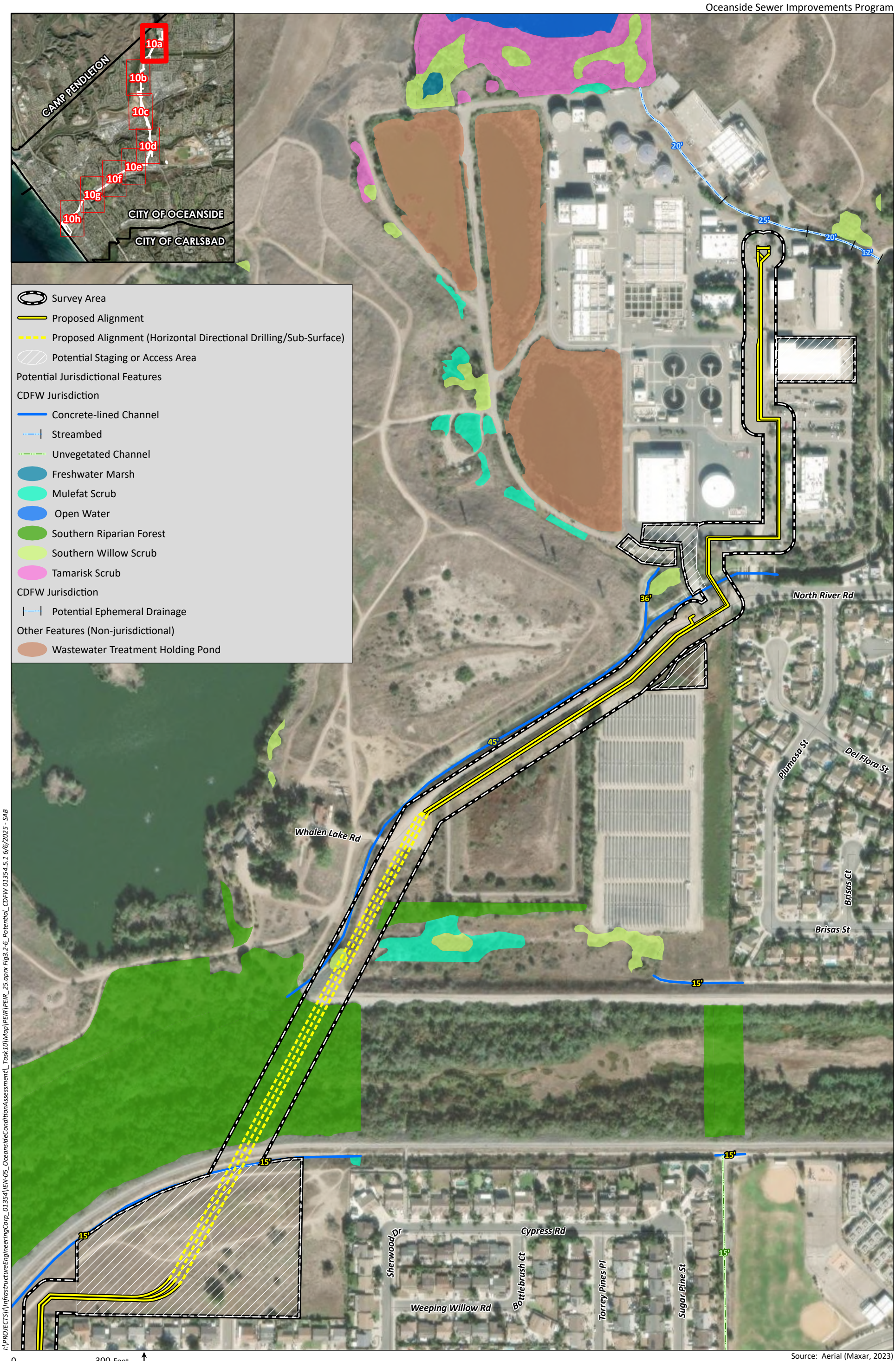
Potentially Jurisdictional USACE and RWQCB Wetlands and Waters

Figure 3.2-5h



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Source: Aerial (Maxar, 2023)

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Potentially Jurisdictional CDFW Wetlands and Waters

Figure 3.2-6a

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Source: Aerial (Maxar, 2023)

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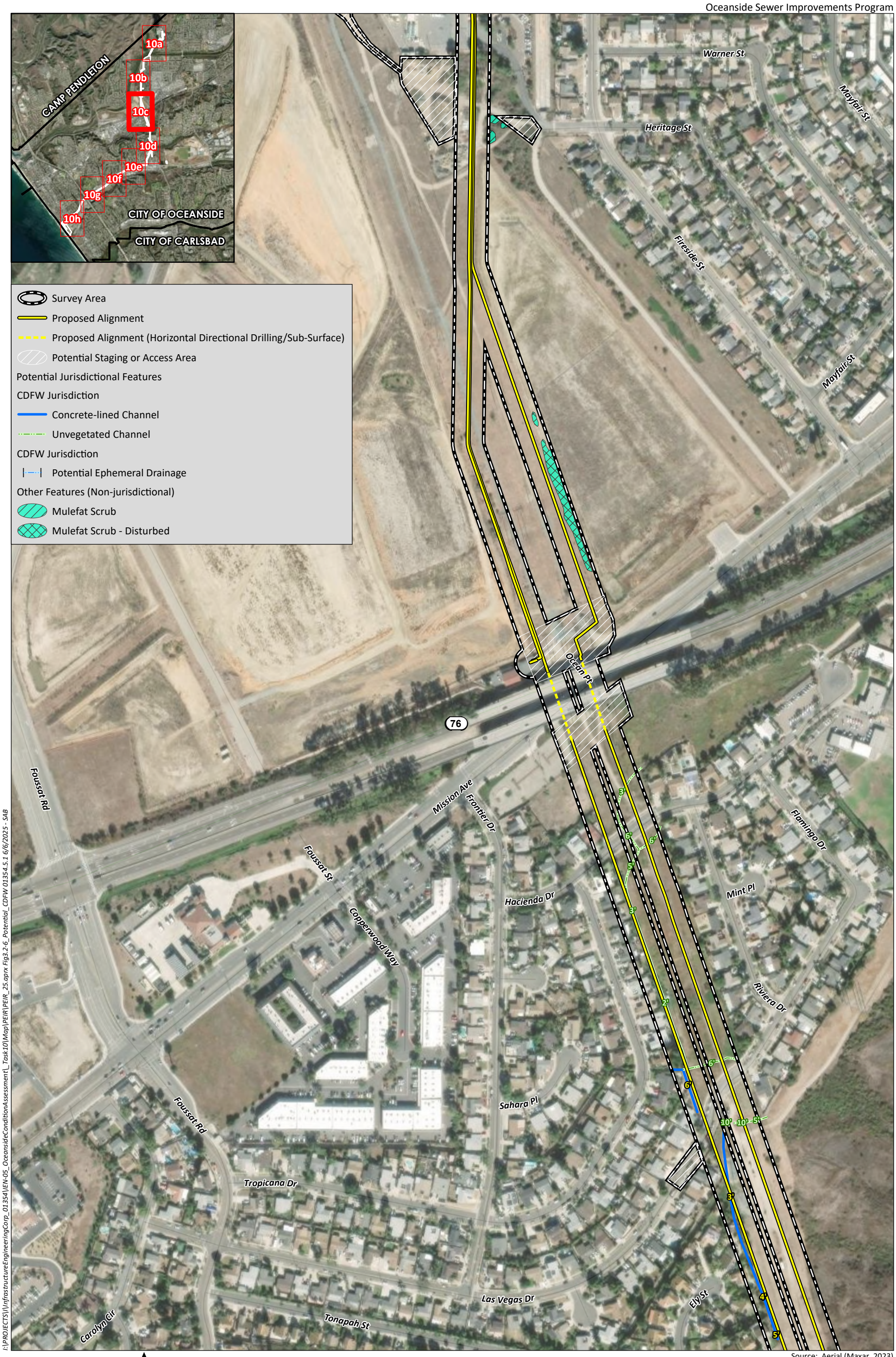
Potentially Jurisdictional CDFW Wetlands and Waters

Figure 3.2-6b



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Source: Aerial (Maxar, 2023)

HELIX Environmental Planning

Potentially Jurisdictional CDFW Wetlands and Waters

Figure 3.2-6c

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Potentially Jurisdictional CDFW Wetlands and Waters

Figure 3.2-6d

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Source: Aerial (Maxar, 2023)

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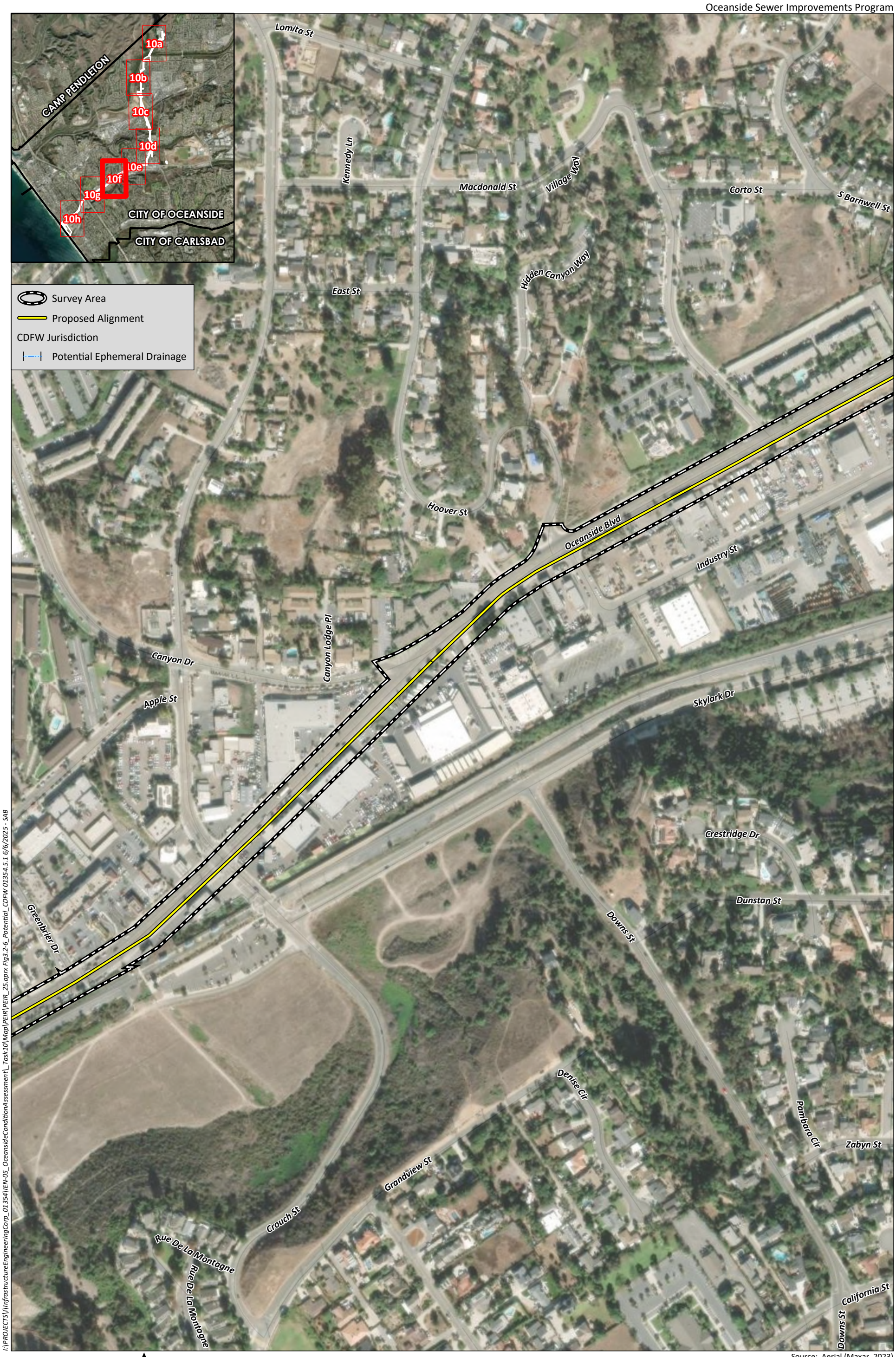
Potentially Jurisdictional CDFW Wetlands and Waters

Figure 3.2-6e



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Source: Aerial (Maxar, 2023)

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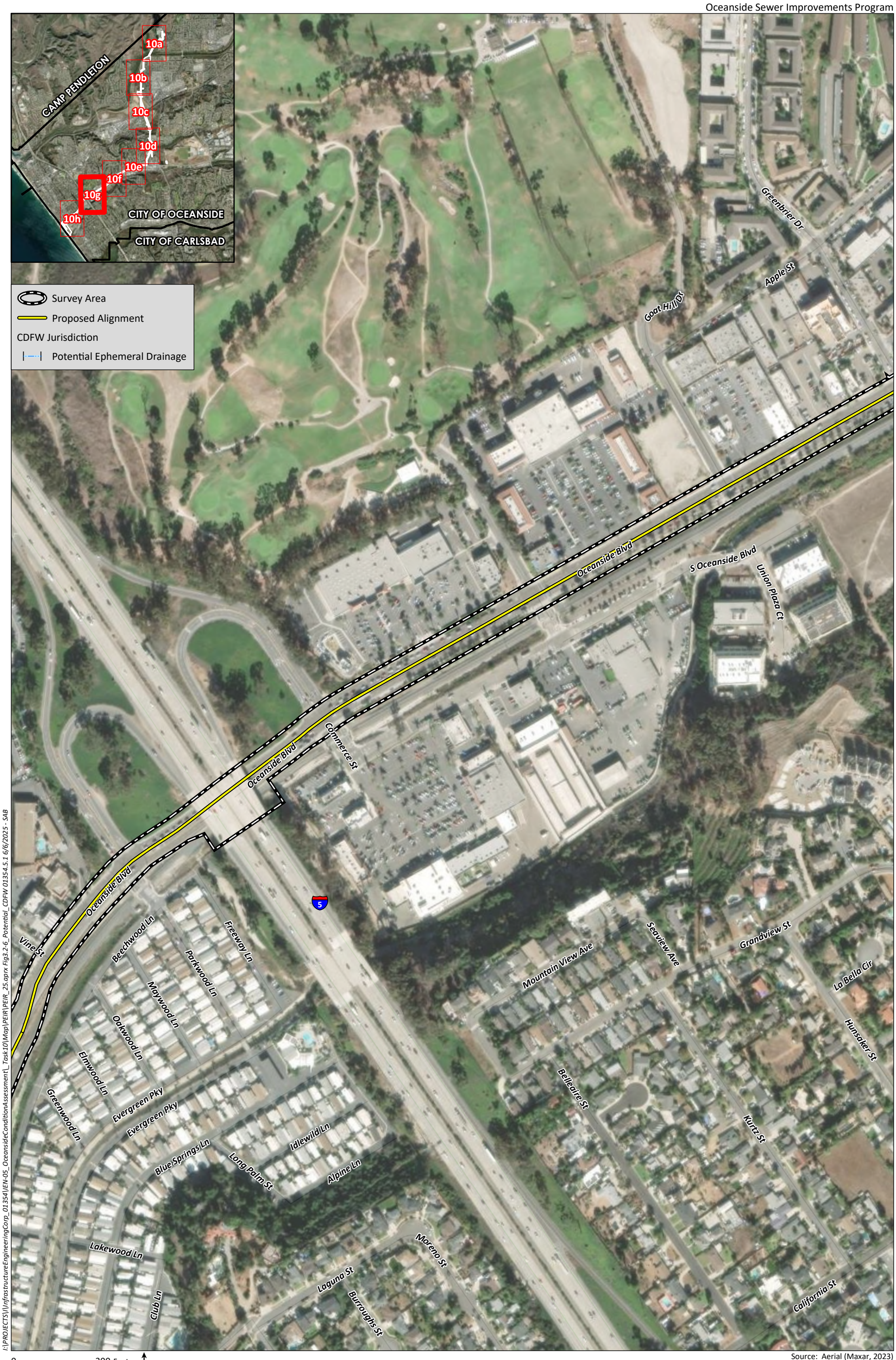
Potentially Jurisdictional CDFW Wetlands and Waters

Figure 3.2-6f



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Source: Aerial (Maxar, 2023)

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Potentially Jurisdictional CDFW Wetlands and Waters

Figure 3.2-6g

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HELIX
Environmental Planning

Potentially Jurisdictional CDFW Wetlands and Waters

Figure 3.2-6h

from a linkage in that it represents a smaller or narrower avenue for movement. A linkage is an area of land that supports or contributes to the long-term movement of animals and genetic exchange by providing a live-in habitat that connects to other habitat areas. Many linkages occur as stepping-stone linkages that are made up of a fragmented archipelago arrangement of habitat over a linear distance.

Important corridors and linkages have been identified on a local and regional scale throughout the Draft North County MHCP (AMEC Earth & Environmental et al. 2003) and Draft SAP. The planning objectives of most corridors and linkages in western San Diego County include establishing a connection between the northern and southern regional populations of the coastal California gnatcatcher, in addition to facilitating movement and connectivity of habitat for large mammals and riparian bird species.

A portion of the northeastern survey area is designated in the Draft SAP as a Wildlife Corridor Planning Zone (see Figure 3.2-7, *Preserves*). A portion of the survey area also runs through a designated coastal California gnatcatcher corridor. Additionally, multiple MHCP hardline and softline preserve areas (Focused Planning Areas [FPAs]) are located within the survey area, and the survey area is contiguous with undeveloped land.

The survey area is a mix of infrastructure facilities and pipelines. Most of the anticipated impacts are for pipelines, which would be constructed underground. While there could be temporary impacts to wildlife use of corridors during construction, long-term impacts of the pipelines to wildlife corridors are not expected. Maintenance of the proposed sewer improvements is not expected to be intensive or potentially disruptive to wildlife use of the area. Since facilities are permanent, aboveground structures, they could impact wildlife movement depending on their location. One facility (a lift station) is proposed to occur on the permanently closed Garrison Elementary School property. Where the proposed facility overlaps the former development, it is not expected to change wildlife's ability to use corridors.

3.2.2 Regulatory Framework

3.2.2.1 Federal

Federal Endangered Species Act

Administered by the USFWS, the Federal Endangered Species Act (FESA) provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered take under the FESA. Section 9(a) of the FESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

If a program or project could directly or indirectly impact federally listed species and/or their critical habitat, and there is no federal action/nexus (e.g., permit, funding, ownership, etc.), the FESA requires the proponent (City) to consult with the USFWS under Section 10. A consultation under Section 10 of the ESA requires the submittal of an Incidental Take Permit (ITP) application and a Habitat Conservation Plan to USFWS for evaluation of proposed impacts. If the USFWS determines the program or project would have a "low effect" on listed, proposed, or candidate species and their habitats, and the program or project would have minor effects on other environmental resources, the USFWS would complete the consultation process and issue an ITP. If the program is determined by the USFWS to have a "moderate or high effect" on listed, proposed, or candidate species and their habitats, the USFWS would require

preparation of National Environmental Policy Act (NEPA) analysis before the issuance of an ITP. The NEPA analysis would include additional evaluation of the program's impacts in the form of an Environmental Assessment or an Environmental Impact Statement. A Section 10 Consultation could be required if impacts to a federally listed species would occur.

Sections 7 and 4(d) of the federal FESA regulate actions that could jeopardize endangered or threatened species. Section 7, administered by the USFWS, describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. A Section 7 Consultation (formal or informal) is required when there is a nexus between a listed species' use of a site and if a program or project is funded (wholly or in part) by the State Revolving Fund. A biological assessment is required for any major construction activity if it may affect listed species. Take can be authorized via a letter of Biological Opinion, issued by the USFWS, for non-marine related listed species issues. As the Program would be funded in part by the State Resolving Fund, a Section 7 Consultation would be required if impacts to a federally listed species would occur.

Identified by the USFWS, critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitat, so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the FESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat.

Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is used to place restrictions on the disturbance of active bird nests during the nesting season (generally January 15 to August 31, including raptors). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

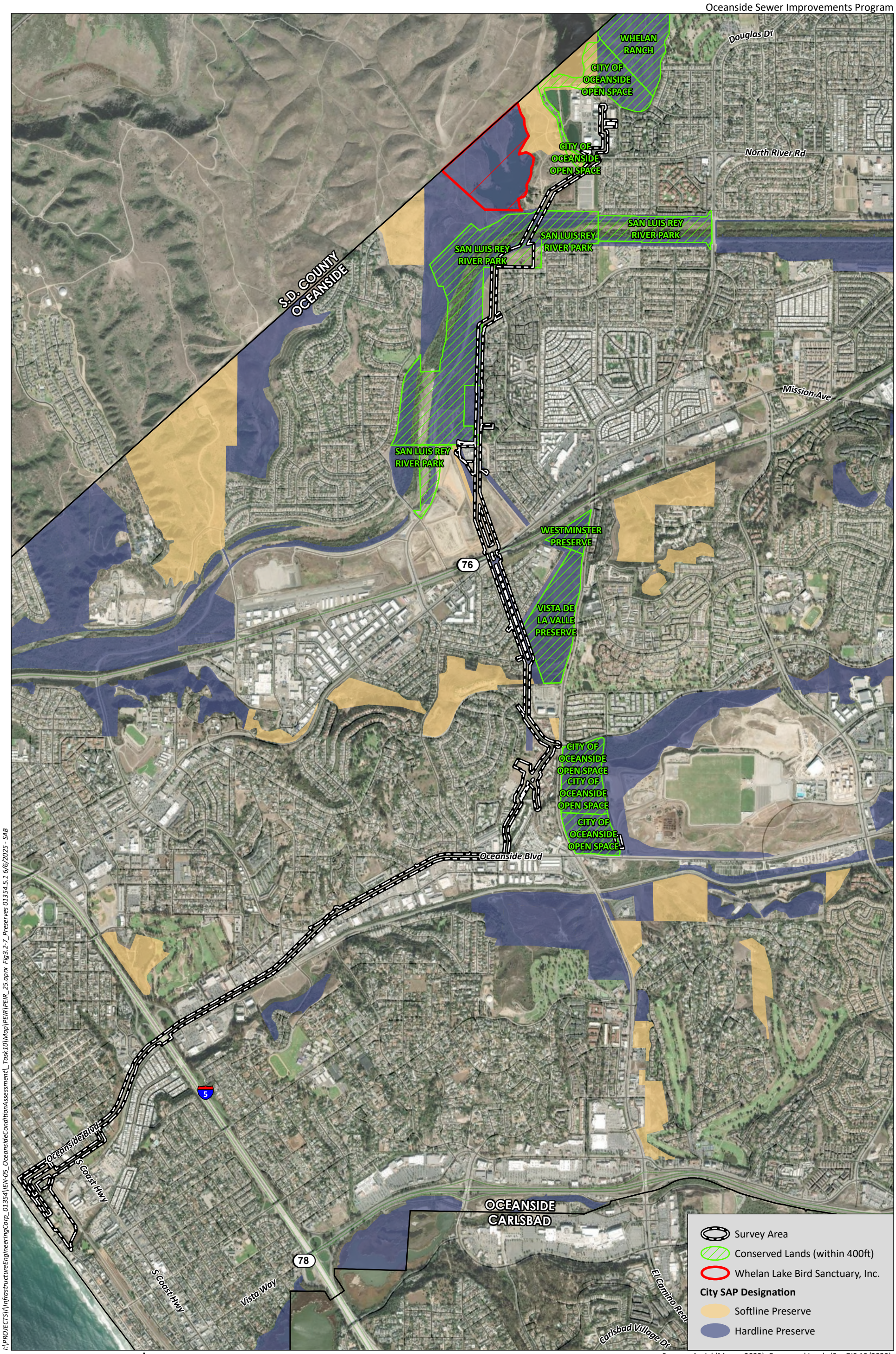
Clean Water Act and Rivers and Harbors Act

Federal wetland regulation (non-marine issues) is guided by the Rivers and Harbors Act of 1899 and the CWA. The Rivers and Harbors Act deals primarily with discharges into navigable waters, while the purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting for projects filling waters of the U.S. is overseen by the USACE under Section 404 of the CWA. Most development projects are permitted using Individual Permit or Nationwide Permit instruments.

3.2.2.2 State

California Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (*CEQA Guidelines*), which require that projects with potential adverse effects (i.e., impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.



Source: Aerial (Maxar, 2023), Conserved Lands (SanGIS 12/2022).

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HELIX Environmental Planning

Preserves

Figure 3.2-7

California Endangered Species Act

The California Endangered Species Act (CESA) established that it is state policy to conserve, protect, restore, and enhance state endangered species and their habitats. Under state law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission. The CESA authorizes that private entities may "take" plant or wildlife species listed as endangered or threatened under the FESA and CESA, pursuant to a federal ITP if the CDFW certifies that the incidental take is consistent with CESA (CFG Code Section 2080.1[a]). For state-only listed species, Section 2081 of the CFG Code authorizes the CDFW to issue an ITP for state listed threatened and endangered species if specific criteria are met. The Multiple Species Conservation Plan is a regional Natural Communities Conservation Plan that was granted take coverage under Section 2081 of the CESA.

California Coastal Act

The California Coastal Act of 1976 is designed to encourage local governments to create Local Coastal Programs to govern decisions that determine the short- and long-term conservation and use of coastal resources. This act stipulates that the California Coastal Commission regulates the development of coastal wetlands. Sections 30230, 30231, 30233, 30236, and 30240 of the Coastal Act are directly applicable to the preservation and protection of wetlands and other environmentally sensitive areas. Section 30121 of the California Coastal Act provides the definition of wetlands within the coastal zone.

California Fish and Game Code

The CFG Code provides specific protection and listing for several types of biological resources. Section 1600 of the CFG Code requires a Streambed Alteration Agreement (SAA) for any activity that would alter the flow, change, or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, and/or lake. Typical activities that require an SAA include excavation or fill placed within a channel, vegetation clearing, structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. Notification is required before any such activities.

If the program could result in adverse impacts to a state listed species that is not also federally listed, Section 2081(b) of the California Fish and Game Code provides a mechanism for CDFW to permit, on a program-specific basis, incidental take of species listed under CESA. The preparation and submission of an ITP application with CDFW by the program proponent is required. The application must include program details, potential program impacts, an analysis of "jeopardy" for the continued existence of the impacted species, and species-specific mitigation and avoidance measures that would fully mitigate for the program impacts.

Pursuant to CFG Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by CFG Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or

eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFW and/or USFWS.

Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) program is a cooperative effort to protect habitats and species. It began under the state's NCCP Act of 1991, legislation broader in its orientation and objectives than the CESA or FESA. These laws are designed to identify and protect individual species that have already declined significantly in number. The primary objective of the NCCP program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by a species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

The primary objective of the NCCP program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by a species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

This voluntary program allows the state to enter into planning agreements with landowners, local governments, and other stakeholders to prepare plans that identify the most important areas for a threatened or endangered species and the areas that may be less important. These NCCP plans may become the basis for a state permit to take threatened and endangered species in exchange for conserving their habitat. The CDFW and USFWS worked to combine the NCCP program with the federal Habitat Conservation Program process to provide take permits for state and federal listed species. Under the NCCP, local governments, such as the County, can take the lead in developing these NCCP plans and become the recipients of state and federal take permits.

Multiple Species Habitat Conservation Plan

The MHCP Plan spans across northwestern San Diego County and has the goal of providing protection for over 80 special status species and approximately 19,000 acres of proposed conservation land (AMEC Earth & Environmental et al. 2003). The City of Oceanside and six additional city jurisdictions (Carlsbad, Encinitas, Escondido, San Marcos, Solana Beach, and Vista) make up the MHCP Plan area. It is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve. The MHCP is one of several large multiple jurisdictional habitat planning efforts in San Diego County, each of which constitutes a subregional plan under the NCCP Act of 1991. The MHCP includes incorporated cities in northwestern San Diego County that will implement their respective portions of the MHCP through citywide “subarea” plans, which describe the specific implementing mechanisms each city will institute for the MHCP.

The survey area is located within the Oceanside Subarea, which has a Draft Subarea Plan, but was never approved or adopted and remains in draft form. Although not adopted, the Draft SAP identifies potential preserve areas as Pre-approved Mitigation Areas (PAMA), “softline” preserve, “hardline” preserve, and conservation banks, collectively referred to as FPAs. In general, hardline preserves and conservation banks are areas that are already preserved to Draft Subarea Plan standards. Softline preserves and PAMA identify areas specifically targeted for future preservation. In the context of the

Draft SAP, the survey area runs through multiple hardline and softline preserve areas. Because the City of Oceanside has not approved or adopted its Draft SAP; the proposed Program is not subject to the requirements of the MHCP, although it is recognized herein as a guide for survey area planning considerations.

Local Coastal Program

The California Coastal Act requires that coastal jurisdictions prepare Local Coastal Programs (LCPs) that establish policies and regulations for land use within each locality's state-prescribed coastal zone. The City of Oceanside's LCP was adopted in 1986, and is currently being updated.

3.2.3 Thresholds of Significance

The significance of impacts to biological resources present or those with potential to occur was determined based upon the sensitivity of the resource and the extent of the anticipated impacts. For certain highly sensitive resources (e.g., a federally and state listed species), any impact would be significant. Conversely, other resources that are of low sensitivity (e.g., species with a large, locally stable population in the County but declining elsewhere) could sustain some impact with a less-than-significant effect.

The following criteria from Appendix G of the CEQA Guidelines are used as thresholds of significance to determine the impacts of the Program as related to biological resources. The Program would have a significant impact if it would:

1. Result in a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

2. Result in a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service;

3. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

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;

5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

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.

3.2.4 Program Impacts and Mitigation

3.2.4.1 Issue 1: Special Status Species

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 the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Impact Analysis

As discussed in Section 3.2.1, several special-status plant and animal species have been observed or have moderate to high potential to occur within the Program area. Special-status plant and animal species could be directly impacted by grading and construction activities associated with the proposed Program. Direct impacts could also occur during construction if activities inadvertently encroach into areas outside the authorized limits of work. Indirect impacts to sensitive species could also occur, both during construction and post-construction, and/or during the operation of projects implemented under the proposed Program. Common indirect impacts that affect special-status species during construction include noise, fugitive dust, erosion, sedimentation, increased human presence, artificial lighting, and spread of non-native plant species. Typical long-term indirect impacts to special-status species post-construction during operation, include the spread of non-native ornamental plant species, use of pesticides/herbicides/fertilizers, artificial lighting, or encroachments into habitat by landscape maintenance and/or trampling from increased human presence. Evaluation of potential direct and indirect impacts to special-status species is discussed below, followed by the referenced avoidance, minimization, and conservation measures that would address potential impacts.

Special-Status Plant Species

Two special-status plant species were observed in the survey area: thread-leaved brodiaea and Brand's phacelia. No other special-status plant species were observed or are expected to occur within the survey area.

Thread-leaved Brodiaea

Thread-leaved brodiaea was observed in native grassland and non-native grassland areas located north of the former Garrison Elementary School in USFWS critical habitat for this species. Thread-leaved brodiaea is federally listed as threatened and state listed as endangered. This species is also a covered species under the MHCP and proposed as a covered species under the Draft SAP.

If thread-leaved brodiaea occurs within the development footprint associated with any of the sewer improvement projects associated with the programmatic effort, then such direct impacts would be considered significant without mitigation and would require additional avoidance, minimization, and conservation measures prescribed by mitigation measure **BIO-1a** to ensure impacts to this species would be reduced to less than significant levels. Further, direct impacts to this listed species would require authorization and consultation with USFWS through the ESA Section 7 or Section 10 processes, as applicable, as well as with CDFW in accordance with the CESA Section 2081 or 2080.1 processes (**BIO-2**). Construction activities could also impact this species if appropriate avoidance and minimization measures are not implemented, including the installation of temporary construction and/or silt fencing at the limits of work (**BIO-5**), biological construction monitoring where work limits occur adjacent to

known sensitive resources (**BIO-6**), and implementation of construction Best Management Practices (BMPs) (**BIO-7**).

Brand's Phacelia

Brand's phacelia was observed in a patch of disturbed Diegan coastal sage scrub located approximately 1,000 feet south of Whelan Lake. If this species is present within any of the individual project development footprints, direct impacts to Brand's phacelia, although non-listed, would be considered significant because it is a CNPS California Rare Plant Rank (CRPR) 1B.1 species, which carries a higher rank of sensitivity than other CRPRs as these species are rare, are generally considered endemic to California, and their populations and range have been in decline. If the proposed Program results in unavoidable direct impacts to this species, then additional avoidance and minimization measures prescribed by mitigation measure **BIO-1a** would be required to ensure impacts to this species would be reduced to less than a significant level.

Potential indirect impacts to this species could occur if appropriate avoidance and minimization measures are not implemented during construction, including the installation of temporary construction and/or silt fencing at the limits of work (**BIO-5**), biological construction monitoring where work limits occur adjacent to known sensitive resources (**BIO-6**), and implementation of construction BMPs (**BIO-7**).

Special Status Animal Species

Light-footed Ridgway's Rail

Light-footed Ridgway's rail (*Rallus obsoletus levipes*) is a federally and state listed endangered species. This species is also CDFW Fully Protected, a covered species under the MHCP, and proposed as a covered species under the Draft SAP. An individual was observed within 500 feet of the of the survey area; thus, for purposes of this analysis, this species could occur in the survey area. Direct impacts would occur if this species were present within the development footprint associated with the proposed Program. Therefore, such direct impacts would require avoidance, minimization, and conservation measures prescribed by mitigation measures **BIO-1b** and **BIO-1c** to ensure impacts to this species would be avoided and/or reduced to less than significant levels.

Impacts to this listed species would also require authorization and consultation with USFWS through the FESA Section 7 or Section 10 processes, as applicable, as well as with CDFW in accordance with the CESA Section 2081 or 2080.1 processes (**BIO-2**). Direct impacts/loss of occupied habitat for this species would be mitigated in accordance with **BIO-8a** and **BIO-8b** (see discussion of *Issue 2: Riparian Habitat and Sensitive Natural Communities*, below).

Indirect impacts associated with excessive noises during the breeding season (February 15 to September 30) would be mitigated by the implementation of **BIO-3**. Besides noise, other construction activities during the breeding season could also impact this species if appropriate avoidance and minimization measures are not implemented, such as: the installation of temporary construction and/or silt fencing at the limits of work (**BIO-5**), biological construction monitoring where work limits occur adjacent to known sensitive resources (**BIO-6**), and implementation of construction BMPs (**BIO-7**).

Least Bell's Vireo

Least Bell's vireo is a federally and state listed endangered species. This species was observed in the survey area during the biological surveys. If least Bell's vireo (including suitable habitat) occurs within the development footprint associated with proposed Program, then such direct impacts would be considered significant and would require avoidance, minimization, and conservation measures prescribed by mitigation measures **BIO-1b** and **BIO-1c** to ensure impacts to this species would be reduced to less than significant levels.

Further, direct impacts to this listed species would require authorization and consultation with USFWS through the FESA Section 7 or Section 10 processes, as applicable, as well as with CDFW in accordance with the CESA Section 2081 or 2080.1 processes (**BIO-2**). Direct impacts/loss of occupied habitat for this species would be mitigated by the implementation of **BIO-8a** and **BIO-8b** (see discussion of *Issue 2: Riparian Habitat and Sensitive Natural Communities*, below).

Indirect impacts associated with noise exceedances during the breeding season (March 15 to September 15) would be mitigated by the implementation of **BIO-3**. Besides noise, other construction activities during the breeding season could also impact this species if appropriate avoidance and minimization measures are not implemented, including the installation of temporary construction and/or silt fencing at the limits of work (**BIO-5**), biological construction monitoring where work limits occur adjacent to known sensitive resources (**BIO-6**), and implementation of construction BMPs (**BIO-7**).

Coastal California Gnatcatcher

The coastal California gnatcatcher is federally listed as threatened and is a CDFW species of special concern. This species was observed within the survey area. A corridor for this species is identified in the survey area within the Draft SAP. USFWS designated critical habitat for this species also overlaps within the survey area. If coastal California gnatcatcher (including suitable habitat) occurs within the development footprint associated with the proposed Program, then such direct impacts would be considered significant without mitigation and would require additional avoidance, minimization, and conservation measures prescribed by mitigation measures **BIO-1b** and **BIO-1c** to ensure impacts to this species would be reduced to less than significant levels. Further, direct impacts to this listed species would require authorization and consultation with USFWS through the FESA Section 7 or Section 10 processes, as applicable, as well as with CDFW in accordance with the CESA Section 2081 or 2080.1 processes (**BIO-2**).

Direct impacts/loss of occupied habitat for this species would be mitigated by the implementation of **BIO-8a** and **BIO-8b** (see discussion of *Issue 2: Riparian Habitat and Sensitive Natural Communities*, below). Indirect impacts associated with noise exceedances during the breeding season (February 15 to August 31) would be mitigated by the implementation of **BIO-3**. Besides noise, other construction activities during the breeding season could also impact this species if appropriate avoidance and minimization measures are not implemented, including the installation of temporary construction and/or silt fencing at the limits of work (**BIO-5**), biological construction monitoring where work limits occur adjacent to known sensitive resources (**BIO-6**), and implementation of construction BMPs (**BIO-7**).

Stephens' Kangaroo Rat

A site assessment for Stephens' kangaroo rat was conducted in 2021 within a portion of the Program survey area that overlapped with the Stephens' kangaroo rat survey area identified in the MHCP (by

Whelan Lake; see Figure 3.2-3, *Stephens' Kangaroo Rat Survey Area*). Results of the survey indicated soils were suitable for Stephens' kangaroo rat occupancy but Stephens' kangaroo rat sign (i.e., scat, tracks, burrows) was not observed. The results also indicate that the vegetation cover and duff layer located over much of the suitable habitat is too dense for occupancy by this species. Despite these results, a pre-construction survey for Stephens' kangaroo rat would be needed due to the lapse of time between the 2021 survey and the start of any construction activities within the Stephens' kangaroo rat survey area (by Whelan Lake). Other portions of the Program area where suitable habitat k-rat occurs would also require pre-construction surveys due to the relatively close proximity of documented individuals per California Natural Diversity Database records. If Stephens' kangaroo rat or suitable habitat occur within the development footprint associated with the proposed Program, then construction impacts would potentially be considered significant without mitigation and would require additional avoidance, minimization, and conservation measures prescribed by mitigation measures **BIO-1c** and **BIO-1d** to ensure impacts to this species would be reduced to less than significant levels.

Construction impacts to Stephens' kangaroo rat, a federally and state listed species, would require authorization and consultation with USFWS through the FESA Section 7 or Section 10 processes, as applicable, as well as with CDFW in accordance with the CESA Section 2081 or 2080.1 processes (**BIO-2**). Impacts to occupied habitat would be mitigated in accordance with **BIO-8a** and **BIO-8b** (see discussion of Issue 2: Riparian Habitat and Sensitive Natural Communities, below). Additionally, the MHCP states that any Stephens' kangaroo rat population shall be treated consistent with the Narrow Endemic Species Policy until all criteria for full recovery (i.e., delisting) of the species have been met. Potential impacts to this species during construction would be mitigated by the implementation of mitigation measure **BIO-1d**.

Cooper's Hawk, Costa's Hummingbird, Vaux's Swift, Northern Harrier, White-tailed Kite, California Horned Lark, Yellow-breasted Chat, and Yellow Warbler

As described in Section 3.2.1, individuals of the following species were observed in and/or within 500 feet of the survey area during the biological surveys conducted for the Biological Technical Report: Cooper's hawk, Costa's hummingbird, Vaux's swift, northern harrier, white-tailed kite, California horned lark, yellow-breasted chat, and yellow warbler. Trees, shrubs, and other vegetation that provide suitable nesting habitat for these and other common birds, including raptors, protected under the MBTA and CFG Code are present within and in the immediate vicinity of the survey area and could be directly impacted. Implementation of the Program could result in the removal or trimming of trees and other vegetation during the general bird nesting season (collectively from January 15 through September 15) and, therefore, could result in impacts to nesting birds in violation of the MBTA and CFG Code. Adverse indirect effects could also occur as a result of construction noise in the immediate vicinity of undeveloped areas supporting an active bird nest, such that the disturbance results in nest abandonment or nest failure. Indirect impacts would be mitigated by the implementation of the pre-construction surveys in **BIO-4.** Implementation of avoidance and minimization measures during construction would also be mitigated by the installation of temporary construction and/or silt fencing at the limits of work (**BIO-5**), biological construction monitoring where work limits occur adjacent to known sensitive resources (**BIO-6**), and implementation of construction BMPs (**BIO-7**).

Other Special-Status Animals

Seven other special-status animal species were determined to have high or moderate potential to occur in the survey area: Monarch butterfly (*Danaus plexippus;* Species of Special Concern), California legless lizard (*Anniella stebbinsi*; Species of Special Concern), California glossy snake (*Arizona elegans*

occidentalis; Species of Special Concern), orange-throated whiptail (*Aspidoscelis hyperythra*; Watch List), south coast garter snake (*Thamnophis sirtalis*; Species of Special Concern), pallid bat (*Antrozous pallidus;* Species of Special Concern), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*; Species of Special Concern).

Although monarch butterflies have a moderate potential of occurring within the survey area, this classification only applies to migratory individuals who may utilize the survey area during migration to forage on nectar-producing flowering plants. The survey area does not contain appropriate wintering habitat, nor were larval host plants identified during biological surveys in 2020 and 2021. In instances where construction would occur in non-developed portions of the survey area, there are also adjacent non-developed areas with similar nectaring resources. Potential direct or indirect impacts to this species are unlikely, and there would be a biological monitoring presence in accordance with **BIO-6**. Thus, impacts associated with this species are considered less than significant.

Reptilian species and mammalian species (other than Stephens' kangaroo rat discussed above) with the potential to occur in the survey area are not federally/state listed, nor are they considered narrow endemic under the Draft SAP. Because potential direct impacts to these species would be limited to a few individuals, if any, and impacts would not jeopardize the species, potential direct impacts to reptilian species identified with the potential to occur within the survey area would be considered less than significant and do not require mitigation.

Suitable habitat associated with these species would be mitigated by Program implementation of **BIO-8a** and **BIO-8b**, further ensuring no significant direct impacts to these species. Indirect impacts to special status reptile species and mammalian species (except for Stephens' kangaroo rat discussed above) with potential to occur in the survey area are not expected; the Program would be required to implement construction BMPs that eliminate potential adverse effects beyond the authorized limits of work.

Nesting Birds

Trees, shrubs, and other vegetation that provide suitable nesting habitat for common birds, including raptors, protected under the MBTA and CFG Code are present within and in the immediate vicinity of the survey area and could be directly impacted. Implementation of the Program could result in the removal or trimming of trees and other vegetation during the general bird nesting season (January 15 through September 15) and, therefore, could result in impacts to nesting birds in violation of the MBTA and CFG Code. Adverse indirect effects could also occur as a result of construction noise in the immediate vicinity of undeveloped areas supporting an active bird nest, such that the disturbance results in nest abandonment or nest failure. Impacts (direct or indirect) to nesting birds would be considered significant. However, implementation of mitigation measure **BIO-4** would require pre-construction surveys before impacts, and construction fencing and biological monitoring measures **BIO-5** through **BIO-7** would reduce potentially significant impacts on nesting birds, including raptors, to less than significant levels.

Mitigation Measures

The following mitigation measures would be implemented to avoid or reduce direct and/or indirect impacts to sensitive biological resources.

BIO-1a Rare Plant Avoidance and Mitigation. The development footprint associated with all sewer improvement projects located within the Program area shall be designed to maximally avoid and

minimize impacts to rare plants, especially federally and/or state listed species (i.e., thread-leaved brodiaea), which have been identified within the Program area. Prior to ground-disturbing activities within the areas where rare plants are re-construction surveys shall be implemented prior to ground-disturbing activities to identify precise locations of rare plants to ensure avoidance to the maximum extent feasible, including incorporating all relevant mitigation in this PEIR, including **BIO-5**, **BIO-6**, and **BIO-7**. Based on the results of the pre-construction survey, a USFWS-approved biologist shall establish the appropriate monitoring buffer for rare plants that have been detected within the construction area. Specific to thread-leaved brodiaea observed near the survey area, a USFWS-approved biologist would be required to be on site during ground disturbing activities occurring within 500 feet of known or potential thread-leaved brodiaea habitat. Specific to Brand's phacelia, Program components proposed for development within areas of known presence shall seek to restrict and minimize impacts to the species populations through project-level design changes and/or construction methods (e.g., walls, fencing, and/or trenchless utilities/technologies). Impacts to federally listed species would require conformance with **BIO-2**.

BIO-1b Critical Populations of Species Avoidance and Mitigation. Prior to approval of final design plans for each Program component, construction footprints shall be designed to maximally avoid and minimize impacts (both direct and indirect) to critical populations of special-status wildlife species (including, but not limited to, least Bell's vireo) as well as designated critical habitat occurring within the survey area. This shall include incorporation of the following avoidance measures during the design phase:

- Elimination of direct impacts by shifting the footprint outside of mapped critical populations and designated critical habitat wherever feasible.

- Minimization of indirect impacts by reducing ground disturbance, vegetation removal, noise, vibration, and human activity near sensitive areas.

Full avoidance of critical populations through limiting the area of disturbance for each future Program component identified within the overall Program area boundaries shall be required to the maximum extent feasible, unless determined in coordination with the City that complete avoidance is infeasible due to engineering, safety, or legal constraints. Infeasibility must be demonstrated through written explanation reviewed and approved by the City of Oceanside (City; Owner) or its Designated Representative(s) prior to final design plan approval. All relevant mitigation in this PEIR, including **BIO-5**, **BIO-6**, and **BIO-7**, shall be implemented to mitigate potential impacts where full avoidance cannot be achieved.

BIO-1c Sensitive Animal Avoidance and Mitigation. Before the construction of each Program component, vegetation communities and sensitive resource mapping documented during prior surveys shall be reviewed by a Qualified Biologist to determine if pre-construction protocol level surveys are required to confirm presence/absence and distribution of federally and/or state listed species. This measure is applicable to the following species: least Bell's vireo, southwestern willow flycatcher, light-footed Ridgway's rail, burrowing owl, and coastal California gnatcatcher. This condition does not apply to arroyo toad based on negative findings and low/marginal habitat within the survey area. If any of these species are identified as occurring within the Program component construction footprint(s), impacts to the species (including its habitat) shall be restricted and minimized through project-level design changes

and/or construction methods (e.g., walls, fencing, scheduling outside of avian breeding seasons) as prescribed by the Qualified Biologist, to the extent feasible. Impacts to federally listed sensitive animal species shall also implement mitigation measure **BIO-2**, which provides for consultation with the USFWS via Section 7 or Section 10, as appropriate. Impacts to state listed species shall also implement mitigation measure **BIO-2**, which provides for consultation with the CDFW via Section 2081(b) Incidental Take Permit or Section 2080.1 Consistency Determination. Indirect impacts within occupied habitat occurring within the breeding season for these species would require additional pre-construction surveys in accordance with **BIO-3**.

BIO-1d Stephens' Kangaroo Rat Avoidance and Mitigation. If the development footprint associated with any of the sewer improvement projects associated with the programmatic effort is proposed to occur within the Stephens' kangaroo rat survey area indicated on the MHCP Database Records Map (near Whelan Lake) and/or if suitable habitat for this species occurs within the development footprint, then a Qualified Biologist possessing a Section 10(a)1(A) research permit for this species shall survey areas containing potentially suitable habitat (open coastal sage scrub, agricultural fields, and grasslands on soils low in clay content) using approved survey protocols (sign surveys for burrows, scats, tracks, trails, followed by protocol trapping to verify species presence) as part of the CEQA review process for Program components, as applicable. Surveys shall occur regardless of location inside or outside of the FPA. If Stephens' kangaroo rat is found present on any of the project sites associated with the proposed Program, consultation with USFWS is required. If construction is allowed to occur in the area based on USFWS consultation, then the following construction measures are proposed to conform with the MHCP: (a) removal of native vegetation and habitat should be avoided and minimized to the maximum extent practicable, (b) implement standard BMPs per Appendix B of the MHCP, (c) construction-related vehicle traffic shall be limited to daylight hours to minimize roadkill, (d) for temporary impacts involving trenching or other excavation, measures shall be taken to prevent Stephens' kangaroo rat from falling into the trench. Excavations shall not be covered (e.g., with metal plates or boards) to exclude rodents, because these may actually attract them to burrow beneath and become entrapped, and (e) to minimize injury or mortality of individuals, the USFWS may authorize qualified biologists to relocate individual Stephens' kangaroo rats to nearby suitable habitat. Proposed minimization/avoidance measures must be approved by the USFWS. If Stephens' kangaroo rats are not present, items (a) and (b) should be implemented within the MHCP Stephens' kangaroo rat survey area and a biological monitor possessing a Section 10(a)1(A) research permit for this species shall be present when construction activities are occurring within the MHCP Stephens' kangaroo rat survey area.

BIO-2 Listed Species Conservation Measures. Where take of a federally listed species would potentially result from implementation of the proposed Program components (as identified through preconstruction surveys required under **BIO-1c** and **BIO-1d**), then before the issuance of land disturbance, clearing, grubbing, or grading permits for that project, it shall be demonstrated that consultation with the USFWS for the Program has analyzed project-level related significant adverse effects to the applicable listed species, has occurred in accordance with the FESA. Additionally, if the Program would impact a state listed species, then it shall be demonstrated that a Section 2081(b) Incidental Take Permit or Section 2080.1 Consistency Determination for impacts to the applicable species has been issued by CDFW or that none was required. Impacts to listed species' habitat shall be compensated by the implementation of habitat-based mitigation off-site purchase of mitigation credits (see mitigation measures **BIO-8a** and **BIO-8b** below).

BIO-3 Listed Species Breeding Season Restrictions. No clearing, grubbing, grading, or other construction activities shall occur during the breeding season for coastal California gnatcatcher (February 15 to August 31), least Bell's vireo (March 15 to September 15), light-footed Ridgeway's rail (February 15 to September 30), and/or southwestern willow flycatcher (May 1 to September 1).

If construction activity is scheduled to occur during the breeding season for these species, a Qualified Biologist, approved by USFWS, will be on site during any construction within 500 feet of known or potential gnatcatcher, vireo, flycatcher, or rail habitat to ensure compliance with all applicable mitigation measures. The biologist will allow direct communication with the Carlsbad Fish and Wildlife Office (CFWO) at any time regarding the proposed Program component. The biologist will be provided with a copy of the Informal Section 7 Consultation Documentation between the USEPA and USFWS and will be available during pre-construction and construction phases to review grading plans, address protection of sensitive biological resources, monitor ongoing work, and maintain communications with the Resident Engineer to ensure that issues relating to the gnatcatcher, vireo, flycatcher, or rail and their habitats are appropriately and lawfully managed. The Qualified Biologist will perform the following duties:

a. Perform a minimum of three focused surveys, on separate days, to determine the presence of gnatcatcher, vireo, flycatcher, or rails nests within 500 feet of construction proposed during their breeding seasons. The surveys will begin a maximum of 7 days prior to construction (including temporary fence installation) and one survey will be conducted the day immediately prior to the initiation of work. Additional surveys will be done once a week during construction in the breeding season. Through coordination with, and concurrence of, the CFWO, these additional surveys may be suspended. The applicant will notify the CFWO at least 7 days prior to the initiation of surveys and within 24 hours of locating any gnatcatcher, vireo, flycatcher, or rail nest.

b. If pre-construction surveys determine that these species are not present, work can occur unimpeded. If an active gnatcatcher, vireo, flycatcher, or rail nest is found within 500 feet of construction, the biologist will postpone work within 500 feet of the nest and contact the CFWO to discuss: (i) the best approach to avoid/minimize impacts to nesting vireo or flycatcher (e.g., sound walls, noise monitoring); and (ii) a nest monitoring program acceptable to the CFWO. Subsequent to these discussions, work may be initiated subject to implementation of the agreed upon avoidance/minimization approach and nest monitoring program. Nest monitoring will occur according to a schedule approved by the CFWO. The biologist will determine whether gnatcatcher, vireo, flycatcher, or rail are being disrupted. If the biologist determines that gnatcatcher, vireo, flycatcher, or rail are being disrupted, the applicant will stop work and coordinate with the CFWO to review the avoidance/minimization approach. Upon agreement as to the necessary revisions to the avoidance/minimization approach, work may resume subject to the revisions and continued nest monitoring. Nest monitoring will continue until fledglings have dispersed or the nest is no longer active, as approved by the CFWO.

BIO-4 Avoidance of Nesting Birds and Raptors. To prevent direct impacts to nesting birds, including raptors, protected under the federal MBTA and CFG Code, the Program shall comply with the following: Construction activities requiring the removal and/or trimming of vegetation suitable for nesting birds (including clearing, grubbing, trenching, grading, or land disturbances) shall

occur outside of the general bird breeding season (January 15 to September 15). This condition may be waived provided that the following additional avoidance measures are taken. If the construction activities cannot avoid the general bird breeding season, a Qualified Biologist shall be retained to conduct a pre-construction nesting bird survey within seven days before the start of the activities to confirm the presence or absence of active bird nests. If no active bird nests are found by the Qualified Biologist, then the activities shall proceed with the reassurance that no violation of the MBTA and CFG Code would occur. If an active bird nest is found by the Qualified Biologist, then vegetation removal and/or trimming activities at the nest location, and within 300 feet for passerine birds and 500 feet for raptors, shall not be allowed to occur until the Qualified Biologist has determined that the nest is no longer active. Buffers may be reduced only at the discretion of the Qualified Biologist depending on the bird species and construction/ vegetation removal activities required in the vicinity of the active nest.

BIO-5 Construction Work Limits Fencing. Before the issuance of land disturbance, clearing, grubbing, or grading permits for each Program component, the approved grading boundaries and limits of work shall be presented on the Final Construction Drawings, including the limits of work fencing. To help ensure inadvertent/unauthorized impacts to environmentally sensitive areas outside of the approved limits of work are avoided, temporary construction fencing (orange fencing or similar), including silt fencing as appropriate, shall be installed at the edges of the approved impact limits within 500 feet of known thread-leaved brodiaea, coastal California gnatcatcher, least Bell's vireo, light-footed Ridgeway's rail, and southwestern willow flycatcher habitat. This fencing shall be installed before construction and maintained for the duration of construction activity. Fencing shall be installed in a manner that does not impact habitats to be avoided. The City shall submit to the CFWO for approval, at least 5 working days prior to initiating soil-disturbing impacts, the final plans for construction. These final plans will include photographs that show the fenced limits of impact, sediment-trapping devices installed prior to grading (if applicable), and all areas to be avoided.

Once fencing is installed, a biological monitor (see **BIO-6**) shall determine the need for additional inspections and monitoring activities throughout the duration of construction. Under no circumstances shall work occur beyond the fenced or demarcated limits of impact. Temporary construction fencing shall be removed upon completion of construction.

BIO-6 Biological Construction Monitoring. A USFWS-approved biologist shall be retained to monitor construction activities. The monitoring, at minimum, shall include inspection of construction work areas, including staging and storage areas, to confirm that activities are kept within the approved limits and that BMPs are in place. The Qualified Biologist shall regularly monitor construction activities throughout construction and perform the following duties.

a. Oversee installation of and inspect temporary fencing and erosion control measures within or up-slope of avoided areas a minimum of once per week during installation and daily during all rain events until established to ensure that any breaks in the fence or erosion control measures are repaired immediately.

b. Periodically monitor the work area to ensure that work activities do not generate excessive amounts of dust and that all other conditions are followed.

c. Train all contractors and construction personnel a maximum of 14 days prior to construction on the biological resources associated with the Program component(s) and ensure that training is implemented by construction personnel. At a minimum, training will include: (i) the purpose for resource protection; (ii) a description of the gnatcatcher, vireo, flycatcher, and rail and their habitats; (iii) the conservation measures given in this consultation that should be implemented during construction to conserve sensitive resources, including strictly limiting activities, vehicles, equipment, and construction materials to the fenced footprint to avoid sensitive resource areas in the field (i.e., avoided areas delineated on maps or on the project site by fencing); (iv) environmentally responsible construction practices; (v) the protocol to resolve conflicts that may arise at any time during the construction process; and, (vi) the general provisions of the Act, the need to adhere to the provisions of the Act, and the penalties associated with violating the Act.

d. Halt work, if necessary, and confer with the CFWO to ensure the proper implementation of species and habitat protection measures. The biologist will report any violation to the CFWO within 24 hours of its occurrence.

e. Submit weekly letter reports via electronic mail (email) to the CFWO during construction within 500 feet of avoided brodiaea, gnatcatcher, vireo, flycatcher, or rail habitat, or unless otherwise agreed to by the CFWO. The weekly reports will document that authorized impacts were not exceeded, work did not occur within the 500-foot buffer, or otherwise CFWO-approved setback and general compliance with all CMs. The reports will also outline the duration of vireo, flycatcher, or gnatcatcher monitoring, the location of construction activities, the type of construction that occurred, and equipment used. These reports will specify numbers and locations of gnatcatcher, vireo, flycatcher, or rail and nests, sex of the birds, observed behavior (especially in relation to construction activities), and remedial measures employed to avoid, minimize, and mitigate impacts to vireo, flycatcher, or gnatcatcher and nests. Raw field notes should be available upon request by the CFWO.

f. Submit a final report to the CFWO within 60 days of completion of construction that includes: (i) maps of areas within 500 feet of brodiaea, gnatcatcher, vireo, flycatcher, or rail habitat with an overlay of habitat that was impacted and avoided; (ii) photographs of habitat areas that were to be avoided; and iii) summary of all gnatcatcher, vireo, flycatcher, or rail and nest observations; and (iv) other relevant summary information documenting that authorized impacts were not exceeded and that general compliance with all mitigation measures was achieved.

If items of non-compliance are identified, the biologist shall notify the on-site construction superintendent and/or other appropriate personnel immediately to discuss and implement corrective actions. If the non-compliance items involve USFWS critical habitat, occupied sensitive species habitat, and/or sensitive species, the biologist has stop work authority. Issues of non-compliance that result in additional impacts to sensitive biological resources shall be documented within 72-hours of identification. Mitigation for unauthorized impacts shall adhere to the applicable measures in this PEIR.

BIO-7 Construction Best Management Practices. The City shall ensure that the following conditions are implemented during construction of each Program component to minimize potential impacts to sensitive species:

a. Employees will strictly limit their activities, vehicles, equipment, and construction materials to the fenced construction footprint and designated staging areas and routes of travel. The construction area(s) will be the minimal area necessary to complete the project and will be specified in construction plans.

b. To avoid attracting predators of the gnatcatcher, vireo, flycatcher, and rail, the project site will be kept as clean of debris as possible. All food related trash items will be enclosed in sealed containers and regularly removed from the site.

c. Disposal or temporary placement of excess fill, brush, or other debris will not be allowed in waters of the U.S. or on their banks.

d. Pets of construction personnel will not be allowed on the construction site.

e. Impacts from fugitive dust will be avoided and minimized through watering and other appropriate measures.

f. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will occur in designated areas outside of waters of the United States within the fenced construction impact limits. These designated areas will be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering waters of the United States and will be shown on the construction plans. Fueling of equipment will take place within existing paved areas greater than 100 feet from waters of the United States. Contractor equipment will be checked for leaks prior to operation and repaired as necessary. “No-fueling zones” will be designated on construction plans.

3.2.4.2 Issue 2: Sensitive Habitats

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or the U.S. Fish and Wildlife Service?

Impact Analysis

Direct and indirect impacts to riparian habitat and sensitive natural communities could occur as a result of construction activities associated with implementation of the Program. Sensitive communities that occur within the Program area, including riparian habitat, are summarized below within Table 3.2-2, *Potential Impacts on Sensitive Natural Communities*.

Table 3.2-2
POTENTIAL IMPACTS ON SENSITIVE NATURAL COMMUNITIES

VEGETATION COMMUNITY OR HABITAT TYPE	MHCP HABITAT GROUP	ACRES[1]
Wetland/Riparian		
Freshwater Marsh (52410)	A	0.05
Southern Riparian Forest (61300)	A	1.73
Mule Fat Scrub (including disturbed) (63310)	A	0.35
Southern Willow Scrub (63320)	A	1.21
	Wetland Subtotal	***3.34***
Upland		
Diegan Coastal Sage Scrub (including disturbed) (32500)	C	2.2
Baccharis Scrub (32530)	C	0.2
Native Grassland (42100)	B	0.2
Salt Grass Grassland (42130)	B	<0.1
Non-native Grassland (42200)	E	24.2
	Upland Subtotal	***26.8***
	TOTAL	**30.14**

[1] Acres rounded to the nearest 0.01 acre for wetland habitat and 0.1 acre for upland habitat.

Implementation of mitigation measure **BIO-5** would ensure that sensitive natural communities beyond the authorized limits of work are protected during construction through the installation of temporary work/impact limits fencing (orange silt fencing or similar) to clearly delineate the edge of the approved limits of grading and clearing. Implementation of **BIO-6** would require monitoring throughout construction to also verify the authorized impact limits are not exceeded. Mitigation measures **BIO-8a** and **BIO-8b** would ensure that direct impacts for the vegetation communities identified in Table 3.2-2 are compensated in accordance with regional mitigation ratio standards (i.e., MHCP). Further, mitigation measures **BIO-9a** and **BIO-9b** provide specific requirements for how compensatory mitigation for impacts to sensitive natural communities also considered jurisdictional aquatic resources would be implemented.

Mitigation Measures

The following mitigation measures would be implemented to avoid or reduce direct and/or indirect impacts to sensitive habitats.

BIO-8a Compensatory Mitigation for Impacts to Sensitive Natural Communities. Before the issuance of land disturbance, clearing, grubbing, or grading permits for each proposed Program component, it shall be demonstrated that compensatory mitigation for direct impacts caused by the Program component (including permanent and temporary) to sensitive natural communities has been adequately proposed in accordance with the ratios provided in Table 3.2-3, *Mitigation Ratios for Impacts to Sensitive Natural Communities.* Mitigation for permanent impacts shall be secured through the purchase of off-site conservation credits from a City-approved conservation bank in the region. This includes all impacts occurring within City Sewer Easements. Although many of the impacts within these areas would otherwise be considered temporary, the routine maintenance required in these areas and potential for ground disturbance (i.e., associated with a repair) deems these areas unsuitable for restoration.

Table 3.2-3
MITIGATION RATIOS FOR IMPACTS TO SENSITIVE NATURAL COMMUNITIES [1]

VEGETATION COMMUNITY OR HABITAT TYPE	MITIGATION RATIO
Wetland/Riparian	
Freshwater Marsh (52410)	3:1
Southern Riparian Forest (61300)	3:1
Mule Fat Scrub (including disturbed) (63310)	3:1
Southern Willow Scrub (63320)	3:1
Upland	
Diegan Coastal Sage Scrub (including disturbed) (32500)2	2:1 to 3:1
Baccharis Scrub (including disturbed) (32530)	2:1 to 3:1
Native Grassland (42100)	3:1
Salt Grass Grassland (42130)	3:1
Non-native Grassland (42200)	0.5:1

[1] Primary conservation actions for upland habitat in Wildlife Corridor Planning Zones are to avoid as much as possible and to minimize any unavoidable impacts. Upland habitat conserved and managed on-site in Wildlife Corridor Planning Zones may be used to satisfy in-kind mitigation obligations associated with impacts to upland habitats located on-site. Upland habitat may be removed in Pre-approved Mitigation Areas. Upland habitat conserved and managed on-site in Pre-approved Mitigation Areas may be used to satisfy in-kind mitigation obligations associated with impacts to upland habitats located on-site. Mitigation obligations that cannot be satisfied with on-site conservation, must be located inside Wildlife Corridor Planning Zones or other Pre-approved Mitigation Areas. Up-tiering of mitigation will be considered on a case-by-case basis and must be approved by the wildlife agencies.

[2] Impacts to coastal sage scrub in the Coastal Zone and Agency approved areas of the Offsite Mitigation Zone shall be mitigated at a 2:1 ratio.

BIO-8b Restoration of Temporary Impacts. Sensitive natural communities identified in Table 3.2-3 of the PEIR that would be temporarily impacted during construction shall be recontoured and/or revegetated immediately (within 12 months) following construction to a pre-construction condition or better, pursuant to the Programmatic Revegetation Plan. This plan shall include clearly defined success criteria and describe the methods to achieve those criteria. Sensitive habitat communities shall be revegetated in-kind to preserve ecological integrity, while temporary impacts to non-sensitive communities shall be restored using a low-fuel native erosion control seed mix. Additionally, all areas within the sewer easement—although considered permanent impacts—shall also be revegetated with the same low-fuel native mix to ensure compliance with erosion control standards.

3.2.4.3 Issue 3: Wetlands

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

Impact Analysis

Implementation of the proposed Program could directly and/or indirectly affect federally protected wetlands, waterways, and other potential jurisdictional aquatic resources in the survey area, including:

wetlands and waters under Section 404 of the CWA subject to jurisdiction of USACE, jurisdictional waters of the State subject to jurisdiction by RWQCB under Section 401 of the CWA, protected streambed and associated riparian habitat under the jurisdiction of CDFW per Section 1602 of the CDFW Game Code. Jurisdictional aquatic resources that occur within the Program area and potential impact acreages are presented in Table 3.2-4, *Potential Impacts to Jurisdictional Aquatic Resources*.

Table 3.2-4
POTENTIAL IMPACTS TO JURISDICTIONAL AQUATIC RESOURCES (acres)[1]

Habitat	Potential Resource Agency Jurisdiction		
	USACE	RWQCB	CDFW
Wetland			
Freshwater Marsh	0.05	0.05	0.05
Southern riparian forest	1.57	1.57	1.73
Southern willow scrub	0	0	1.21
Mule fat scrub	0	0	0.01
Subtotal	***1.62***	***1.62***	***3.00***
Concrete brow ditch or drainage	0.22	1.34	1.32
Potential drainage	0	0.22	0.22
Subtotal	***0.22***	***1.56***	***1.54***
TOTAL	**1.84**	**3.18**	**4.54**

[1] Areas are presented in acre(s) rounded to the nearest 0.01.
USACE = U.S. Army Corps of Engineers; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

Where feasible, construction of any of the Program components would avoid direct impacts to jurisdictional resources associated with the San Luis Rey River as well as other jurisdictional aquatic resources by means of specific construction methods that would install the pipeline beneath jurisdictional features (e.g., jack and bore, multi-directional drilling, or tunneling). If it is determined that direct impacts to jurisdictional resources are unavoidable, such impacts are expected to be temporary, but would still be considered significant. No permanent impacts or development within jurisdictional aquatic resources are anticipated as a result of any of the Program components. Indirect impacts to jurisdictional wetlands or waterways are not expected as a result of implementation the proposed Program.

As a regulatory requirement, future development would be required to notify and obtain necessary permits from the following responsible agencies, including the USACE, RWQCB, or CDFW. Because the proposed designs of the Program components are still being developed, and due to changing regulatory guidelines, it is uncertain which regulatory permits may be needed for the Program. If at the time a final development proposal is made, the potential wetlands or waters of the U.S. are determined to be jurisdictional wetlands or waters by the Resource Agencies, it is anticipated that a 404 permit from the USACE, 401 Certification from the RWQCB, and 1602 agreement from CDFW could be needed. If the potential wetlands or waters on site are ruled non-jurisdictional by USACE, it is anticipated that a WDR Permit from RWQCB and a 1602 agreement from CDFW would be required for a future development proposal. Mitigation measures **BIO-9a** and **BIO-9b** would ensure that the appropriate permits are obtained and that the impact is compensated in accordance with regulatory agency requirements. Mitigation measure **Bio-9b** proposes ratios consistent with those typically required by these regulatory agencies and, therefore, would compensate for impacts to jurisdictional resources, such that impacts would be reduced to below a level of significance. Implementation of required construction BMPs in

combination with mitigation measures **BIO-5** through **BIO-7** would also ensure that construction activities are regularly monitored, are contained within the proposed work limits, and that no additional impacts to adjacent jurisdictional resources occur.

Mitigation Measures

The following mitigation measures would be implemented to avoid or reduce permanent and temporary impacts to jurisdictional resources.

BIO-9a Regulatory Permitting. Before the issuance of land disturbance, clearing, grubbing, or grading permits to impact potentially jurisdictional aquatic resources, the City shall obtain and retain evidence that regulatory permits from USACE, RWQCB, and/or CDFW as determined to be at that time applicable, have been issued, or that no such permits are required.

BIO-9b Compensatory Mitigation for Impacts to Jurisdictional Resources. Permanent and temporary impacts to potentially jurisdictional resources under the regulation of USACE, RWQCB, and/or CDFW that result from any of the construction footprints associated with the proposed Program components shall be mitigated at a 3:1 ratio consisting of a minimum 1:1 creation/establishment and subject to regulatory permitting requirements of the USACE, RWQCB, or CDFW (**BIO-9a**). Mitigation shall be provided through the purchase of appropriate credits from a mitigation bank approved by the USACE, RWQCB, or CDFW, as applicable. Jurisdictional aquatic resources temporarily impacted during construction shall be recontoured and/or revegetated immediately (within 12 months) following construction to a pre-construction condition or better. No revegetation monitoring shall be needed, unless otherwise required by the USACE, RWQCB, or CDFW as applicable.

3.2.4.4 Issue 4: Wildlife Movement

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 corridors, or impede the use of native wildlife nursery sites?

Impact Analysis

A majority of the proposed Program would occur within urban/developed land, located outside regional or local wildlife corridors. However, the northern portion of the Biological Technical Report survey area is within an MHCP biological core and linkage area (BCLA). The development footprint associated with the proposed Program components may be located within a BCLA that could potentially be used for wildlife movement, fish, and/or native wildlife nursery sites. Additionally, portions of the survey area are designated in the Draft SAP as a WCPZ designated coastal California gnatcatcher corridor, and MHCP hardline and softline preserve areas. Where feasible, the design of Program components within these areas would avoid and/or minimize direct and indirect impacts to these potential wildlife movement areas. Direct impacts to BLCA, preserve areas, WCPZ, and corridors are expected to be temporary, and in some instances, subsurface. In addition, Program components that cross the San Luis Rey River would likely be constructed using specific methods such as: jack and bore, multi-directional drilling, or tunneling that would avoid direct impacts to this wildlife movement corridor. Indirect impacts could occur and would be associated with excessive construction noise if construction occurs during the breeding season. Given that the single aboveground facility for the Program is proposed to occur within an existing developed setting on the former Garrison Elementary School property and that the school

does not serve as a wildlife corridor or nursery site, implementation of the OMG Lift Station at this location would not impede local wildlife movement or nursery sites.

A major population area and critical population of least Bell's vireo are identified in and around the northern portion of the survey area in the MHCP, associated with the San Luis Rey River. Based on the analysis above and the fact that the applicable portions of Program would either minimize (**BIO-1b**, **BIO-1c**, **BIO-2**), or completely avoid riparian habitat (e.g., through jack and bore or tunneling), the proposed Program would have less than significant impacts to wildlife movement or corridors and would not interfere with potential nursery sites.

To further reduce potential impacts to wildlife movement in the survey area, avoidance and minimization measures such as construction limit delineation (**BIO-5**), biological construction monitoring in areas where work limits occur adjacent to potential wildlife movement areas (**BIO-6**), and measures to minimize potential indirect impacts (**BIO-7**) would be implemented.

Mitigation Measures

Implementation of mitigation measures **BIO-1b**, **BIO-1c**, **BIO-2** and **BIO-5** through **BIO-7** would be implemented to avoid or reduce impacts to wildlife movement areas.

3.2.4.5 Issue 5: Local Policies

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

Impact Analysis

The proposed Program would be required to comply with City policies and ordinances. The City does not have a local tree preservation policy or other policies or ordinances protecting biological resources. Thus, no impact to local policies or ordinances protecting biological resources would occur.

Mitigation Measures

No impacts related to local policies or ordinances protecting biological resources would occur; therefore, no mitigation is necessary.

3.2.4.6 Issue 6: Conservation Planning

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?

Impact Analysis

The proposed Program is located within the boundaries of the MHCP and specifically within the Draft SAP area. The Draft SAP has not been adopted and remains in draft form since 2010; therefore, there would be no conflicts with the provisions of an adopted habitat conservation plan. The proposed Program would also not conflict with the provisions of the MHCP. The proposed Program would be encouraged to comply with minimum standards and mitigation ratios required by the MHCP, as set forth

in mitigation measures **BIO-1a** through **BIO-9b**. Overall, the implementation of the proposed Program would not preclude or prevent finalizing and adoption of the Draft SAP.

Mitigation Measures

Compliance with existing regulations, in addition to the implementation of mitigation measures **BIO-1a** through **BIO-9b**, would ensure consistency with the MHCP and Draft SAP.

3.2.5 Level of Significance After Mitigation

As described above, there would be **no impact** associated with conflicting with any local policies or ordinances protecting biological resources and no mitigation would be required. Implementation of the proposed Program has the potential to result in **significant impacts** to special status plant and animal species, including nesting birds and raptors protected under the MBTA and CFG code. Implementation of mitigation measures **BIO-1a** through **BIO-7** would minimize direct impacts to sensitive biological resources associated with temporary construction with the implementation of construction limit delineation, biological construction monitoring, and habitat-based mitigation. The same measures would also minimize indirect impacts associated with temporary construction, post-construction, and/or operation of the OMG Lift Station through implementation of construction BMPs and design considerations. Further, impacts to special status species habitat would be compensated by habitat-based mitigation via the purchase of appropriate mitigation credits following mitigation measures **BIO-8a** through **BIO-9b**. Implementation of these measures would ensure that impacts related to special status species would be **less than significant with mitigation.**

Implementation of the proposed Program would potentially result in **potentially significant** direct and indirect impacts to riparian habitat and other sensitive natural communities (i.e., southern riparian forest, mule fat scrub [including disturbed], southern willow scrub, beach, Diegan coastal sage scrub [including disturbed], baccharis scrub, native grassland, salt grass grassland, and non-native grassland) during construction. Measures **BIO-5** through **BIO-8b** would minimize impacts through construction limit delineation, monitoring, and purchase of conservation credits within a mitigation bank acceptable to the City and wildlife agencies (as applicable), as well as implementation of a programmatic revegetation plan would. Implementation of these measures would ensure that impacts related to sensitive habitats would be **less than significant with mitigation.**

Implementation of the proposed Program could result in **potentially significant** impacts to protected wetlands, waters, and/or streambed and associated riparian vegetation under the jurisdiction of USACE, RWQCB, and CDFW. Future development proposals would be required to secure the necessary regulatory permits before impacts per mitigation measure **BIO-9a**. Mitigation measure **BIO-9b** proposes ratios consistent with those typically required by these regulatory agencies and, therefore, would compensate for impacts to jurisdictional resources, such that impacts would be reduced to below a level of significance. Implementation of mitigation measures **BIO-5** through **BIO-7** during construction would prevent additional impacts to potentially jurisdictional features. Impacts associated with the proposed Program would be **less than significant with mitigation**.

Impacts associated with a substantial adverse effect on federally protected wetlands would be **potentially significant** for direct and indirect impacts as a result of construction activities and future development. Mitigation measures **BIO-9a** and **Bio-9b** would ensure appropriate permits are obtained for future development and impacts are adequately compensated, while mitigation measures **BIO-5** and

BIO-6 would include monitoring and construction limit delineations. Implementation of these measures would ensure that impacts related to wetlands would be **less than significant with mitigation**.

Impacts associated with the substantial interference with the movement of wildlife species, or the use of wildlife nursey sites would be **potentially significant** as a result of construction activities. Measures **BIO-5** through **BIO-7** would be implemented and therefore ensure that impacts related to wildlife movement would be **less than significant with mitigation**.

Impacts associated with conflict with the provisions of an adopted Habitat Conservation Plan or other habitat conservation plan would be **potentially significant** as a result of the Program being located within the boundaries of the MHCP and specifically within the Draft SAP area. However, compliance with the aforementioned measures **BIO-1a** through **BIO-9b** would ensure that the Program's impacts to conservation plans, such as the MHCP, would be **less than significant with mitigation**.

3.2.6 References

AMEC Earth & Environmental, Conservation Biology Institute, Onaka Planning & Economics, and The Rick Alexander Company. 2003. Final Multiple Habitat Conservation Program Plan, Volume I. March.

Beauchamp, R. M. 1986. A Flora of San Diego County. Sweetwater River Press, 241 pp.

HELIX Environmental Planning Inc. (HELIX). 2026. Oceanside Sewer Improvements Program Biological Technical Report. January.

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, 156 pp.

Jackson, L. 1985. Ecological origins of California's Mediterranean grasses. Jour. of Biogeography (1985) 12, 349-361.

Oberbauer, Thomas. 1991. Comparison of Pre-European and 1988 vegetation coverage for San Diego County. P. Abbot and B. Elliot. Geol. Soc. North Amer., So. Calif. Reg., Sympos. Oct. 21-24, 1991, San Diego, California.

Ogden Environmental and Energy Services Co., Consultants Collaborative, Inc, Onaka Planning and Economics, Douglas Ford and Associates, Sycamore Associates, SourcePoint, and CESAR. 1993. Working Draft Multiple Species Conservation Program. Volume 1: MSCP Plan. Prepared for the City of San Diego Clean Water Program. December 15.

USFWS. 2025. Informal Section 7 Consultation for the Oceanside Sewer Improvements Program, City of Oceanside, San Diego County, California. July 16.

3.3 CULTURAL RESOURCES

This section addresses the potential impacts of the proposed Program to cultural resources. The following discussion includes a description of the environmental setting, a summary of applicable regulations, and an evaluation of the proposed Program's potential environmental effects associated with an adverse change in historical and archaeological resources and the disturbance of human remains. This section incorporates information from the *Cultural Resources Technical Report* (HELIX 2026a; Appendix D) and *Cultural Resources Post-Review Discovery and Monitoring Plan* (HELIX 2026b; Appendix E) prepared for the Program.

3.3.1 Environmental Setting

3.3.1.1 Cultural Setting

Prehistoric Setting

The approximately 10,000 years of documented prehistory of the Program region can be divided into three periods: Early Prehistoric Period (San Dieguito Tradition), Archaic Period (Encinitas Tradition), and Late Prehistoric Period. The Early Prehistoric Period represents the time of the entrance of the first known human inhabitants into California. In some areas of California, it is referred to as the Paleo-Indian period, and it is associated with the Big-Game-Hunting activities of the peoples of the last Ice Age, occurring during the Terminal Pleistocene (pre-10,000 years ago) and the Early Holocene (beginning circa 10,000 years ago). The earliest sites in the San Diego subregion, documented to be over 9,000 years old, belong to the San Dieguito Tradition. The San Dieguito Tradition has been documented mostly in the coastal and near coastal areas in San Diego County, as well as in the southeastern California deserts. The content of the earliest component of the C.W. Harris Site (CA-SDI-149/316/4935B), located along the San Dieguito River, formed the basis upon which the "San Dieguito complex" was identified and which was later reclassified as the San Dieguito Tradition.

The Archaic Period, dating from circa 8600 Before Present (BP) to circa 1300 BP, has a large number of archaeological site assemblages identified at a range of coastal and inland sites (Warren et al. 1998). These assemblages appear to indicate that a relatively stable, sedentary, predominantly gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of southern California for more than 7,000 years. The local cultural manifestations of the Archaic period are called the La Jollan complex along the coast and the Pauma complex inland. Pauma complex sites lack the shell that dominates many La Jollan complex site assemblages.

The Late Prehistoric period is characterized by higher population densities and intensification of social, political, and technological systems. The Late Prehistoric period is represented by the San Luis Rey (SLR) complex in the northern portion of San Diego County and the Cuyamaca complex in the southern portion. The SLR complex is divided into two phases: SLR I and SLR II. Elements of the SLR complex include small, triangular, pressure-flaked projectile points; milling implements: mortars and pestles, manos and metates, and bedrock milling features; bone awls; Olivella shell beads; other stone and shell ornaments; and cremations. SLR I was originally thought to date from AD 1400 to AD 1750, with SLR II dating between AD 1750 and AD 1850 (Meighan 1954). However, that division was based on the assumption that the Luiseño did not practice pottery manufacture until just prior to the arrival of the Spanish. The chronology has since been revised due to evidence that pottery may have been introduced to the Luiseño circa AD 1200-1600. Ceramics were probably introduced from the Luiseños' southern

neighbors, the Kumeyaay (True et al. 1974). The SLR complex is associated with the ethnographic Luiseño, who were present in the area at the time of first contact with Europeans.

Ethnographic Setting

The Program location is generally considered to lie within the traditional territory of the Luiseño people. The name Luiseño derives from Mission San Luis Rey de Francia and has been used to refer to the Native people associated with the mission. Mission San Luis Rey is located approximately one mile to the north of the proposed Program alignments. The Wanis site complex, located on the west side of the San Luis Rey River from the Program area probably represents the village of San Luis Rey or *Keish* (*Quechla*). Human remains have been found at the Wanis site complex as well. A number of other archaeological sites have been recorded in the Program vicinity, many associated with the occupation of Mission San Luis Rey or with the Wanis complex. The Luiseño are Takic-speaking people of the Uto-Aztecan linguistic stock. The Luiseño followed a seasonal gathering cycle, with bands occupying a series of campsites within their territory. The Luiseño lived in semi-sedentary villages usually located along major drainages, in valley bottoms, and also on the coastal strand, with each family controlling gathering areas.

Historical Setting

Spanish Period

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769. It was that year that the Royal Presidio of San Diego was founded on a hill overlooking Mission Valley. The Mission San Diego de Alcala was constructed in its current location five years later. The Spanish Colonial period lasted until 1821 and was characterized by religious and military institutions bringing Spanish culture to the area and attempting to convert the Native American population to Christianity. Mission San Diego was the first mission founded in Southern California. Mission San Luis Rey, situated less than a mile northeast of the Program area, was founded in 1798. Asistencias (chapels) were later established at Pala (1816) and Santa Ysabel (1818).

Mexican Period

The Mexican period lasted from 1821, when Mexico gained its independence from Spain, to 1848, when Mexico ceded California to the United States under the Treaty of Guadalupe Hidalgo at the end of the Mexican-American War. Following secularization of the missions in 1834, mission lands were given as large land grants to Mexican citizens as rewards for service to the Mexican government. The society made a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities.

American Period

The American period began in 1848, when California was ceded to the United States. The territory became a state in 1850. The terms of the Treaty of Guadalupe Hidalgo brought about the creation of the Lands Commission in response to the Homestead Act of 1851, which was adopted as a means of validating and settling land ownership claims throughout the state. Few of the large Mexican ranchos remained intact, due to legal costs and the difficulty of producing sufficient evidence to prove title claims. Much of the land that once constituted rancho holdings became available for settlement by immigrants to California. The influx of people to California and to the San Diego region resulted from

several factors, including the discovery of gold in the state, the end of the Civil War, the availability of free land through passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways. During the late nineteenth and early twentieth centuries, rural areas of San Diego County developed small agricultural communities centered on one-room schoolhouses. Such rural farming communities consisted of individuals and families tied together through geographical boundaries, a common schoolhouse, and a church. Farmers living in small rural communities were instrumental in the development of San Diego County. They fed the growing urban population and provided business for local markets. Rural farm school districts represented the most common type of community in the county from 1870 to 1930.

3.3.1.2 Identification of Cultural Resources

This section presents the methods used to evaluate cultural resources within the Program area. The presence and significance of existing cultural resources were determined using the following methodologies: a review of previous studies within the Program area, a records search of the California Historical Resources Information System (CHRIS) from the South Coastal Information Center (SCIC), a review of historic aerial photographs and maps, Sacred Lands File search, Native American outreach, and a pedestrian survey. The evaluation of cultural resources is in conformance with PRC Section 21083.2 and the CEQA Guidelines. Statutory requirements of CEQA (Section 15064.5) were followed in evaluating the significance of cultural resources. The records search, archival search, and pedestrian survey are described in detail below. Please refer to Section 3.10, *Tribal Cultural Resources*, for discussion on Native American outreach and consultation pursuant to AB 52.

Records Search

As part of the Oceanside Condition Assessment Project study, a CHRIS records search request was submitted to the SCIC on August 4, 2017, which was completed and received on August 31, 2017. The records search covered 0.5 mile on either side of the pipeline alignment and included locations and records for archaeological and historical resources, historic addresses, locations and citations for previous cultural resources studies, and a review of the state Office of Historic Preservation (OHP) historic properties directory. Updated records searches were conducted by SCIC staff on May 19, 2021, and by HELIX on December 4, 2023, that included a half-mile radius around the current Program area. The records search identified 150 previous cultural resource studies within the records search area, 50 of which are within the Program area. At least half of the Program area has been surveyed for cultural resources in the past, based on the records search maps. There are 48 archaeological resources recorded within the half-mile radius as well as numerous historic addresses.

Many of the archaeological sites are associated with the ethnohistoric village of San Luis Rey, several of which have been called the Wanis site complex. While the Wanis sites are located on the west side of the San Luis Rey River (outside the Program area), directly across the river from Wanis, partially within the Program area, is P-37-005445 (CA-SDI-5445), which covers over 100 acres and includes buried deposits. Small shell scatters and lithic scatter sites have been identified on the knolls and ridges overlooking the San Luis Rey River Valley and the Loma Alta Creek drainage. Bedrock milling features have been recorded in some areas, where suitable rock outcrops are present. Several lithic scatters are located surrounding the development footprint, particularly within the northern half of the alignment. Furthermore, several habitation sites are located west of the proposed alignments, along the San Luis Rey River. A prehistoric hearth and a cache of fire-affected rock were recovered within the southern alignment, located on a knoll within 150 feet of the existing Oceanside Land Outfall (OLO) (not proposed

for replacement); this site is no longer present, as it was destroyed by development following an excavation program (Appendix D).

Historic resources recorded within the records search radius include homesteads associated with pioneer families. One site consists of historic trash scatters apparently associated with a structure built in the 1930s, and two resources consist of residences from the late 1930s to the early 1950s. There are 73 historic addresses recorded within the search radius, with construction dates ranging from 1880 to 1956. Some of these historic buildings are contributors to historic districts, while others are significant in their own right. Most of the properties are of local significance, but at least two are listed on the National Register of Historic Places (NRHP), and many are categorized as "appear eligible for listing" on either the NRHP or California Register of Historical Resources (CRHR). Several historic structures are documented within the southern half of the Program area, near the developed coastal areas, on the east side of the proposed alignment. In the northern portion of the Program area, the San Luis Rey Mission and associated structures, such as building remnants and historic burial grounds, are located within a mile east of the proposed Program. Furthermore, historic refuse has been found near the Program alignment near the OMG Lift Station.

Eight archaeological sites or historic built environment resources have been recorded within 150 feet of the proposed pipeline alignments as shown in Table 3.3-1, *Cultural Resources Identified Within or Adjacent to Program Area.*

Table 3.3-1
CULTURAL RESOURCES IDENTIFIED WITHIN OR ADJACENT TO PROGRAM AREA

Resource Number	Age	Description	Status	Program Component
P-37-005445 (CA-SDI-5445)	Precontact	Large (over 100 acres) habitation site.	Not reidentified within the Area of Potential Effect (APE) during survey, although significant buried deposits are known just outside the APE.	OMG FM, MALS FM Replacement, Land Outfall Replacement, Mission Avenue Gravity Sewer Lining and Replacement
P-37-007787 (CA-SDI-7787)	Precontact	Slight shell scatter with debitage, a utilized flake, hammerstone, and ground stone fragment.	Not reidentified within the APE during survey; possibly destroyed in conjunction with construction of SR 76; recorded south of Mission Avenue, approximately 100 feet from pipeline.	Mission Avenue Gravity Sewer Lining and Replacement
P-37-011468 (CA-SDI-11468)	Precontact	A light scatter of shell and lithics	Not reidentified within the APE during surveys, possibly due to poor visibility; mapped just outside the APE.	OMG FM, Land Outfall Replacement, MALS FM Replacement.
P-37-011470 (CA-SDI-11470)	Multicomponent	Historic ranch complex owned by the Whelan Family. Precontact shell midden and fire-affected rock scatter.	Reidentified within the APE; sparsely scattered shell observed on the surface.	OMG FM, Land Outfall Replacement, MALS FM Replacement

Resource Number	Age	Description	Status	Program Component
P-37-012564 (CA-SDI-12564)	Precontact	Low density shell scatter.	Reidentified within the APE; sparsely scattered shell observed on the surface; testing conducted.	OMG FM, Land Outfall Replacement
P-37-029336 (CA-SDI-18767)	Precontact	Hearth feature (disturbed), fire-affected rock and associated artifacts; found in construction monitoring.	Not reidentified within the APE during survey; recorded on knoll north of APE; apparently destroyed by construction.	Existing Land Outfall (not proposed for replacement)
P-37-033928 (CA-SDI-21313)	Precontact	Small shell scatter.	Not reidentified within the APE during survey; a few artifacts observed during monitoring for Oceanside Boulevard Lift Station on knoll above APE.	Land Outfall Replacement
P-37-037110	Historic	The San Luis Rey Water Reclamation Facility (SLRWRF), constructed in 1972 and expanded between 1972 and 2014.	Reidentified within the APE during survey.	OMG FM, Land Outfall Replacement, MALS FM Replacement

Source: HELIX 2026a (Appendix D)
Note: Pursuant to 36 CFR 800.4(a)(1), the APE is the geographic area within which an undertaking may directly or indirectly alter the character or use of historic properties. For the purposes of this analysis, the APE for the Program is defined as the proposed pipeline alignments and a 150-foot buffer on each side of the alignment centerline, and the proposed OMG Lift Station site with a 150-foot radius.

Other Archival Research

Various additional archival sources were consulted, including historic topographic maps and aerial imagery. In general, the early topographic maps and aerial photographs examined indicate that, prior to the 1940s, the Program area was primarily used for agricultural purposes with structures associated with the San Luis Rey Mission in the area. During the 1960s aerials, housing tracts appear within the northern half of the proposed Program along Mission Avenue. The SLRWRF is visible on the 1978 aerial, but much of the surrounding area remained as agricultural land. Additional residential homes were developed by 1980 north and east of the OMG FM and MALS FM Replacement alignments. Near the central portion of the proposed alignments, the Oceanside Municipal Airport is visible on the 1964 aerial. Finally, historic aerials show development of the coastal area by the mid-1940s and further residential and commercial developments by the mid-1960s.

Pedestrian Survey

Multiple pedestrian surveys were conducted in the Program area, as documented in the *Cultural Resources Technical Report* (HELIX 2026a). The alignments were surveyed for cultural resources by three HELIX archaeologists along with a Luiseño Native American monitor on September 15, 2017, and September 18, 2017. The survey area included 50 feet on each side of the existing pipeline alignments. To the extent feasible, the survey area was walked in parallel transects spaced 10 feet apart; however, thick vegetation and wet conditions in some areas hampered this effort.

On October 2, 2020, a HELIX archaeologist and Luiseño Native American monitor surveyed CA-SDI-11470 and three alternative project alignments for the OMG FM. The survey area included 50 feet on each side of the proposed pipeline alignments. To the extent feasible, the survey area was walked in parallel transects spaced 10 feet apart; however, thick vegetation in some areas hampered this effort. Two additional open fields next to the project alignment at the intersection of Pala Road and the San Luis Rey River were surveyed as well. The 10-acre area was heavily disturbed and bisected by bicycle paths. Visibility in this area was highly variable, with dense vegetation obscuring surface visibility completely in some areas. Where feasible, this area was walked in parallel transects spaced 15 meters apart.

A HELIX archaeologist surveyed the area of the OMG Lift Station and an additional OMG FM alternative alignment on August 4, 2020, accompanied by a Luiseño Native American monitor. Visibility in the survey area was highly variable. The survey area was walked in parallel transects spaced 20 to 25 feet apart on both sides of the alignment. Due to the apartments and existing roadways, the southern portion of the existing line was surveyed in five- to six-foot transects. Visibility in the survey area was highly variable, with dense vegetation obscuring surface visibility completely in some areas. Visibility in the western portion of the survey area was low but increased to 90 percent within the existing dirt road that bisected the area. Visibility in the eastern portion of the survey area was fully obscured by the developed hardscapes.

On April 27, 2022, HELIX archeologists along with a Luiseño Native American monitor surveyed several areas for potential alignments and Program components associated with the OMG Lift Station and associated pipeline, as well as areas at the far northern end of the Program area, in and around the SLRWRF and adjacent to Whelan Lake. The survey methods were the same as those of the previous surveys.

3.3.2 Regulatory Framework

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. Significant resources are those resources that have been found eligible for listing in the CRHR or the NRHP, as applicable.

3.3.2.1 National Historic Preservation Act

Federal regulations that are applicable to projects where there is a federal nexus (e.g., permitting and/or funding from a federal agency) consist of the National Historic Preservation Act (NHPA) and its implementing regulations (16 United States Code 470 et seq., 36 Code of Federal Regulations ([CFR] Part 800). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on "historic properties," that is, properties (either historic or archaeological) that are eligible for the NRHP. To be eligible for the NRHP, a historic property must be significant at the local, state, or national level under one or more of the following four criteria:

A. Associated with events that have made a significant contribution to the broad patterns of our history;

B. Associated with the lives of persons significant in our past;

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

D. Has yielded or may be likely to yield, information important in prehistory or history.

3.3.2.2 California Environmental Quality Act

Cultural Resources

The CEQA Guidelines address determining the significance of impacts to cultural resources. Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance (OHP 1995). Significant resources are designated as "historical resources," and are defined per PRC Section 21084.1 and CEQA Guidelines Section 15064.5 as follows:

- Resource(s) listed in or determined eligible by the State Historical Resources Commission for listing in the CRHR (CEQA Guidelines Section 15064.5[a][1]);

- Resource(s) either listed in the NRHP or in a "local register of historical resources" or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, unless "the preponderance of evidence demonstrates that it is not historically or culturally significant" (CEQA Guidelines Section 15064.5[a][2]);

- Resources determined by the Lead Agency to meet the criteria for listing in the CRHR (CEQA Guidelines Section 15064.5[a][3]).

For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

1. 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;

2. It is associated with the lives of persons important to local, California, or national history;

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; and/or

4. It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

Under CEQA Guidelines Section 15064.5(a)(4), a resource may also be considered a "historical resource" for the purposes of CEQA at the discretion of the lead agency.

All resources that are eligible for listing in the NRHP or CRHR must have integrity, which is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial relationships. A resource must also be judged with reference to the particular criteria under which it is proposed for nomination. Under Section 106 of the NHPA, actions that alter any of the

characteristics that qualify a property for eligibility for listing in the NRHP "in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association" (36 CFR 800.5[a]) constitute an adverse effect to the historic property.

3.3.2.3 City of Oceanside Regulations

The City's General Plan is currently undergoing an update; the existing General Plan has as one of its stated goals, "Encourage the conservation and protection of significant cultural resources for future scientific, historic, and educational purposes."

Chapter 14A of the City's Municipal Code addresses historic preservation. Sec. 14A.2 – Policy and purpose states:

> It is hereby declared as a matter of public policy that the recognition, preservation, enhancement, perpetuation and use of structures, landscape features, sites and areas within the City of Oceanside having historical, architectural, archeological, cultural or aesthetic significance is required in the interest of the economic prosperity, cultural enrichment and general welfare of the people [City of Oceanside Code of Ordinances, Sec. 14A.2].

3.3.3 Thresholds of Significance

The following criteria from Appendix G of the CEQA Guidelines are used as thresholds of significance to determine the impacts of the proposed Program as related to cultural resources a. The proposed Program would have a significant impact if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;

2. Cause a substantial adverse change in the significance of an archaeological resources pursuant to Section 15064.5;

3. Disturb human remains, including those interred outside of formal cemeteries; or

3.3.4 Program Impacts and Mitigation

3.3.4.1 Issue 1: Historical Resources

Would the proposed project cause a substantial adverse change in the significance of a historical resource pursuant to Section 5064.5?

Impact Analysis

Eight cultural resources were determined to be intersecting or located within 150 feet of the proposed Program area, as discussed previously in Section 3.3.1.2. One historic resource was identified within the APE: the SLRWRF. The Land Outfall Replacement (Part A), OMG FM, and MALS FM Replacement alignments cross the site; however, the Program does not include direct impacts to the existing facilities. Although the facility reflects broader national and state-wide trends in increased urban sanitation, the site was recorded as ineligible as a historical resource or a historic property, as defined by CEQA and Section 106 of the NHPA.

In addition, this site is (1) not associated with events that have made a significant contribution to the broad patterns of history; (2) cannot be shown to be associated with the lives of persons significant to the past; (3) does not embody the distinctive characteristics of a type, period, or method of construction or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; and (4) is not likely to yield information important in prehistory or history.

As such, no historical resources per CEQA would be affected by the Program, and no impacts would occur.

Mitigation Measures

No impacts to historical resources would occur; therefore, no mitigation is required.

3.3.4.2 Issue 2: Archaeological Resources

Would the proposed project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Impact Analysis

As discussed previously under Section 3.3.1.2, cultural resources are known to occur in the immediate vicinity of the pipeline alignments and the Program area is considered as sensitive for cultural resources. Eight cultural resources were determined to be intersecting or located within 150 feet of the proposed Program. Three of these previously recorded resources were observed during the archaeological surveys: P-37-011470, P-37-012564, and P-37-037110. Five other previously recorded sites (P-37-005445, P-37-007787, P-37-011468, P-37-029336, and P-37-033928) were not seen within the Program study area during the surveys for the Program; however, significant cultural deposits at P-37-005445 were observed during monitoring of the proposed Ocean KAMP development in 2019.

P-37-005445 is assumed eligible and crossed by the proposed OMG FM, MALS FM Replacement, and the Land Outfall Replacement. Although no evidence of this resource was observed on the surface, there is a high potential for subsurface cultural resources associated with the site. In order to minimize impacts to cultural resources, it is recommended that, to the extent feasible, pipeline replacement be designed to occur within the same trenches as the existing pipelines. Where this is not feasible, trench widths should be kept as narrow as feasible to accommodate the new or replacement pipelines.

P-37-011468, P-37-011470, and P-37-033928 all appear to be located at the edge of the Program APE but outside of it; no evidence of these sites was found within the APE. In the event of post-review discoveries of resources during construction, the process and discovery protocol outlined in the Cultural Resources Post-Review Discovery and Monitoring Plan prepared for the program would be implemented so that appropriate measures to resolve potential adverse effects to subsurface historic properties that may be present within the APE and discovered during construction are followed.

Based on the high degree of cultural sensitivity of much of the Program area, the presence of known cultural resources, and the potential for buried cultural resources, it is recommended that an archaeological and Native American monitoring program be implemented for ground-disturbing activities in areas with moderate, moderate-high, or high cultural sensitivity. Based on the presence of cultural resources in the Program area, unidentified resources could be present within the Program

footprint. The Program therefore has the potential to affect archaeological resources during ground-disturbing activities, such as clearing, trenching, and grading, and impacts are considered potentially significant. As such, an archaeological and Native American monitoring program would be required, as outlined below in mitigation measures **CUL-1** through **CUL-9** and in the *Cultural Resources Post-Review Discovery and Monitoring Plan*. Implementation of these mitigation measures would ensure impacts to archeological resources would be **less than significant**.

Mitigation Measures

The following mitigation measures would be required to be implemented during Program construction to mitigate potential impacts to archaeological resources:

CUL-1 Before the issuance of the Notice to Proceed for each Project Component, the City of Oceanside (City; Owner) or its Designated Representative(s) shall enter into a pre-excavation agreement, otherwise known as a Tribal Cultural Resources Treatment and Tribal Monitoring Agreement (Pre-Excavation Agreement) with the "Traditionally and Culturally Affiliated (TCA) Native American Monitor(s) associated with the TCA Luiseño Tribe(s)." A copy of the Agreement shall be included in the Grading Plan Submittals for the Grading Permit. The purpose of this Agreement shall be to formalize protocols and procedures between the City and the "TCA Native American Monitor(s) associated with the TCA Luiseño Tribe(s)" for the treatment of known cultural resources; the designation, responsibilities, and participation of professional tribal monitors during grading, excavation, and ground disturbing activities; project scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains, including but not limited to, Native American human remains, funerary objects, cultural and religious landscapes, ceremonial items, traditional gathering areas and tribal cultural resources, located and/or discovered through a monitoring program in conjunction with the construction of the proposed project, including additional archaeological surveys and/or studies, excavations, geotechnical investigations, grading, and all other ground-disturbing activities.

CUL-2 At least 45 days prior to the issuance of the Notice to Proceed for each Project Component, the City of Oceanside Water Utilities Department or its Designated Representative(s) shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Archaeologist and Luiseño Native American Monitor(s) have been retained at the City or Contractor's expense to implement the monitoring program, as described in the Pre-Excavation Agreement and the project's Cultural Resources Post-Review Discovery and Monitoring Plan prepared for the EPA (HELIX 2026b). The Qualified Archaeologist shall meet the Secretary of the Interior's (SOI) Professional Qualifications Standards (48 Federal Register 44738-39). The archaeological monitor will conduct the construction monitoring under the oversight of the Qualified Archaeologist.

CUL-3 The Qualified Archaeologist shall maintain ongoing collaborative consultation with the Luiseño Native American monitor(s) during all ground-disturbing activities. The requirement for the monitoring program shall be noted on all applicable construction documents, including demolition plans, grading plans, etc. The Contractor shall notify the City of Oceanside Water Utilities Department of the start and end of all ground-disturbing activities.

CUL-4 The archaeological monitor and Luiseño Native American Monitor(s) shall attend all applicable pre-construction meetings with the Contractor and/or associated Subcontractors to present a Cultural Resources Awareness and Sensitivity Training and discuss the construction schedule and the protocols for an inadvertent discoveries. The Contractor must give a 48-hour notice of any scheduled pre-construction meetings and monitoring.

The archaeological monitor and Luiseño Native American Monitor(s) shall follow the protocols outlined in the project's Cultural Resources Post-Review Discovery and Monitoring Plan prepared for the EPA (HELIX 2026b), and the Pre-Excavation Agreement including: being present on-site full-time during grubbing, grading, and/or other ground-altering activities, including the placement of imported fill materials or fill used from other areas of the project site, to identify any evidence of potential archaeological or tribal cultural resources. All fill materials shall be absent of any and all tribal cultural resources. To ensure that all TCA Luiseño Tribe(s) have an equal opportunity for representation, tribal monitors from each TCA Luiseño Tribe(s), that request to provide monitoring, will be systematically rotated on a schedule established by the City.

CUL-5 In order for potentially significant archaeological artifact deposits and/or cultural resources to be readily detected during mitigation monitoring, a written "Controlled Grade Procedure" shall be prepared by a Qualified Archaeologist, in consultation with the TCA Luiseño Tribe(s) that have participated in the state-prescribed process for the Program, subject to the approval of the City or its Designated Representative(s), in accordance with the Cultural Resources Post-Review Discovery and Monitoring Plan prepared for the EPA (HELIX 2026b)

The Controlled Grade Procedure shall establish requirements for any ground-disturbing work with machinery occurring in and around areas the Qualified Archaeologist and Luiseño Native American monitor(s) determine to be sensitive through the cultural resource mitigation monitoring process. The Controlled Grade Procedure shall include, but not be limited to, appropriate operating pace, increments of removal, weight, and other characteristics of the earth-disturbing equipment. To the extent feasible, grading shall to occur within the same trenches as existing pipelines. Where this is not feasible, trench widths should be kept as narrow as feasible to accommodate the new or replacement pipelines. A copy of the Controlled Grade Procedure shall be included in the Engineering Plans for each Program Component prior to construction.

CUL-6 During the monitoring program, all ground disturbance (trenching/excavation/drilling) occurring within the boundaries of P-37-005445 should be monitored full-time by the archaeological monitor and Luiseño Native American Monitor, with screening of a sample of the soils occurring. The monitors will direct the pace of excavation within the archaeological site in order to allow sufficient time to thoroughly examine the soils and the trench sidewalls. In addition, to minimize impacts to cultural resources, it is recommended that trench widths be kept as narrow as feasible to accommodate the new or replacement pipelines.

CUL-7 The archaeological monitor or the Luiseño Native American monitor may halt ground-disturbing activities if unknown tribal cultural resources, archaeological artifact deposits, or cultural features are discovered. Ground-disturbing activities shall be directed away from these deposits and at least a 25-foot radius, to allow a determination of potential

importance. Isolates and clearly non-significant deposits will be minimally documented in the field, and before grading proceeds, these items shall be secured until they can be repatriated. If items cannot be securely stored on the project site, they may be stored in off-site facilities located in San Diego County.

Any newly discovered cultural resource(s) shall be subject to evaluation. If the Qualified Archaeologist and Luiseño Native American monitor(s) determine that the unearthed tribal cultural resource, artifact deposits, or cultural features are considered potentially significant, TCA Luiseño Tribe(s) that have participated in the state-prescribed consultation process for this project shall be notified and consulted regarding the respectful and dignified treatment of those resources. Pursuant to California Public Resources Code Section 21083.2(b) avoidance and protection of a significant tribal cultural resource and/or unique archaeological resource is the preferred method of preservation. If, however, it is determined by the City that avoidance of the resource is infeasible, the Qualified Archaeologist and the TCA Luiseño Tribe(s) shall make recommendations to the City on the measures that will be implemented to protect the newly discovered cultural resource(s), including but not limited to, excavation, relocation, and further evaluation of the discoveries in accordance with CEQA.

If it is determined that a data recovery plan is necessary by the City as the Lead Agency under CEQA, TCA Luiseño Tribes that have participated in the state-prescribed consultation process for this project shall be notified and consulted regarding the drafting and finalization of any such recovery plan. For significant tribal cultural resources, artifact deposits, or cultural features that are part of a data recovery plan, an adequate artifact sample to address research avenues previously identified for sites in the area will be collected using professional archaeological collection methods. The data recovery plan shall also incorporate and reflect the tribal values of the TCA Luiseño Tribe(s) that have participated in the state-prescribed consultation process for this project. If the Qualified Archaeologist collects such resources, the Luiseño Native American monitor(s) must be present during any testing or cataloging of those resources. Moreover, if the archaeological monitor does not collect the tribal cultural resources that are unearthed during the ground-disturbing activities, the Luiseño Native American monitor, may at their discretion, collect said resources and provide them to the appropriate TCA Luiseño Tribe(s), as determined through the appropriate process, for respectful and dignified treatment in accordance with the Tribe's cultural and spiritual traditions. Ground-disturbing activities shall not resume until the Qualified Archaeologist, in consultation with the Luiseño Native American Monitor, deems the cultural resource or feature has been appropriately documented and/or protected.

If the City, the Qualified Archaeologist, and the TCA Tribe(s) cannot agree on the significance or the mitigation for the newly discovered cultural resource(s), these issues will be presented to the City for decision. The City shall make the determination based on the provisions of CEQA with respect to cultural resources and shall take into account the religious beliefs, customs, and practices of the TCA Tribe(s).

CUL-8 The landowner shall relinquish ownership of all tribal cultural resources unearthed during the cultural resource mitigation monitoring conducted during all ground-disturbing activities, and from any previous archaeological studies or excavations on the project site to

the appropriate TCA Luiseño Tribe(s), as determined through the appropriate process, for respectful and dignified treatment and disposition, including reburial at a protected location on-site, in accordance with the TCA Luiseño Tribe(s),'s cultural and spiritual traditions.

Excluding sacred items, human remains, and grave goods, project archaeologists will be allowed to retain the cultural resource(s) at their office to document and photograph the cultural resource(s) for inclusion in the final monitoring report. Within 90 days after all monitoring is completed, the Qualified Archaeologist must return all cultural resources to the TCA Tribe(s). During those 90 days, the TCA Tribe(s) will work with the City to select a location for reburial that will be free from any disturbance including but not limited to development, excavation, any landscaping that exceeds the depth of the resources, above- or below-ground utility installation, flooding, etc. Upon return of the cultural resources, the City will allow the TCA Tribe(s) a reasonable timeframe in which to access the agreed upon area. The TCA Tribe(s) will document the reburial location with GPS coordinates, add the data to internal GIS systems, and complete a form for submittal to the Native American Heritage Commission (NAHC).

Prior to filing the Notice of Completion, the City and the TCA Tribe(s) shall complete a Long-Term Preservation Plan for the reburial location. This Preservation Plan shall describe the open space easement within which the resources are located, which will be transferred to the TCA Tribe(s).

All cultural materials that are associated with burial and/or funerary goods will be repatriated to the Most Likely Descendant as determined by the NAHC per California Public Resources Code Section 5097.98. No tribal cultural resources shall be subject to curation.

Any archaeological resources unearth during the monitoring which the TCA Tribe(s) does wish to be given ownership of, such as diagnostic historic archaeological items, should be curated at a curation facility, that meets federal standards per 36 CFR Part 79. Non-diagnostic items do not need to be curated.

CUL-9 Prior to filing the Notice of Completion, a monitoring report and/or evaluation report, if appropriate, which describes the results, analysis, and conclusions of the archaeological monitoring program (e.g., data recovery plan), any associated California Department of Parks and Recreation 523 Forms and/or confidential maps, details of the location of the final disposition of cultural resources, any issues or problems that occurred during monitoring, and any other pertinent information shall be submitted by the Qualified Archaeologist, along with the TCA Tribe(s) monitoring notes and comments, to the City of Oceanside or its Designated Representative(s) for approval. Upon approval by the City, a complete final report shall be submitted to the appropriate Information Center, the TCA Tribe(s), any relevant curation facility, and the landowner, as applicable.

As referenced in the above mitigation measures, cultural resource monitoring and treatment during construction would follow the procedures detailed in the *Cultural Resources Post-Review Discovery and Monitoring Plan* (Appendix E). This plan establishes protocols for archaeological and Native American monitoring during all ground-disturbing activities, including implementation of a Controlled Grade Procedure in sensitive areas and screening of soils within site CA-SDI-5445. It also provides a discovery protocol consistent with 36 CFR Section 800.13(a)(2), requiring immediate work stoppage within an

Environmentally Sensitive Area, notification of the Archaeological Principal Investigator, and consultation with the City, USEPA, State Historic Preservation Officer, and Consulting Tribes. Post-construction requirements include preparation of DPR 523 forms, a final monitoring report, and repatriation of Native American cultural materials to Consulting Tribes. These measures ensure compliance with CEQA and Section 106 of the NHPA and provide a framework for resolving post-review discoveries during Program implementation.

3.3.4.3 Issue 3: Human Remains

Would the proposed project disturb any human remains, including those interred outside of formal cemeteries?

Impact Analysis

While no formal cemeteries are known to occur in the immediate vicinity of the APE, the potential for encountering significant deposits or features, including human remains, during construction activities remains high given the rich cultural history of the area. Human remains have been found at site P-37-005445, which is crossed by the proposed OMG FM, MALS FM Replacement, and the Land Outfall Replacement (Part A). The potential exists to encounter human remains during ground disturbing activities. The potential for inadvertent disturbance of any human remains would be considered a significant impact, regardless of archaeological significance or association. As such, mitigation measure CUL-10 would be implemented.

Mitigation Measures

The following mitigation measure would be implemented during Program construction to mitigate potential impacts to human remains.

CUL-10 As specified by California Health and Safety Code Section 7050.5, if human remains are found on the project site during construction or during archaeological work, the person responsible for the excavation, or his or her authorized representative, shall immediately notify the San Diego County Office of the Medical Examiner by telephone. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains, for at least a 25-foot radius, shall occur until the Medical Examiner has made the necessary findings as to origin and disposition pursuant to California Public Resources Code 5097.98. If such a discovery occurs, a temporary construction exclusion zone shall be established surrounding the area of the discovery so that the area would be protected, and consultation and treatment could occur as prescribed by law. If suspected Native American remains are discovered, the remains shall be kept in-situ, or in a secure location in close proximity to where they were found, and the analysis of the remains shall only occur on-site in the presence of a Luiseño Native American monitor. By law, the Medical Examiner will determine within two working days of being notified if the remains are subject to their authority. If the Medical Examiner identifies the remains to be of Native American ancestry, he or she shall contact the NAHC within 24 hours. The NAHC shall make a determination as to the Most Likely Descendent.

3.3.5 Level of Significance After Mitigation

As described above, impacts related to a substantial adverse change in the significance of a historical resource would be **less than significant without mitigation**. Impacts related to a substantial adverse change in the significance of an archaeological resource would be **potentially significant** for construction of the Program components during ground-disturbing activities, such as clearing, trenching, and grading, requiring the implementation of mitigation. The proposed mitigation measures **CUL-1** through **CUL-9** would ensure impacts to archeological resources would be **less than significant with mitigation** through implementation of an archaeological and Native American monitoring and post-review discovery program aimed at mitigating potential impacts to archaeological resources.

Impacts related to the disturbance of human remains would also be **potentially significant** due to ground-disturbing activities. Implementation of **CUL-10,** which outlines the protocol for the inadvertent discovery of human remains, would ensure that potential impacts to human remains would be **less than significant with mitigation**.

3.3.6 References

HELIX Environmental Planning Inc. (HELIX). 2026a. Oceanside Sewer Improvements Program Cultural Resources Post-Review Discovery and Monitoring Plan. January.

2026b. Oceanside Sewer Improvements Program Cultural Resources Technical Report. January.

Meighan, C.W. 1954. A Late Complex in Southern California Prehistory. Southwestern Journal of Anthropology 10(2):215-227.

Parker, Patricia L. and Thomas F. King. 1998. Guidelines for Evaluating and Documenting Traditional Cultural Properties. National Park Service, Washington, D.C.

True, D.L., C.W. Meighan, and Harvey Crew. 1974. Archaeological Investigations at Molpa, San Diego County, California. University of California Publications in Anthropology, Vol 11.

Warren, Claude N., Gretchen Siegler, and Frank Dittmer. 1998. Paleoindian and Early Archaic Periods. In Prehistoric and Historic Archaeology of Metropolitan San Diego: A Historic Properties Background Study. Draft. ASM Affiliates. Report submitted to Metropolitan Wastewater, San Diego.

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3.4 ENERGY

This section addresses the potential energy-related impacts of the proposed Program. The following discussion includes a description of existing conditions as related to energy; a summary of applicable regulations; and an evaluation of the proposed Program's potential environmental effects associated with the wasteful, inefficient, or unnecessary consumption of energy resources and conflict with plans for renewable energy or energy efficiency. This section is based on information from the Air Quality, Greenhouse Gas Emissions, and Energy Technical Report prepared by HELIX (2026; Appendix B); the California Energy Demand (CED) 2020-2030 Revised Forecast (California Energy Commission [CEC] 2020); and the CEC's Final 2023 Integrated Energy Policy Report (IEPR; CEC 2024).

3.4.1 Environmental Setting

3.4.1.1 Existing Energy Consumption and Generation

Units of Measure

The units of energy used in this section are the British thermal units (BTU), kilowatt hour (kWh)[1], therms, and gallons. A BTU is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at sea level. Because the other units of energy can all be converted into equivalent BTU, the BTU is used as the basis for comparing energy consumption associated with different resources. A kWh is a unit of electrical energy, and one kWh is equivalent to approximately 3,413 BTU, taking into account initial conversion losses (i.e., from one type of energy, such as chemical, to another type of energy, such as mechanical) and transmission losses. Natural gas consumption is described typically in terms of cubic feet or therms; one cubic foot of natural gas is equivalent to approximately 1,050 BTU, and one therm represents 100,000 BTU. One gallon of gasoline/diesel is equivalent to approximately 125,000/139,000 BTU, respectively, taking into account energy consumed in the refining process.

Electricity

According to the U.S. Energy Information Administration (EIA), California used approximately 239,480 gigawatt hours (GWh) of electricity in 2023 (EIA 2024). Electricity usage in California for differing land uses varies substantially by the type of uses in a building, type of construction materials used in a building, and the efficiency of all electricity-consuming devices within a building.

San Diego Gas & Electric (SDG&E) provides electric services to 3.7 million customers across a 4,100-square-mile service area that includes the San Diego County and southern Orange County (SDG&E 2025a). SDG&E is a subsidiary of Sempra Energy and would provide electricity for the proposed Program. According to SDG&E, customers consumed approximately 3,895 million kWh of electricity in 2024 (SDG&E 2025b). SDG&E receives electric power from a variety of sources. According to the California Public Utility Commission's (CPUC's) 2024 California Renewables Portfolio Standard Annual Report, 48 percent of SDG&E's power came from eligible renewable energy sources in 2023, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (CPUC 2024).

[1] Kilowatt hours is the most commonly used measure of electrical consumption; however, due to the scope of this analysis, gigawatt hours (GWh; equivalent to one million kWh) is also used.

Baseline electricity consumption is forecasted to grow at a rate of approximately 1.7 percent annually through 2040 in California (CEC 2024).

Natural Gas

According to the EIA, California used approximately 2,087,461 million cubic feet of natural gas in 2023 (EIA 2025a). CPUC regulates natural gas utility service for approximately 10.8 million customers who receive natural gas from Pacific Gas & Electric (PG&E), Southern California Gas (SoCalGas), SDG&E, Southwest Gas, and several smaller natural gas utilities. CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage (CPUC 2021). SDG&E provides natural gas service to the Counties of San Diego and Orange and would provide natural gas to the proposed Program. SDG&E is a wholesale customer of SoCalGas and currently receives all of its natural gas from the SoCalGas system (CPUC 2021).

The majority of California's natural gas customers are residential and small commercial customers (core customers). These customers accounted for approximately 35 percent of the natural gas delivered by California utilities in 2018. Large consumers, such as electric generators and industrial customers (noncore customers), accounted for approximately 65 percent of the natural gas delivered by California utilities in 2018 (CPUC 2021).

CPUC regulates California natural gas rates and natural gas services, including in-state transportation over transmission and distribution pipeline systems, storage, procurement, metering, and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. Biogas (e.g., from wastewater treatment facilities or dairy farms) is just beginning to be delivered into the gas utility pipeline systems, and the State has been encouraging its development (CPUC 2021).

In 2017, California customers received 38 percent of their natural gas supply from basins located in the Southwest, 27 percent from Canada, 27 percent from the Rocky Mountains, and 8 percent from basins located within California (CPUC 2021). Natural gas from out-of-state production basins is delivered into California through the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Southern Trails, and Mojave Pipeline. The North Baja–Baja Norte Pipeline takes gas off the El Paso Pipeline at the California/Arizona border and delivers it through California into Mexico. The Federal Energy Regulatory Commission regulates the transportation of natural gas on interstate pipelines, and CPUC often participates in Federal Energy Regulatory Commission regulatory proceedings to represent the interests of California natural gas consumers (CPUC 2021).

Most of the natural gas transported through interstate pipelines, as well as some California-produced natural gas, is delivered through the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the backbone pipeline system is then delivered into local transmission and distribution pipeline systems or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline system, and some core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. CPUC has regulatory jurisdiction over 100,000 miles of transmission and distribution pipelines, and thousands more miles of service lines (CPUC 2021).

PG&E and SoCalGas own and operate several natural gas storage fields that are located in Northern and Southern California. These storage fields and four independently owned storage utilities—Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage—help meet peak-season natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently (CPUC 2021).

California's regulated utilities do not own any natural gas production facilities. All natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the Federal Energy Regulatory Commission in the mid-1980s and is determined by market forces. However, CPUC decides whether California's utilities have taken reasonable steps to minimize the cost of natural gas purchased on behalf of its core customers (CPUC 2021).

As indicated in the preceding discussion, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas is becoming available through existing delivery systems, thereby increasing the availability and reliability of resources.

Petroleum

According to the EIA, California used a total of approximately 649 million barrels of petroleum in 2023, with the majority (555 million barrels) used for the transportation sector (EIA 2025b). This total annual consumption equates to a daily use of approximately 1.8 million barrels of petroleum. There are 42 U.S. gallons in a barrel, so California consumes approximately 76 million gallons of petroleum per day, adding up to an annual consumption of 26 billion gallons of petroleum. In California, petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel.

Petroleum currently accounts for the majority of California's transportation energy consumption. However, technological advances, market trends, consumer behavior, and government policies could result in significant changes in fuel consumption by type and in total. At the federal and state levels, various policies, rules, and regulations have been enacted to improve vehicle fuel efficiency, promote the development and use of alternative fuels, reduce transportation-source air pollutants and greenhouse gas (GHG) emissions, and reduce vehicle miles traveled (VMT).

3.4.2 Regulatory Framework

Energy consumption is a significant source of GHG emissions. Regulations to address energy also address GHGs, resulting in some overlap in the discussions in the following text and Section 3.6, *Greenhouse Gas Emissions*. In addition to the federal, state, and local regulations directed at reducing GHG emissions through increased efficiencies presented in Section 3.6 (i.e., Executive Order [EO] S-3-05; EO B-30-15; AB 32; Senate Bill [SB] 32; SB 1078; SB 1368; SB X1-2; SB 350; SB 100; EO S-01-07; the CARB Scoping Plan), energy efficiency regulations that have the potential to influence the Program are discussed below.

3.4.2.1 Federal

Energy Independence and Security Act of 2007

House of Representatives Bill 6, the federal Energy Independence and Security Act of 2007, established new standards for a few equipment types not already subjected to a standard, and updated some existing standards. Perhaps the most substantial new standard that House of Representatives Bill 6 established is for general service lighting that is being deployed in two phases. First, phased in between 2012 through 2014, common light bulbs were required to use about 20 to 30 percent less energy than previous incandescent bulbs. Second, by 2020, light bulbs were required to consume 60 percent less energy than previous incandescent bulbs; this requirement will effectively phase out the incandescent light bulb.

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 is responsible for establishing additional vehicle standards. In 2010, fuel economy standards were set at 27.5 miles per gallon for new passenger cars and 23.5 miles per gallon for new light-duty trucks. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States.

3.4.2.2 State

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the CEC. The Act established state policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields.

Integrated Energy Policy Report

SB 1389 (Chapter 568, Statutes of 2002; PRC 25300–25323) required CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop and evaluate energy policies and programs that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (PRC Section 25301[a]). This work culminated in the IEPR.

CEC adopts an IEPR every two years and an update every other year. The 2023 IEPR is the most recent IEPR, which was adopted in February 2024. The 2023 IEPR provides a summary of priority energy issues currently facing the state, outlining strategies and recommendations to further the state's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the IEPR include gas decarbonization, energy efficiency, the Clean Transportation program, AB 1257, and publicly owned utilities' progress toward peak demand reserves and margins. The report also discusses the speeding connection of clean resources to the electricity grid, the potential use of clean and renewable hydrogen, and the California demand Forecast to 2040.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statues of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan (SAF Plan) in partnership with CARB and in consultation with other state, federal, and local agencies. The SAF Plan presents strategies and actions California must take to increase the use of alternative nonpetroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The SAF Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Executive Order S-06-06

EO S-06-06, signed on April 25, 2006, by former Governor Arnold Schwarzenegger, establishes targets for the use and production of biofuels and biopower, and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation. The EO establishes the following target to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels within California by 2010, 40 percent by 2020, and 75 percent by 2050. The EO also calls for the state to meet a target for use of biomass electricity. The 2011 Bioenergy Action Plan identifies those barriers and recommends actions to address them so that the state can meet its clean energy, waste reduction, and climate protection goals. The 2012 Bioenergy Action Plan updates the 2011 plan and provides a more detailed action plan to achieve the following goals:

- Increase environmentally and economically sustainable energy production from organic waste;
- Encourage development of diverse bioenergy technologies that increase local electricity generation, combined heat and power facilities, renewable natural gas, and renewable liquid fuels for transportation and fuel cell applications;
- Create jobs and stimulate economic development, especially in rural regions of the state; and
- Reduce fire danger, improve air and water quality, and reduce waste.

Energy Action Plan II

The CEC, California Power Authority, and CPUC adopted an Energy Action Plan (EAP) to establish goals for California's energy future and a means to achieve these goals. EAP II supports and expands on the commitment of state agencies to cooperate and reflect on the energy actions since original EAP adoption. EAP II includes a coordinated implementation plan for state energy policies that have been articulated through EOs, instructions to agencies, public positions, and appointees' statements; the CEC's IEPR; CPUC and CEC processes; agencies' policy forums; and legislative direction.

3.4.2.3 Local

SDG&E Integrated Resource Planning

SDG&E's long-term electricity resource planning is conducted through the CPUC's Integrated Resource Planning (IRP) process. The IRP is the CPUC's process for evaluating and guiding the state's electric system needs, ensuring that load-serving entities (LSEs), including SDG&E, procure resources needed to maintain safe, reliable, and cost-effective electric service while meeting statewide GHG reduction and clean energy goals. The IRP process evaluates statewide and utility-specific needs across several categories, including system reliability needs, local capacity needs, and flexibility needs associated with variable renewable generation. The CPUC undertakes this planning on a biennial cycle, using a 10-year planning horizon and incorporating inputs from the California Energy Commission's demand forecasts and the California Independent System Operator's transmission planning assumptions. As part of each IRP cycle, SDG&E must prepare and submit an **IRP**, demonstrating how its portfolio of energy resources, including existing resources, planned contracts, and anticipated procurement, will meet CPUC-established GHG targets, reliability requirements, and statutory mandates related to energy efficiency, renewable energy, and clean energy procurement. The CPUC aggregates all LSE plans to develop a statewide **Preferred System Plan**, which identifies the mix of resources needed to meet California's clean energy goals and informs future procurement directives.

Through the IRP process, SDG&E is required to prioritize energy efficiency and demand response, followed by renewable and zero-carbon resources, consistent with clean electricity targets established in Senate Bill 350 and Senate Bill 100. When necessary, the CPUC may issue decisions requiring SDG&E to procure additional resources to satisfy statewide or regional reliability needs. These procurement directives often support the development of energy storage, renewable energy, clean firm generation, and other resources critical to maintaining grid reliability as the grid transitions away from fossil fuels.

City of Oceanside's General Plan

The City's General Plan General Plan takes steps to address energy by including policies for improving energy efficiency, reducing waste, recycling, and managing water use. The City's General Plan also seeks to reduce energy consumption through minimizing VMT; creating increased opportunities for transit, pedestrians, and bicycles; and encouraging and approving green building and land development conservation initiatives. The following policies identified in the City's General Plan are applicable to the proposed Program (City of Oceanside 1975, 2002, 2012):

Circulation Element

- **Policy 2.5:** The City will strive to incorporate complete streets throughout the Oceanside transportation network which are designed and constructed to serve all users of streets, roads and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or using transit.

- **Policy 2.6:** The City will strive to stay up-to-date with legislation and emerging technologies as it relates to complete streets and multimodal analysis.

- **Policy 4.1:** The City shall encourage the reduction of VMT, reduction of the total number of daily and peak hour vehicle trips, and provide better utilization of the circulation system through development and implementation of TDM (transportation demand management) strategies.

These may include, but not limited to, implementation of peak hour trip reduction, encourage staggered work hours, telework programs, increased development of employment centers where transit usage is highly viable, encouragement of ridesharing options in the public and private sector, provision for park-and-ride facilities adjacent to the regional transportation system, and provision for transit subsidies.

- **Policy 4.9:** The City shall look for opportunities to incorporate TDM programs into their Energy Roadmap that contributes to state and regional goals for saving energy and reducing greenhouse gas emissions.

The Circulation Element also includes the Bicycle Master Plan included as Appendices A and B to the element, respectively.

Land Use Element

- **Bicycle Facilities**
    - **Policy A:** Development shall provide Class II Bikeways (Bike Lanes) on all secondary, major, and prime arterials.
    - **Policy D:** The use of land shall integrate the Bicycle Circulation System with auto, pedestrian, and transit systems:
        1. Development shall provide short-term bicycle parking and long-term bicycle storage facilities such as bicycle racks, pedestal posts, and rental bicycle lockers.
        2. Development shall provide safe and convenient bicycle access to high activity land uses, such as schools, parks, shopping, employment, and entertainment centers.
- **Pedestrian**
    - Policy A: The construction of five (5) foot wide sidewalks adjacent to the curb shall be required in all new developments and street improvements.
- **Transit System**
    - **Policy A:** The City shall coordinate and encourage the existing bus system to serve newly developed areas.
- **Energy**
    - **Policy A:** The City shall encourage the design, installation, and use of passive and active solar collection systems.
    - **Policy B:** The City shall encourage the use of energy efficient design, structures, materials, and equipment in all land developments or uses.
    - **Policy C:** The City shall encourage the use of long-term lower cost energy sources.

Environmental Resource Management Element

- The City will continue to cooperate with the SDAPCD Board. This will include participation in the development of the Regional Air Quality Strategy (RAQS) through cooperation with the San Diego County Air Quality Planning Team.

3.4.3 Thresholds of Significance

The following criteria from Appendix G of the CEQA Guidelines are used as thresholds of significance to determine the impacts of the proposed Program as related to energy. The proposed Program would have a significant impact if it would:

1. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during Program construction or operation; or

2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

3.4.4 Program Impacts and Mitigation

3.4.4.1 Issue 1: Wasteful, Inefficient, or Unnecessary Energy Consumption

Would the proposed Program result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis

Construction Energy Use

Construction activities would require the use of diesel fuel, gasoline, and other fuels. Energy use during construction typically involves the use of motor vehicles for transportation of workers and materials and the use of motorized equipment for direct construction actions such as moving soil and demolishing structures. The estimated combined construction energy that would be used during construction activities is shown in Table 3.4-1, *Construction Energy Use*. As shown in Table 3.4-1, total Program construction activities would result in the consumption of approximately 179,491 gallons of diesel fuel and approximately 16,155 gallons of gasoline. The total construction energy use would be approximately 26,952 million British thermal units (MMBTUs).

Table 3.4-1
CONSTRUCTION ENERGY USE

Source	Diesel (gallons)	Gasoline (gallons)	Total Energy (MMBTU)
Off-Road Construction Vehicles	179,378	--	24,934
On-Road Construction Vehicles	113	16,155	2,019
TOTAL[1]	179,491	16,155	26,952

Source: HELIX 2026; Appendix B.
[1] Totals may not sum due to rounding.
MMBTU = million British thermal units per year

Construction activities are not anticipated to result in an inefficient use of energy. Since the use of gasoline and diesel fuel would be a significant portion of construction costs, contractors and equipment operators would minimize the use of fuel to only what is necessary for implementation of construction activities. Construction equipment would be maintained in optimal working order and rated energy efficient and on-site vehicle idling would be minimized to reduce the use of gasoline and diesel. These requirements would be verified in the field by the City's Owner's Agent/construction management personnel as part of standard construction management protocol.

Due to the short-term nature of the construction activities and the total amount of diesel and gasoline fuel anticipated to be consumed, the Program's consumption of energy (primarily diesel fuel) during construction would not represent a substantial demand on energy resources or result in the need to develop any new, or alter any existing, energy production or distribution facilities. In addition, construction-related energy would not be used in a wasteful, inefficient, or unnecessary manner.

Operational Energy Use

Energy use associated with operation would occur from electricity use at the OMG Lift Station and diesel fuel use from the emergency generator. The OMG Lift Station is anticipated to consume up to 800 MWh of electricity per year. Although flows that previously moved through the system by gravity would now require pumping, the OMG Lift Station would be designed and constructed in compliance with the California Plumbing Code and CALGreen requirements, which ensure incorporation of energy-efficient mechanical and electrical systems. These efficiency measures would help minimize additional operational energy demand and keep long-term energy costs down.

The emergency generator is estimated to consume a total of 48 gallons of diesel fuel per year and would meet applicable industry standard requirements. The OMG Lift Station would operate on an on-demand basis, with pumping occurring only as needed to convey flows that previously moved through the system by gravity, thereby minimizing unnecessary energy consumption. The Program's overall operational energy is summarized in Table 3.4-2, *Operational Energy Use*. As shown therein, the total operational energy use is estimated to be 2,736 MMBTU per year.

Table 3.4-2
OPERATIONAL ENERGY USE

Source	Diesel (gallons)	Electricity (MWh)	Total Energy (MMBTU)
Emergency Generator	48	--	7
OMG Lift Station Pumps	--	800	2,730
TOTAL[1]	48	800	2,736

Source: HELIX 2026; Appendix B.
[1] Totals may not sum due to rounding.
MMBTU = million British thermal units per year

The purpose of the Program is to make necessary improvements to the existing sewer infrastructure, as well as additional infrastructure necessary to accommodate planned growth in the area. Energy usage would be limited to operations necessary for successful completion of the Program. The OMG Lift Station would undergo review and approval by the City's Building Department and would be required to comply with applicable provisions of the California Plumbing Code and California Green Building Standards Code (CALGreen), which include requirements related to energy-efficient equipment,

operational efficiency, and resource conservation. Therefore, the Program would not consume energy in a wasteful, inefficient, or unnecessary manner, and impacts would be less than significant**.**

Mitigation Measures

Impacts related to the wasteful, inefficient, or unnecessary consumption of energy resources during Program construction and operation would be less than significant; therefore, no mitigation is necessary.

3.4.4.2 Issue 2: Conflict with Energy Plans

Would the proposed Program conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact Analysis

The Program is located within the SDG&E planning area, which is covered by the CPUC's IRP process. The IRP evaluates statewide and utility-specific system, local, and flexibility needs on a biennial 10-year horizon and authorizes procurement and transmission planning necessary to maintain reliable and cost-effective service. The City's sewer improvements would add a small, routine operational electric load (primarily at the proposed OMG Lift Station), which would be interconnected to SDG&E's distribution system and served within SDG&E's IRP-governed planning and procurement framework. SDG&E implements CPUC IRP decisions, including Preferred System Plan portfolios and related reliability procurements, to ensure that forecast loads are met, and conducts solicitations as needed to bring new capacity online. Because the Program's incremental load falls within the normal range of demand variation anticipated in the IRP and would be served through standard utility interconnection and IRP-directed procurement as needed, the Program would be consistent with the IRP framework.

The energy-related policies contained in the City's General Plan focus on reducing energy consumption through minimizing VMT, encouraging green building, reducing waste, recycling, and managing water use. These policies are generally not applicable to the Program. To ensure consistency with City policy and reduce energy demand associated with material production and disposal, construction debris generated by the Program would be recycled through a City-approved construction debris recycling program included in the contract documents. These requirements would be verified in the field by the City's Owner's Agent/construction management personnel as part of standard construction management protocol. As described above, the OMG Lift Station would be required to comply with applicable provisions of the California Plumbing Code and CALGreen, which include requirements related to energy-efficient equipment, operational efficiency, and resource conservation. As such, impacts would be less than significant related to conflict with or obstruction of an energy plan.

Mitigation Measures

Impacts related to conflict with a state or local plan for renewable energy or energy efficiency would less than significant; therefore, no mitigation is necessary.

3.4.5 Level of Significance After Mitigation

Impacts associated with consumption of energy in a wasteful, inefficient, or unnecessary manner during Program construction and operation would be **less than significant** with no mitigation required. Impacts

associated with conflicting with or obstructing implementation of a state or local plan for renewable energy or energy efficiency, including the SDG&E IRP process, would be **less than significant** with no mitigation required.

3.4.6 References

California Energy Commission (CEC). 2024. Final 2023 Integrated Energy Policy Report (IEPR). February 14. Available at: https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report-iepr/2023-integrated-energy-policy-report.

California Public Utilities Commission (CPUC). 2024. 2024 California Renewables Portfolio Standard Annual Report. November. Available at: https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/office-of-governmental-affairs-division/reports/2024-california-renewables-portfolio-standard-rps-annual-report.pdf.

2021. Natural Gas and California. Available at: https://www.cpuc.ca.gov/industries-and-topics/natural-gas/natural-gas-and-california. Accessed July 2021.

Helix Environmental Planning, Inc. (HELIX). 2026. Air Quality, Greenhouse Gas Emissions, and Energy Technical Report. January.

San Diego Gas and Electric (SDG&E). 2025a. About us. Available at: https://www.sdge.com/more-information/our-company/about-us. Accessed May 14, 2025.

2025b. Energy Data Access. Available at: https://energydata.sdge.com/. Accessed May 15, 2025.

U.S. Energy Information Administration (EIA). 2025a. Natural Gas Consumption by End Use. Released April 30, 2025. Available at: https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm. Accessed May 14, 2025.

2025b. California State Profile and Energy Estimates – Table F16: Total Petroleum Consumption Estimates, 2019. Available at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=CA. Accessed May 14, 2025.

2024. State Electricity Profiles: California. Last updated October 23, 2024. Available at: https://www.eia.gov/electricity/state/. Accessed May 14, 2025.

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3.5 GEOLOGY AND SOILS

This section addresses the potential impacts of the proposed Program related to geology and soils. The following discussion includes a description of the environmental setting, a summary of applicable regulations, and an evaluation of the proposed Program's potential environmental effects associated with direct or indirect substantial adverse effects, including seismic hazards, erosion and sedimentation, geologic instability, expansive soils, septic tanks, and paleontological resources.

3.5.1 Environmental Setting

3.5.1.1 Geologic Setting

The Program area is located within the coastal sub-province of the Peninsular Ranges Geomorphic Province that defines the City's geologic setting and is characterized by northwest-trending mountain ranges separated by subparallel fault zones. The local geology consists mostly of Santigo formation and quaternary alluvium comprised of unconsolidated clay, silt, sand, and gravel. Coarse-grained sedimentary rocks underly the area, along with alluvial formations from the San Luis Rey River, Loma Alta Creek, and Buena Vista Creek beds (City 2024).

3.5.1.2 Seismic Setting

While the Program area does not cross any known active or potentially active faults, like most of southern California the City is considered seismically active and susceptible to earthquakes resulting from fault movement. As such, the Program area is in a seismically active region that will be subjected to future seismic shaking and seismically induced ground formation during earthquakes generated by any of several surrounding active faults. Major known active fault zones in the Southern California region include the Newport-Inglewood Fault, Rose Canyon Fault, Lake Elsinore Fault, and San Jacinto Fault, the nearest of which are the Elsinore Fault located northeast of the City that runs through Lake Elsinore, Temecula, and southern Riverside County; and the Rose Canyon Fault located to the south trending in a north-northeasterly direction through downtown San Deigo, Mission Bay, Pacific Beach and La Jolla.

3.5.1.3 Seismic Hazards

Fault Rupture

Surface rupture occurs when movement on a fault breaks through to the surface. This rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Fault rupture almost always follows preexisting faults, which are zones of weakness. Fault rupture from fault displacement can adversely affect surface and subsurface structures and facilities. As noted above, the Program area does not cross any known active or potentially active faults; therefore, fault rupture is not a seismic hazard that would potentially occur within the proposed Program area.

Seismic Ground Shaking

Earthquakes on major faults can produce strong ground shaking, which is defined as the effect of surface motion generated by an earthquake that results in most of the damage during seismic events. Several factors determine how ground shaking interacts with structures, including the size of the earthquake, the type of ground the earthquake waves travel through, and the distance away from the

earthquake source. Seismic ground shaking, which may occur at the proposed Program area, can affect the integrity of surface and subsurface facilities such as projects identified by the proposed Program, either directly from vibration-related damage to rigid structures, or indirectly through associated hazards including liquefaction, as described below.

Liquefaction

Liquefaction is a phenomenon in which loose, saturated, granular soils lose shear strength and behave like a fluid when subjected to high-intensity ground shaking. It typically occurs under three main conditions: shallow groundwater, low-density non-cohesive soils (with less than 70 percent relative density and low clay/silt content), and high-intensity seismic motion. Liquefaction is generally most likely at depths shallower than 50 feet. Its impacts can include lateral spreading (horizontal displacement on sloped surfaces), ground lurching (permanent shifts of the ground surface), subsidence, collapse of soils, and loss of support for structures, pavements, foundations, and utilities. Within the Program area's vicinity, liquefaction zones are primarily associated with alluvial valley deposits near waterways, including the San Luis Rey River, Loma Alta Creek, and Buena Vista Creek (City 2024). There are no California Geological Survey Liquefaction Zones in the Program area (DOC 2024), and liquefaction hazards are therefore considered low.

Landslides

Landslides occur when masses of rock, earth, or debris move downslope, including rock falls, mudflows, deep slope failures, and shallow debris flows. Their occurrence is influenced by both natural and human factors, such as slope grade and height, geologic and soil characteristics, vegetation cover, moisture levels, precipitation, and the surface or subsurface flow of water. Human activities such as grading, construction, irrigation, and mining can further destabilize slopes. Landslides are often triggered by other hazards, including fires, floods, and especially earthquakes, which may cause seismically induced landslides and rock falls on steep or compromised slopes. The California Geological Survey has classified most of the City as landslide susceptibility class 0 or III (Low Risk). Based on review of landslide potential mapping of San Diego County, there are no California Geological Survey Landslide Zones in the Program area (DOC 2024).

3.5.1.4 Geologic Instability Hazards

Subsidence

Potential hazards related to regional subsidence are typically associated with conditions such as karst/limestone terrain (i.e., the formation of subsurface cavities by dissolution of soluble rocks), subsurface mining, large-scale groundwater or oil and gas withdrawal, or decomposition of thick organic (peat) layers. Subsidence can result in a loss of support capability within the associated soil or formational materials and/or differential settlement (different degrees of settlement over relatively short distances), potentially resulting in damage to surface and subsurface structures such as buildings, pavement, and utilities. The County of San Diego's Multi-Jurisdictional Hazard Mitigation Plan determined that subsidence is of minimal concern within the County of San Diego due to the region's granitic soils, which are less prone to subsidence. Further, the plan found a lack of historical record of subsidence within the region (County of San Diego 2023).

Collapsible Soils

Surficial materials including non-engineered fill, topsoil, and alluvial deposits may be susceptible to hydro-collapse, a process in which loose, dry soils undergo rapid consolidation (collapse) when wetted. This phenomenon is most common in arid and semi-arid areas, with the associated effects generally localized but potentially substantial and including differential settlement as noted above for subsidence. As the Program alignment occurs within areas containing the noted surficial materials, there is potential for collapsible soils to be present.

Expansive Soils

Expansive (or shrink-swell) behavior in soils is attributable to the water-holding capacity of clay minerals and can adversely affect the integrity of facilities such as foundations, pavement, and underground pipelines. Expansive soils can exacerbate the risk of landslides and slope failure, as well as damage infrastructure and buildings. Expansive soils are certain types of clay that expand and contract depending on their moisture content. For areas on a slope where these clays underlie more rigid topsoil, landslides may occur when moisture in the clay increases and the clay becomes unstable. This causes the overlying soil to slip, or move, leading to soil creep or landslides, and posing a risk to people, buildings, and infrastructure in the area. Mapping of expansive soils in the County shows the majority of potential expansive soils are located within the incorporated areas in western San Diego County. The majority of the Program area is underlain with soil types that contain low percentages of clay (lower than 20 percent; UC Davis 2023) and the potential for expansive soils underlying the Program would be low.

3.5.1.5 Paleontological Setting

Paleontological resources (i.e., fossils) are evidence of ancient life. This includes the remains of the body of an organism, such as bones, skin impressions, shell, or leaves, as well as traces of an organism's activity, such as footprints or burrows, called trace fossils. In addition to the fossils themselves, geologic context is an important component of paleontological resources, and includes the stratigraphic placement of the fossil as well as the characteristics of the rock, in order to assess the ecological setting at the time the fossil was formed, the depositional environment, and how the fossil was formed.

It is important to note that fossils are preserved in the subsurface and are encountered when exposed by natural processes like erosion or artificial processes like excavation. For the purposes of assessments of paleontological resource potential, paleontologists rely upon the geologic units at the surface and in the subsurface, and the potential of these units to preserve fossils, as well as the nature of these fossils and what their scientific importance might be. The majority of the City, including the Program area, is identified in the City of Oceanside Draft Program Environmental Impact Report (City 2024) as underlain by high paleontological sensitivity areas.

3.5.2 Regulatory Framework

3.5.2.1 Federal

International Building Code

The International Building Code (IBC) is the building code that provides the minimum requirements that must be implemented throughout the United States and its territories. It is an essential tool to preserve public health and safety that provides safeguards from hazards associated with the built environment. It

addresses design and installation of innovative materials that meet or exceed public health and safety goals. Provisions within the IBC are intended to ensure that structures can adequately resist seismic forces during earthquakes. These seismic provisions provide guidance on how structures should be designed and constructed to limit seismic risk.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act (PRPA) directs the U.S. Department of the Interior and U.S. Department of Agriculture to manage and protect paleontological resources on federal land using "scientific principles and expertise," including plans for inventory, monitoring, and the scientific and educational use of paleontological resources (16 U.S.C. Section 470aaa). To formulate a consistent paleontological resources management framework, the PRPA incorporates most of the recommendations from the report of the Secretary of the Interior titled "Assessment of Fossil Management on Federal and Indian Lands" (U.S. Department of the Interior 2000). The PRPA officially recognizes the scientific importance of paleontological resources by declaring that Section 2, Federal Lands & Policy Management Act of 1962 (30 U.S.C. 611; Subpart 3631.0 *et seq*., Federal Register Vol. 47, No. 159, 1982) does not refer specifically to paleontological resources. However, paleontological resources are understood and recognized in policy as scientific resources, as recognized with the passage of the PRPA. Under the Federal Lands & Policy Management Act, federal agencies are charged to:

- Manage public lands in a manner that protects the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, archaeological, and water resources, and, where appropriate, preserve and protect certain public lands in their natural condition (Section 102);
- Periodically inventory public lands so that the data can be used to make informed land-use decisions (Section 102); and
- Regulate the use and development of public lands and resources through easements, licenses, and permits (Section 302; 43 U.S.C. Sections 1701 and 1732).

3.5.2.2 State

California Building Standards Code (Title 24)

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was adopted based on the IBC to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of entering and exiting facilities, and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California.

The CBC provides requirements for general structural design and includes means for determining earthquake loads. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of

the structure, which the structure then must be designed to withstand. According to the CBC, structures should be able to: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some nonstructural damage; and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Although no guarantees can be made, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

Seismic design specifications are determined according to the seismic design category in accordance with Chapter 16 of the CBC. Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), loadbearing of soils (Section 1806), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). For certain seismic design categories, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses measures to be considered in structural design, which may include ground stabilization, selecting appropriate foundation type and depths, selecting appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Greenbook Standard Specifications

The Greenbook Standard Specifications for Public Works Construction (Greenbook) provides standard specifications for public works projects, including measures related to geologic issues such as soil testing, grading and excavation, pipeline construction and joints, and design/construction of concrete and masonry features. Like the IBC and CBC, the Greenbook is regularly updated to reflect current industry standards and practices.

Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act)

The Alquist-Priolo Act was passed in 1972 to provide a mechanism for reducing losses from surface fault rupture on a statewide basis. The main intent of the Alquist-Priolo Act is to ensure public safety by preventing the construction of buildings used for human occupancy on the surface trace of active faults. The Alquist-Priolo Act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The law requires the State Geologist to establish regulatory zones, known as Earthquake Fault Zones, around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. Local agencies must regulate most development projects within the zones.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (California PRC Section 2690 *et seq*.) addresses earthquake hazards from non-surface fault rupture, including liquefaction, landslides, strong ground shaking, and other earthquake and geologic hazards for structures intended for human occupancy. 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. In addition, the related California Geological Survey Special Publications 117, *Guidelines for Evaluating and Mitigating Seismic Hazards in California* (California Geological Survey 2008), provides guidance for the evaluation and mitigation of earthquake-related hazards for applicable projects.

Construction General Permit

As authorized by the federal Clean Water Act, the National Pollutant Discharge Elimination System General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, otherwise referred to as the Construction General Permit (CGP), regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from certain construction sites. Administered by and through the State Water Resources Control Board and nine Regional Boards, the CGP requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs, including, but not limited to, erosion control. For Linear Underground/Overhead Projects, the permit for waste discharge requirements states that one of the following conditions must be met: (1) at least 70 percent of pre-existing vegetative cover is reestablished following construction; (2) in areas that were not previously vegetated, sites are returned to original grade and/or soils are compacted; or (3) equivalent measures such as blankets, soil cement, or geotextiles are installed. Routine inspection of all BMPs is required under the provisions of the CGP. In addition, the SWPPP is required to contain a visual monitoring program for erosion.

California Public Resources Code

The California PRC (Chapter 1.7, Section 5097) includes state-level requirements for the assessment and management of paleontological resources. These statutes require reasonable mitigation of adverse impacts to paleontological resources resulting from development on non-federal public lands, define the removal of paleontological sites or features from state lands as a misdemeanor, and prohibit the removal of any paleontological site or feature from state land without permission of the applicable jurisdictional agency.

3.5.2.3 Local

Standards related to potential geologic hazards, generally for occupied buildings, are developed by local agencies and jurisdictions. Local agencies incorporate such standards into sources such as general plans and municipal codes. Typically, these standards encompass the types of federal and state regulatory and industry standards outlined above. They include requirements for appropriate geotechnical analyses and remediation for development projects based on site-specific conditions. The City has adopted standard specifications related to geologic hazards that apply to its infrastructure. This includes the City's Code of Ordinances Chapter 6 Article III, which adopts the CBC as the Building Code for the City.

3.5.3 Thresholds of Significance

The following criteria from Appendix G of the CEQA Guidelines are used as thresholds of significance to determine the impacts of the proposed Program as related to geology and soils, including paleontological resources. The proposed Program would have a significant impact if it would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction, or landslides;

2. Result in substantial soil erosion or the loss of topsoil;

3. Result in on or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse by being located on a geologic unit or soil that is unstable, or that would become unstable as a result of the proposed project;

4. Create substantial direct or indirect risks to life or property by being located on expansive soil;

5. 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; or

6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

3.5.4 Program Impacts and Mitigation

3.5.4.1 Issue 1: Seismic Hazards

Would the proposed Program expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
ii. Strong seismic ground shaking?
iii. Seismic-related ground failure, including liquefaction?
iv. Landslides?

Impact Analysis

Rupture/Ground Shaking

No known active or potentially active faults exist on or are adjacent to the Program alignment (California Department of Conservation [DOC] 2015). Additionally, the Program is not located within an Alquist-Priolo Earthquake Fault (DOC 2024). Ground surface rupture or cracking of the ground surface due to an active fault is therefore considered unlikely in the Program area.

Due to regional proximity to major known active fault zones such as the Newport-Inglewood Fault, Rose Canyon Fault, Lake Elsinore Fault, and San Jacinto Fault, the Program area lies in a seismically active region. The nearest active fault zones are the Lake Elsinore Fault, located over 35 miles from the Program area at the nearest point; and the Rose Canyon Fault, located over 30 miles from the Program area at the nearest point. The Program components are likely to be subjected to strong ground motion from seismic activity similar to that of the rest of the San Diego County and Southern California, due to the seismic activity of the region as a whole.

Each Program component would be designed and constructed in accordance with applicable federal, state, and local requirements intended to protect life and property from earthquake hazards. The City of Oceanside adopts and enforces the California Building Standards Code (Title 24), including the California Building Code (CBC), which is updated on a triennial cycle and locally implemented through the City's

building regulations. The CBC incorporates nationally recognized seismic loading criteria through referenced standards to establish seismic design parameters and required structural resistance to earthquake effects. Compliance with these codes and referenced standards, as enforced through plan review and permitting, would reduce risks associated with seismic shaking and would ensure Program facilities are engineered to applicable seismic performance requirements.

Liquefaction

There are no California Geological Survey Liquefaction Zones in the Program area (DOC 2024), and liquefaction hazards are therefore considered low. Regardless, during design of Program components, engineers would assess potential for liquefaction to confirm the potential for liquefaction hazards is low and incorporate protective measures, as necessary. Pipelines would be installed within consolidated, properly compacted engineered backfill materials designed to provide uniform support and reduce the potential for ground deformation. Additionally, design and construction of Program components would comply with applicable federal, state, and local codes, standards, and regulations (including the IBC and CBC), which incorporate requirements for geotechnical evaluation and foundation design intended to reduce risks associated with liquefaction and other earthquake-induced ground failures. Compliance with these standards would ensure that structures and people are protected from the effects of liquefaction with implementation of the Program.

Landslides/Slope Instability

Based on review of landslide potential mapping of San Diego County, there are no California Geological Survey Landslide Zones in the Program area (DOC 2024), and landslide hazards are therefore considered low. Regardless, design of each Program component would comply with applicable federal, state, and local codes, standards, and regulations (including the IBC and CBC) designed to protect structures and people from the effects of landslides. No slopes would be created during construction of Program components that would result in effects associated with landslides or slope instability. Additionally, upon the completion of construction, the pipelines would be underground, and the OMG Lift station would not have permanent employees, thus reducing the risk of hazard to people.

With compliance with applicable codes, standards, and regulations, the Program would not expose people or structures to potential substantial adverse effects related to fault rupture, seismic ground shaking, seismic-related ground failure, or landslides. Impacts would be **less than significant**.

Mitigation Measures

Impacts related to seismic hazards would be less than significant; therefore, no mitigation is necessary.

3.5.4.2 Issue 2: Erosion and Sedimentation

Would the proposed Program result in substantial soil erosion or the loss of topsoil?

Impact Analysis

The potential for erosion would temporarily increase during construction activities as a result of ground disturbance from vehicles, heavy equipment, trenching, and general earth work that could accelerate the erosion process. Wind erosion could occur on exposed soils or disturbed areas, where vehicles and equipment cause dust. However, potential erosion impacts would be minimized through compliance

with the City's Grading Ordinance, which establishes the requirements for erosion control, stabilization, and proper grading practices. Construction activities would also be subject to implementation of best management practices required under each project-specific SWPPP that would be required to be prepared and implemented for the Program components to control erosion, sedimentation, and dust generation (refer to Section 4.3, Hydrology and Water Quality, for more information). With adherence to these applicable regulations and implementation of BMPs, impacts related to erosion would be **less than significant**.

Mitigation Measures

Impacts related to erosion and sedimentation would be less than significant; therefore, no mitigation is necessary.

3.5.4.3 Issue 3: Geologic Instability

Would the proposed Program be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Program, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Impact Analysis

As described above, the Program area has low susceptibility to landslides or liquefaction, including related effects involving lateral spreading (horizontal displacement on sloped surfaces), ground lurching (permanent shifts of the ground surface), subsidence, and collapse of soils. Design and construction of the proposed Program components would comply with applicable federal, state, and local codes, standards, and regulations designed to protect structures and people from the effects of unstable soil (including the IBC and CBC), which include incorporation of geotechnical evaluation and foundation design intended to reduce risks associated with unstable soils. Compliance with these standards would ensure that impacts related to landslides, lateral spreading, subsidence, liquefaction, and collapse would be **less than significant**.

Mitigation Measures

Impacts related to geologic instability would be less than significant; therefore, no mitigation is necessary.

3.5.4.4 Issue 4: Expansive Soil

Would the proposed Program 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?

Impact Analysis

As described above, the potential for expansive soils underlying the Program is low. Nevertheless, design and construction of each Program component would comply with applicable federal, state, and local codes, standards, and regulations (including the IBC and CBC), which contain requirements for geotechnical investigation, foundation design, and soil treatment to address expansive soil conditions where present. With adherence to these requirements, impacts related to expansive soils would be **less than significant**.

Mitigation Measures

Impacts related to expansive soils would be less than significant; therefore, no mitigation is necessary.

3.5.4.5 Issue 5: Septic Tanks

Would the proposed 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?

Impact Analysis

The Program does not require the use of septic tanks or alternative waste water disposal systems. No impact would occur.

Mitigation Measures

No impacts to septic tanks or alternative wastewater disposal systems would occur; therefore, no mitigation is required.

3.5.4.6 Issue 6: Paleontological Resources

Would the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact Analysis

Construction of the Program components would involve a variety of ground-disturbing activities, including grading, trenching, excavating, and tunneling. The potential for encountering significant paleontological deposits or features during construction activities is considered high given most of the Program alignment and components are within areas classified as having a high paleontological sensitivity (City 2024). The potential for inadvertent disturbance of any paleontological resources would be considered a potentially significant impact.

Mitigation Measures

The following mitigation measure would be implemented during Program construction to mitigate potential impacts to paleontological resources:

GEO-1 At least 45 days prior to the issuance of the Notice to Proceed for each Project Component, the City of Oceanside Water Utilities Department or its Designated Representative(s) shall provide a written and signed letter to the City of Oceanside Planning Division stating that a Qualified Paleontologist been retained at the City or Contractor's expense to implement the paleontological resources monitoring program. A Qualified Paleontologist is defined as an individual with an MS or PhD in paleontology or geology who is familiar with paleontological procedures and techniques and has expertise in local geology, stratigraphy, and biostratigraphy. The Qualified Paleontologist shall perform the following:

- Attend the pre-construction meeting and provide worker environmental awareness training at the preconstruction meeting as well as at the jobsite the day grading is to be

initiated. In addition, the Qualified Paleontologist shall inform the grading contractor and City Engineer of the paleontological monitoring program methodologies.

- Identification of where paleontological monitoring of excavations impacting the San Diego Formation, Old Alluvial Floodplain Deposits, and deep excavations (greater than five feet below the ground surface) in areas underlain by Young Alluvial Floodplain Deposits is required within each Program component site based on construction plans and/or geotechnical reports.

- Procedures for adequate paleontological monitoring (including necessary monitoring equipment), methods for treating fossil discoveries, fossil recovery procedures, and sediment sampling for microvertebrate fossils, including the following requirements:

  - A paleontological monitor shall be on site at all times during the original cutting of previously undisturbed sediments of moderately to highly sensitive geologic units (e.g., San Diego Formation, Old Alluvial Floodplain Deposits, and excavations below a depth of five feet below the ground surface in areas underlain by Young Alluvial Floodplain Deposits) to inspect cuts for contained fossils. (A paleontological monitor is defined as an individual who has experience in the collection and salvage of fossil materials.) The paleontological monitor shall work under the direction of a Qualified Paleontologist. Monitoring is not required during shallow excavations within Young Alluvial Floodplain Deposits.

  - Paleontological monitoring is not required in areas underlain by Artificial Fill unless grading activities are anticipated to extend beneath the veneer of fill and impact underlying geological units with moderate to high paleontological sensitivity (e.g., San Diego Formation, Old Alluvial Floodplain Deposits, or deeper excavations into Young Alluvial Floodplain Deposits).

  - If fossils are discovered, the Qualified Paleontologist and/or paleontological monitor shall recover them. The Qualified Paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert, or halt grading within 50 feet of the resource to allow recovery of fossil remains. Because of the potential for the recovery of small fossil remains, it may be necessary in certain instances, and at the discretion of the Qualified Paleontologist, to set up a screen-washing operation on the project site. Alternatively, sediment samples can be collected and processed off-site.

- Paleontological reporting and collections management:

  - Prepared fossils along with copies of all pertinent field notes, photos, maps, and the final paleontological monitoring report discussed below shall be deposited in a scientific institution with paleontological collections such as the San Diego Natural History Museum within 90 days of completion of monitoring unless the City of Oceanside and the Qualified Paleontologist determine the extent of fossils recovered will require more preparation, stabilization, and/or curatorial time. Curation costs shall be paid for by the City or Contractor.

- A final paleontological monitoring report shall be completed. This report shall include discussions of the methods used, stratigraphy exposed, fossils collected, and significance of recovered fossils, and shall be submitted to the designated scientific institution within 90 days of the completion of monitoring unless the City and the Qualified Paleontologist determine the extent of fossils recovered require more preparation, stabilization, and/or curatorial time.

3.5.5 Level of Significance After Mitigation

As described above, impacts related to a substantial adverse effect involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure including liquefaction, or landslides; substantial erosion or the loss of topsoil; geologic hazards resulting from placement of Program components within a geologic unit or soil that is unstable; or risks related to expansive soil would be **less than significant without mitigation**. There would be **no impact** associated with septic tanks and no mitigation would be required. Impacts related to a substantial adverse change in the significance of paleontological resources would be **potentially significant** for construction of the Program components during ground-disturbing activities, such as clearing, trenching, and grading, requiring the implementation of mitigation. The proposed mitigation measure **GEO-1** would ensure impacts to paleontological resources would be **less than significant with mitigation** through the implementation of a paleontological monitoring program aimed at mitigating potential impacts to paleontological resources.

3.5.6 References

California Department of Conservation (DOC). 2024. Earthquake Zones of Required Investigation. Available at: https://maps.conservation.ca.gov/cgs/informationwarehouse/eqzapp/.

2015. Fault Activity Map of California. Available at: https://maps.conservation.ca.gov/cgs/fam/.

California Geological Survey. 2008. Special Publication 117A: *Guidelines for Evaluating and Mitigation Seismic Hazards in California*.

County of San Diego (County). 2023. Multi-Jurisdictional Hazard Mitigation Plan. February. Available at: https://www.sandiegocounty.gov/content/sdc/oes/emergency_management/oes_jl_mitplan.html.

Oceanside, City of. 2024. Draft Program Environmental Impact Report for the City of Oceanside General Plan Update, Smart and Sustainable Corridors Specific Plan, and Climate Action Plan Update. June. Available at: https://www.ci.oceanside.ca.us/government/development-services/planning/ceqa/general-plan-update-phase-2-onward-oceanside.

University of California, Davis (UC Davis). 2023. SoilWeb. Available at: https://casoilresource.lawr.ucdavis.edu/gmap/.

3.6 GREENHOUSE GAS EMISSIONS

This section addresses the potential GHG emissions impacts of the proposed Program. The following discussion includes a description of the environmental as related to GHGs; a summary of applicable regulations; and an evaluation of the proposed Program's potential environmental effects associated with the generation of GHGs and conflicts with an applicable plan, policy, or regulation adopted for the purpose of reducing GHGs. This section is based on the *Air Quality, Greenhouse Gas Emissions, and Energy Technical Report* prepared for the proposed Program (HELIX 2026; Appendix B).

3.6.1 Environmental Setting

3.6.1.1 Climate Change Overview

Global climate change refers to changes in average climatic conditions on Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth's atmosphere. These gases allow solar radiation (sunlight) into the Earth's atmosphere but prevent radiative heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with: (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The temperature record shows a decades-long trend of warming, with 2016 and 2020 tied for the warmest years on record since 1880 (National Aeronautics and Space Administration [NASA] 2021). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to pre-industrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (CO_2e) by the year 2100 (IPCC 2014).

3.6.1.2 Types of Greenhouse Gases

The GHGs defined under California's AB 32 include the following compounds, as detailed below:

- Carbon dioxide (CO_2)
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Carbon dioxide. CO_2 is the most important and common anthropogenic GHG. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (about 280 ppm in 1750). As of January 2025, the CO_2 concentration exceeded 426 ppm (National Oceanic and Atmospheric Administration [NOAA] 2025).

Methane. CH_4 is the main component of natural gas used in homes. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous oxide. N_2O is produced by both natural and human-related sources. N_2O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Hydrofluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). Chlorofluorocarbons were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the 1989 Montreal Protocol.

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, because methane and N_2O are approximately 25 and 298 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1). Estimates of GHG emissions are often presented in CO_2e, which weigh each gas by its GWP. Expressing GHG emissions in CO_2e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. Emissions of CO_2e are commonly presented in metric tons (MT; 1 MT equals approximately 2,205 pounds). The atmospheric lifetime and GWP of selected GHGs are summarized in Table 3.6-1, *Global Warming Potentials and Atmospheric Lifetimes*.

Table 3.6-1
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-134a	14	1,430
PFC: Tetraflouromethane (CF_4)	50,000	7,390
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: IPCC 2007
HFC: hydrofluorocarbon; PFC: perfluorocarbon

3.6.1.3 GHG Emissions Inventories

In an effort to evaluate and reduce the potential adverse impact of global climate change, international, state, and local organizations have conducted GHG inventories to estimate their levels of GHG emissions and removals. The following summarizes the results of these global, national, state, countywide, and local GHG inventories.

In 2020, total anthropogenic GHG emissions worldwide were estimated at 49,800 million metric tons (MMT) of CO_2e emissions (PBL 2022). The five largest emitting countries and the European Union (EU-27), together account for about 60 percent of total global GHG emissions: China (27 percent), the United States (12 percent), the European Union (about 7 percent), India (7 percent), the Russian Federation (4.5 percent) and Japan (2.4 percent). These countries also have the highest CO_2 emission levels (PBL 2022).

Per the USEPA Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2020, total United States GHG emissions were approximately 5,981 MMT CO_2e in 2020 (USEPA 2022). The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 76.4 percent of total GHG emissions (4,760 MMT CO_2e). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 92.8 percent of CO_2 emissions in 2018 (5,031.8 MMT CO_2e). Relative to 1990, gross United States GHG emissions in 2020 are lower by 7.3 percent, down from a high of 15.2 percent above 1990 levels in 2007. GHG emissions decreased from 2019 to 2020 by 10.6 percent and overall, net emissions in 2020 were 21.4 percent below 2005 levels (USEPA 2022).

California GHG Emissions

CARB performs statewide GHG inventories. The inventory is divided into six broad sectors: agriculture and forestry, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in MMT CO_2e. Table 3.6-2, *California GHG Emissions by Sector*, shows the estimated statewide GHG emissions for the years 1990, 2000, 2010, and 2022.

Table 3.6-2
CALIFORNIA GHG EMISSIONS BY SECTOR
(MMT CO_2e)

Sector	1990	2000	2010	2022
Agriculture and Forestry	18.9 (4%)	31.0 (7%)	33.7 (8%)	29.8 (8%)
Commercial	14.4 (3%)	14.1 (3%)	20.1 (4%)	23.4 (6%)
Electricity Generation	110.5 (26%)	105.4 (22%)	90.6 (20%)	59.9 (16%)
Industrial	105.3 (24%)	105.8 (22%)	101.8 (23%)	83.8 (23%)
Residential	29.7 (7%)	31.7 (7%)	32.1 (7%)	30.7 (8%)
Transportation	150.6 (35%)	183.2 (39%)	170.2 (38%)	143.6 (39%)
Unspecified Remaining	1.3 (<1%)	0.0 (0%)	0.0 (0%)	0.0 (0%)
Total	**430.7**	**471.1**	**448.5**	**371.1**

Source: CARB 2007; CARB 2019b; and CARB 2024
MMT = million metric tons; CO_2e = carbon dioxide equivalent

As shown in Table 3.6-2, statewide GHG emissions totaled 431 MMT CO_2e in 1990, 471 MMT CO_2e in 2000, 449 MMT CO_2e in 2010, and 371 MMT CO_2e in 2022. Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

San Diego County GHG Emissions

A San Diego regional emissions inventory that was prepared by the University of San Diego (USD) School of Law, Energy Policy Initiative Center (EPIC) accounted for the unique characteristics of the region. Its 2019 emissions inventory update for San Diego is presented in Table 3.6-3, *San Diego County GHG Emissions by Sector* in 2019. The sectors included in this inventory are somewhat different from those in the statewide inventory. Similar to the statewide emissions, transportation related GHG emissions contributed the most countywide, followed by emissions associated with energy use.

Table 3.6-3
SAN DIEGO COUNTY GHG EMISSIONS BY SECTOR

Emissions Category	2019 Emissions MT CO_2e	Percentage of Total[1]
On-Road Transportation	1,331,000	45%
Electricity	599,000	20%
Solid Waste	193,000	6%
Natural Gas Consumption	478,000	16%
Agriculture	134,000	4%
Water	39,000	1%
Off-Road Transportation	71,000	2%
Wastewater	18,000	1%
Propane	121,000	4%
Total	**2,984,000**	**100%**

Source: USD EPIC 2023. Unincorporated County of San Diego 2019 Greenhouse Gas Emissions Inventory and Projections. Prepared by the University of San Diego School of Law Energy Policy Initiative Center (EPIC).
[1] Percentages may not total 100 due to rounding.
MT = metric tons; CO_2e = carbon dioxide equivalent

3.6.2 Regulatory Framework

3.6.2.1 Federal

Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* that CO_2 is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA's proposed GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation's National Highway Traffic Safety Administration in September 2009.

Final Mandatory Reporting of GHG Rule

The USEPA is the federal agency responsible for setting and enforcing the federal ambient air quality standards for atmospheric pollutants. The USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The USEPA also has jurisdiction over emission sources outside state waters (outer continental shelf) and establishes various emissions standards for vehicles sold in states other than California. In September 2009, the USEPA issued the Final Mandatory Reporting of GHG Rule. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHG, manufacturers of vehicles and engines, and facilities that emit 25,000 MT or more per year of GHG emissions are required to submit annual reports to USEPA. The USEPA estimates that the rule covers about 10,000 facilities nationwide, accounting for about 85 percent of GHG emissions in the U.S.

3.6.2.2 State

The statewide GHG emissions regulatory framework is summarized below by category: state climate change targets, renewable energy and energy procurement, building energy, mobile sources, solid waste, water, and other state regulations and goals. The following text describes EOs, legislation, regulations, and other plans and policies that would directly or indirectly reduce GHG emissions and/or address climate change issues.

State Climate Change Targets

Executive Order S-3-05

On June 1, 2005, EO S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. EOs are not laws and can only provide the governor's direction to state agencies to act within their authority. Legislation is required to enact the goals of EO S-3-05 and establish a framework for statewide implementation. AB 32, described below, mandates the 2020 GHG emissions reduction goals of EO S-3-05. The 2050 GHG emissions reduction goal of EO S-3-05 has not been enacted by any legislation and remains only a goal of the EO.

Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599), widely known as AB 32, requires that CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 enacts the goals of EO S-3-05.

Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28-nation European Union. The emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050. SB 32, described below, mandates the 2030 GHG emission reduction goals of EO B-30-15.

Senate Bill 32

SB 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the state's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

Assembly Bill 1279

Approved by Governor Newsom on September 16, 2022, AB 1279, *The California Climate Crisis Act*, declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045, and achieve and maintain net negative GHG emissions thereafter, and to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. AB 1279 anticipates achieving these policies through direct GHG emissions reductions, removal of CO_2 from the atmosphere (carbon capture), and almost complete transition away from fossil fuels.

Senate Bill 905

Approved by Governor Newsom on September 16, 2022, SB 905, *Carbon sequestration: Carbon Capture, Removal, Utilization, and Storage Program*, requires CARB to establish a Carbon Capture, Removal, Utilization, and Storage Program to evaluate the efficacy, safety, and viability of carbon capture, utilization, or storage technologies and CO_2 removal technologies and facilitate the capture and sequestration of CO_2 from those technologies, where appropriate. SB 905 is an integral part of achieving the state policies mandated in AB 1279.

California Air Resources Board Scoping Plan

The Scoping Plan is a strategy CARB develops and updates at least once every five years, as required by AB 32. It lays out the transformations needed across our society and economy to reduce emissions and reach our climate targets. The current 2022 Scoping Plan is the third update to the original plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 mandate of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual. The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG emissions targets. The 2013 Scoping Plan assessed progress toward achieving the 2020 mandate and made the case for addressing short-lived climate pollutants. The 2017 Scoping Plan also assessed progress toward achieving the 2020 limit and provided a technologically feasible and cost-effective path to achieving the SB 32 mandate of reducing GHGs by at least 40 percent below 1990 levels by 2030.

On December 15, 2022, CARB approved the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan). The 2022 Scoping Plan lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045, as directed by Assembly Bill 1279. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels; further reductions in short-lived climate pollutants; support for sustainable development; increased action on natural and working lands to reduce emissions and sequester carbon; and the capture and storage of carbon (CARB 2022a).

Renewable Energy and Energy Procurement

Senate Bill 1078

SB 1078 (Sher) (September 2002) established the Renewable Portfolio Standard (RPS) program, which required an annual increase in renewable generation by the utilities equivalent to at least 1 percent of sales, with an aggregate goal of 20 percent by 2017. This goal was subsequently revised as described below.

Senate Bill 1368

SB 1368 (September 2006) required the CEC to develop and adopt regulations for GHG emission performance standards for the long-term procurement of electricity by local publicly owned utilities. These standards must be consistent with the standards adopted by the California Public Utilities Commission.

Assembly Bill 1109

Enacted in 2007, AB 1109 required the CEC to adopt minimum energy efficiency standards for general purpose lighting, to reduce electricity consumption by 50 percent for indoor residential lighting and 25 percent for indoor commercial lighting.

Executive Order S-14-08

EO S-14-08 (November 2008) focused on the contribution of renewable energy sources to meet the electrical needs of California while reducing the GHG emissions from the electrical sector. This EO

required that all retail suppliers of electricity in California serve 33 percent of their load with renewable energy by 2020. Furthermore, the EO directed state agencies to take appropriate actions to facilitate reaching this target. The California Natural Resources Agency (CNRA), through collaboration with the CEC and CDFW (formerly the California Department of Fish and Game), was directed to lead this effort.

Executive Order S-21-09 and Senate Bill X1-2

EO S-21-09 (September 2009) directed CARB to adopt a regulation consistent with the goal of EO S-14-08 by July 31, 2010. CARB was further directed to work with the California Public Utilities Commission and CEC to ensure that the regulation builds upon the RPS program and was applicable to investor-owned utilities, publicly owned utilities, direct access providers, and community choice providers. Under this order, CARB was to give the highest priority to those renewable resources that provide the greatest environmental benefits with the least environmental costs and impacts on public health and can be developed the most quickly in support of reliable, efficient, cost-effective electricity system operations. On September 23, 2010, CARB initially approved regulations to implement a Renewable Electricity Standard. However, this regulation was not finalized because of subsequent legislation (SB X1-2, Simitian, statutes of 2011) signed by Governor Brown in April 2011.

SB X1-2 expanded the RPS by establishing a renewable energy target of 20 percent of the total electricity sold to retail customers in California per year by December 31, 2013, and 33 percent 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 (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.

SB X1-2 applies to all electricity retailers in the state including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must meet the renewable energy goals previously listed.

Senate Bill 350

SB 350 (October 2015, Clean Energy and Pollution Reduction Act) further expanded the RPS by establishing a goal of 50 percent of the total electricity sold to retail customers in California per year by December 31, 2030. In addition, SB 350 included the goal to double the energy efficiency savings in electricity and natural gas final end uses (e.g., heating, cooling, lighting, or class of energy uses on which an energy-efficiency program is focused) of retail customers through energy conservation and efficiency. The bill also requires the California Public Utilities Commission, in consultation with the CEC, to establish efficiency targets for electrical and gas corporations consistent with this goal. Regarding mobile sources, as one of its elements, SB 350 establishes a statewide policy for widespread electrification of the transportation sector, recognizing that such electrification is required for achievement of the state's 2030 and 2050 reduction targets (see California Public Utilities Code Section 740.12).

Senate Bill 100

SB 100 (2018) increased the standards set forth in SB 350 establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources

and zero-carbon resources supply 100 percent of the retail sales of electricity to California. This bill requires that the achievement of 100 percent zero-carbon electricity resources do not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling.

Senate Bill 1020

SB 1020 (September 2022) revises the standards from SB 100, requiring the following percentage of retail sales of electricity to California end-use customers come from eligible renewable energy resources and zero-carbon resources:

- 90 percent by December 31, 2035;
- 95 percent by December 31, 2040; and
- 100 percent by December 31, 2045.

Mobile Sources

Assembly Bill 1493 and Advanced Clean Cars

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. The amendments also prepared California to merge its rules with the federal Corporate Average Fuel Economy rules for passenger vehicles (CARB 2022b).

In January 2012, CARB approved Advanced Clean Cars I, a new emissions-control program for model years 2017 through 2025 including low emissions vehicle and zero-emissions vehicle criteria. The Advanced Clean Cars II regulations were adopted in 2022, imposing the next level of low-emission and zero-emission vehicle standards for model years 2026 through 2035 that contribute to meeting federal ambient air quality ozone standards and California's carbon neutrality targets.

By 2035 all new passenger cars, trucks, and SUVs sold in California will be zero emissions. The Advanced Clean Cars II regulations take the state's already growing zero-emission vehicle market and robust motor vehicle emission control rules and augments them to meet more aggressive tailpipe emissions standards and ramp up to 100 percent zero-emission vehicles.

Executive Order S-01-07

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established for California and directs the CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although challenged in 2011, the Ninth Circuit Court of Appeals reversed the District Court's opinion and rejected arguments that implementing LCFS violates

the interstate commerce clause in September 2013. CARB, therefore, is continuing to implement the LCFS statewide.

Senate Bill 375

SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPOs' Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline CEQA processing.

Executive Order N-79-20

EO N-79-20, signed by Governor Newsom on September 23, 2020, establishes three goals for implementation of zero emissions vehicles in California: first, 100 percent of in-state sales of new passenger cars and trucks will be zero-emissions by 2035; second, 100 percent of medium- and heavy-duty vehicles in the state will be zero-emissions vehicles by 2045 for all operations where feasible, and by 2035 for drayage trucks; and third, 100 percent of off-road vehicles and equipment will be zero emissions by 2035 where feasible.

Solid Waste

Assembly Bill 939

In 1989, AB 939, known as the Integrated Waste Management Act (California PRC Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board to oversee a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25 percent by 1995 and 50 percent by the year 2000.

Assembly Bill 341

The state legislature enacted AB 341 (California PRC Section 42649.2), amending the Integrated Waste Management Act to include a provision declaring that it is the policy goal of the state that not less than 75 percent of solid waste generated be source-reduced, recycled, or composted by the year 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state's policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015 published a discussion document titled AB 341 Report to the Legislature, which identifies five priority strategies that CalRecycle believes would assist the state in reaching the 75 percent goal by 2020, legislative and regulatory recommendations, and an evaluation of program effectiveness (CalRecycle 2019).

Assembly Bill 1826

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic

waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Senate Bill 1383

SB 1383 (Chapter 395, Statutes of 2016) establishes targets to reduce statewide disposal of organic waste by 50 percent from 2014 levels by 2020 and by 75 percent by 2025. CalRecycle was granted the regulatory authority to implement these requirements and adopted implementing regulations that became fully enforceable on January 1, 2022 (CalRecycle 2021). While the statutory targets remain in effect, CalRecycle has emphasized compliance through program implementation, infrastructure development, and good faith efforts, recognizing ongoing statewide constraints in organics processing and food recovery capacity.

Water

Executive Order B-29-15

In response to the ongoing drought in California, EO B-29-15 (April 2015) set a goal of achieving a statewide reduction in potable urban water usage of 25 percent relative to water use in 2013. The term of the EO extended through February 28, 2016, although many of the directives have become permanent water-efficiency standards and requirements. The EO includes specific directives that set strict limits on water usage in the state. In response to EO B-29-15, the California Department of Water Resources modified and adopted a revised version of the Model Water Efficient Landscape Ordinance that, among other changes, significantly increases the requirements for landscape water use efficiency and broadens its applicability to include new development projects with smaller landscape areas.

Executive Order B-37-16

Issued May 2016, EO B-37-16 directed the State Water Resources Control Board (State Water Board) to adjust emergency water conservation regulations through the end of January 2017 to reflect differing water supply conditions across the state. The State Water Board also developed a proposal to achieve a mandatory reduction of potable urban water usage that builds off the mandatory 25 percent reduction called for in EO B-29-15. The State Water Board and Department of Water Resources were required to develop new, permanent water use targets that build upon the existing state law requirements that the state achieve 20 percent reduction in urban water usage by 2020. EO B-37-16 also specifies that the State Water Board permanently prohibit water-wasting practices such as hosing off sidewalks, driveways, and other hardscapes; washing automobiles with hoses not equipped with a shut-off nozzle; using non-recirculated water in a fountain or other decorative water feature; watering lawns in a manner that causes runoff, or within 48 hours after measurable precipitation; and irrigating ornamental turf on public street medians.

Executive Order N-10-21

In response to a state of emergency due to severe drought conditions, EO N-10-21 (July 2021) called on all Californians to voluntarily reduce their water use by 15 percent from their 2020 levels. Actions suggested in EO N-10-21 include reducing landscape irrigation, running dishwashers and washing machines only when full, finding and fixing leaks, installing water-efficient showerheads, taking shorter

showers, using a shut-off nozzle on hoses, and taking cars to commercial car washes that use recycled water.

Other State Actions

Senate Bill 97

SB 97 (Dutton) (August 2007) directed the Governor's Office of Planning and Research to develop guidelines under CEQA for the mitigation of GHG emissions. In 2008, the Governor's Office of Planning and Research issued a technical advisory as interim guidance regarding the analysis of GHG emissions in CEQA documents. The advisory indicated that the lead agency should identify and estimate a project's GHG emissions, including those associated with vehicular traffic, energy consumption, water usage, and construction activities (Governor's Office of Planning and Research 2008). The advisory further recommended that the lead agency determine significance of the impacts and impose all mitigation measures necessary to reduce GHG emissions to a level that is less than significant. The CNRA adopted the CEQA Guidelines amendments in December 2009, which became effective in March 2010.

Under the amended CEQA Guidelines, a lead agency has the discretion to determine whether to use a quantitative or qualitative analysis or apply performance standards to determine the significance of GHG emissions resulting from a particular project (14 CCR [California Code of Regulations] 15064.4(a)). The CEQA Guidelines require a lead agency to consider the extent to which the Project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)). The CEQA Guidelines also allow a lead agency to consider feasible means of mitigating the significant effects of GHG emissions, including reductions in emissions through the implementation of project features or off-site measures. The adopted amendments do not establish a GHG emission threshold, instead allowing a lead agency to develop, adopt, and apply its own thresholds of significance or those developed by other agencies or experts. The CNRA also acknowledges that a lead agency may consider compliance with regulations or requirements implementing AB 32 in determining the significance of a project's GHG emissions (CNRA 2009).

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance-based standards" (14 CCR 15064.4(a)). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment: (1) the extent a project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) the extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

3.6.2.3 Local

Under Section 53091(d) and (e) of the California Government Code, building ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment or transmission of water or wastewater. Zoning ordinances of a county or city shall not apply to the location or construction of facilities for the production, generation, storage, treatment, or

transmission of water. Consequently, zoning ordinances only apply to wastewater projects. The following discussion of regional policies is provided for informational purposes and regional context.

Oceanside Climate Action Plan and Energy and Climate Action Element

The City has held public workshops on the City's General Plan Update, which includes development of a Climate Action Plan (CAP) and a policy framework to the Energy and Climate Action Element (E-CAP). The E-CAP proactively supports statewide efforts to cut GHG emissions by expanding local renewable energy generation, reducing energy use, promoting recycling and reuse, facilitating active transportation, and encouraging other sustainable practices. As part of this effort to ensure a sustainable future, the City prepared a GHG emissions inventory and a CAP, both of which inform the E-CAP. The City's Final CAP was adopted on May 8, 2019. The City is currently in process of developing the CAP Consistency Checklist for streamlined compliance review of new development. The City has established screening and efficiency metric thresholds, which projects are to use to evaluate impacts from GHG emissions, in order to help the City to meet state reduction targets for 2020 and 2030. Consistent with the California Air Pollution Control Officers Association interim screening level, the City has established a bright line threshold of significance for GHG emissions impacts: 900 MT annually, with construction-related emissions amortized over 20 years. Projects that fall under this threshold are not required to conduct analysis of GHG emissions impacts, and thus would not benefit from the Checklist. Should a project exceed the bright line threshold, it is required to meet an efficiency metric threshold of 4.0 MT CO_2e per service population per year (MT CO_2e/SP/yr) for year 2020 and an efficiency metric threshold of 3.0 MT CO_2e/SP/yr for year 2030 (City 2019). Projects that meet these thresholds would be considered consistent with the City's CAP.

3.6.3 Thresholds of Significance

GHG impacts are the result of combined worldwide emissions over many years, and additional development would incrementally contribute to the significant adverse environmental impacts of global climate change. No single project could generate enough GHG emissions to contribute noticeably to a change in the global average temperature. However, the combination of GHG emissions from past, present, and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts. Therefore, GHG emissions impacts are only evaluated cumulatively.

The following criteria from Appendix G of the CEQA Guidelines are used as thresholds of significance to determine the impacts of the proposed Program as related to GHG emissions. The proposed Program would have a significant impact if it would:

1. Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

The determination of significance is governed by CEQA Guidelines 15064.4, entitled "Determining the Significance of Impacts from Greenhouse Gas Emissions." CEQA Guidelines 15064.4(a) states, "[t]he determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in Section 15064. A lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount

of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to … [use a quantitative model or qualitative model]" (emphasis added). In turn, CEQA Guidelines 15064.4(b) clarifies that a lead agency should consider "Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project."

The City is currently in process of developing the CAP Consistency Checklist; thus, the City has established screening and efficiency metric thresholds, which projects are to use to evaluate impacts from GHG emissions, in order to help the City to meet state reduction targets for 2030. Consistent with California's Climate Change Scoping Plan, the City has established a bright line threshold of significance for GHG emissions impacts: 900 MT annually, with construction-related emissions amortized over 20 years. Projects that fall under this threshold are not required to conduct analysis of GHG emissions impacts, and thus would not benefit from the Checklist. Should a project exceed the bright line threshold, it is required to meet an efficiency metric threshold of 4.0 MT CO_2e/SP/yr for year 2020 and an efficiency metric threshold of 3.0 MT CO_2e/SP/yr for year 2030 (City 2019). Projects that meet these thresholds would be considered consistent with the City's CAP.

3.6.4 Program Impacts and Mitigation

3.6.4.1 Issue 1: Greenhouse Gas Emissions

Would the proposed Program generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Impact Analysis

The proposed Program would generate GHGs in the short-term during construction and the long-term during operation. The Program's emissions were estimated using CalEEMod Version 2022.1 (CAPCOA 2022). As applicable to this analysis, the model calculates emissions of the GHG emissions for CO_2, CH_4, and N_2O. For the full scope of methodology and assumptions used in this analysis, refer to Appendix B.

Emissions of GHGs are presented in MT CO_2e, which is a metric used to compare the emissions from various GHGs based on their global warming potential. The CO_2e of a gas is determined by multiplying the tons of that gas by its global warming potential.

Construction

Program construction would generate GHG emissions associated with construction equipment exhaust and from construction worker vehicle trips to and from the Program area. The primary GHG emissions would be CO_2 from gasoline and diesel combustion, with more limited vehicle tailpipe emissions of N_2O and CH_4. Total GHG emissions during Program construction are presented in Table 3.6-4, *Estimated Construction GHG Emissions*. As shown in Table 3.6-4, the Program would result in GHG emissions from construction of 1,959 MT CO_2e. Amortized over 20 years, the proposed construction activities would contribute approximately 98 MT CO_2e emissions per year.

Table 3.6-4
ESTIMATED CONSTRUCTION GHG EMISSIONS

Year	Emissions (MT CO_2e)
2025	176
2026	788
2027	506
2028	454
2029	36
Total Construction Emissions	**1,959**
Amortized Construction Emissions[2]	98

Source: HELIX 2026
[1] The total presented is the sum of the unrounded values.
[2] Construction emissions are amortized over 20 years.
MT = metric tons; CO_2e = carbon dioxide equivalent

Operation

Operational sources of emissions from the Program include energy use (electricity) and stationary sources (emergency generator).

Energy Use

Projects that increase electricity consumption also result in an indirect increase in GHG emissions. The generation of electricity through the combustion of fossil fuels typically yields CO_2, and to a much smaller extent, CH_4, and N_2O. The new OMG Lift Station would consume approximately 800 MWh of electricity per year resulting in emissions of 62 MT CO_2e.

Stationary Sources (Emergency Generators)

A 450 kW diesel-powered emergency generator would be used at the OMG Lift Station. Generator emissions were estimated using CalEEMod based on the testing frequency and duration, assumed to be up to 30 minutes per day, once per month, and the power output of the engine. The Program would result in emissions of 2 MT CO_2e from stationary sources.

Emissions

Table 3.6-5, *Total Estimated Operational GHG Emissions*, includes the total annual emissions for the Program. The emissions include the amortized annual construction emissions anticipated for the Program. Implementation of the Program would result in annual GHG emissions of 162 MT CO_2e. This can be compared to and is less than the City's bright line screening level of 900 MT CO_2e per year. Therefore, the increase in GHG emissions would not be cumulatively considerable, and the impact would be less than significant.

Table 3.6-5
TOTAL ESTIMATED OPERATIONAL GHG EMISSIONS

Emission Sources	Emissions ($MT CO_2e$)
Energy Sources	62
Stationary Sources	2
Operational Subtotal	64
Construction (amortized over 20 years)	98
Total Operational Emissions	**162**
City's Screening Threshold	***900***
Exceed Threshold?	**No**

Source: HELIX 2026
Note: Totals may not add up exactly due to rounding.
MT = metric tons; CO_2e = carbon dioxide equivalent

The proposed Program would not generate GHGs, either directly or indirectly, that may have a significant impact on the environment during construction or operation. Impacts would be less than significant.

Mitigation Measures

Impacts related to GHG emissions would be less than significant; therefore, no mitigation is necessary.

3.6.4.2 Issue 2: Conflict with Plans or Policies

Would the proposed Program conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

Impact Analysis

As described above in Section 3.6.2, there are numerous state plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall state plan and policy is AB 1279, *The California Climate Crisis Act,* with the quantitative goal to ensure that by 2045, statewide anthropogenic GHG emissions are reduced to at least 85 percent below the 1990 levels. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the LCFS, and regulations requiring an increasing proportion of electricity to be generated from renewable sources are being implemented at the statewide level; as such, compliance at the project level is not addressed. Therefore, the proposed Program does not conflict with those plans and regulations.

The City developed a CAP to reduce GHG emissions within the City and thereby reduce the City's contribution to global climate change concerns. The City's CAP includes GHG reduction strategies in the sectors of energy and buildings, water and wastewater, solid waste, transportation and land use, and agriculture and forestry to reach the City's GHG reduction targets (City 2019). The purpose of the Program is to make necessary improvements to the existing sewer infrastructure, as well as additional infrastructure necessary to accommodate planned growth in the area. As previously discussed, the increase in GHG emissions would be less than the City's bright line screening level threshold being applied to this analysis. Since the proposed Program would not result in a substantial increase in GHG emissions, the proposed Program would be consistent with the GHG reduction goals of the City's CAP.

Given the aforementioned, implementation of the proposed Program would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. This would represent a less than significant impact.

Mitigation Measures

Impacts related to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions would be less than significant; therefore, no mitigation is necessary.

3.6.5 Level of Significance After Mitigation

Impacts associated with direct and/or indirect GHG emissions generated by the Program and conflicting with an applicable plan, policy, or regulation to reduce GHG emissions would be **less than significant** with no mitigation required.

3.6.6 References

California Air Pollution Control Officers Association (CAPCOA). 2022. California Emission Estimator Model (CalEEMod) Version 2022.1

California Air Resources Board (CARB). 2024. Current California GHG Emission Inventory Data. 2000-2022 GHG Inventory (2023 Edition). Available at: https://ww2.arb.ca.gov/ghg-inventory-data. Accessed December 13.

2022a. 2022 Scoping Plan for Achieving Carbon Neutrality. November 16. Available at: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.

2022b. Clean Car Standards – Pavley, Assembly Bill 1493. Available at: http://www.arb.ca.gov/cc/ccms/ccms.htm. Accessed October 2022.

2019b. California Greenhouse Gas Inventory for 2000-2017 – By Sector and Activity. August 12. Available at: https://ww3.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_sector_sum_2000-17.pdf.

2017. California's 2017 Climate Change Scoping Plan: The strategy for achieving California's 2030 greenhouse gas target. November. Available at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

2013. Clean Car Standards – Pavley, Assembly Bill 1493. Available at: http://www.arb.ca.gov/cc/ccms/ccms.htm.

2007. California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit. November 16.

California Department of Resources Recycling and Recovery (CalRecycle). 2021. *SB 1383 Short-Lived Climate Pollutant Reduction Strategy.* Available at: https://calrecycle.ca.gov/organics/slcp/

City of Oceanside (City). 2019. Oceanside Climate Action Plan. April 2019. Available at: https://www.ci.oceanside.ca.us/home/showpublisheddocument/3850/637952805731930000.

HELIX Environmental Planning, Inc. (HELIX). 2026. Oceanside Sewer Improvements Program Air Quality, Greenhouse Gas Emissions, and Energy Technical Report. January.

Intergovernmental Panel on Climate Change (IPCC). 2014. Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

2013. Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.

2007. Climate Change 2007: The Physical Science Basis. Summary for Policymakers. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. February.

National Aeronautics and Space Administration [NASA], Goddard Institute for Space Studies. 2021. NASA News & Features Releases. 2020 Tied for Warmest Year on Record, NASA Analysis Show. January 14. Available at: https://www.giss.nasa.gov/research/news/20210114/.

National Oceanic and Atmospheric Administration [NOAA]. 2025. Earth System Research Laboratory. Trends in Atmospheric Carbon Dioxide. Accessed April 25. Available at: https://www.esrl.noaa.gov/gmd/ccgg/trends/global.html.

PBL Netherlands Environmental Assessment Agency. 2022. Trends in Global CO_2 and Total Greenhouse Gas Emissions, 2021 Summary Report. Accessed January 2023.

University of San Diego School of Law, Energy Policy Initiative Center (USD EPIC). 2019. Unincorporated County of San Diego 2019 Greenhouse Gas Emissions Inventory and Projections.

U.S. Environmental Protection Agency (USEPA). 2022. Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2019. EPA 430-R-21-005. April 2021. Available at: https://www.epa.gov/sites/default/files/2021-04/documents/us-ghg-inventory-2021-main-text.pdf.

3.7 HAZARDS AND HAZARDOUS MATERIALS

This section addresses the potential impacts of the proposed Program related to hazards and hazardous materials. The following discussion includes a description of the environmental setting as related to hazards and hazardous materials; a summary of applicable regulations; and an evaluation of the proposed Program's potential environmental effects associated with the transport, use, and disposal of hazardous materials, release of hazardous materials, use of hazardous materials near schools, existing hazardous materials sites, airport hazards, emergency response and evacuation plans, and wildland fires.

3.7.1 Environmental Setting

For the purposes of this PEIR, a "hazardous material" is defined by the California Health and Safety Code Sections 25501(n) and (o), as: "any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment."

3.7.1.1 Hazardous Materials Associated with Existing Sewer Facilities

Existing hazards associated with sewer facilities include the potential for leaks or spills of raw sewage from pipelines or sewage conveyance facilities. The City maintains and implements its Jurisdictional Runoff Management Program (JRMP), which includes sewage spill prevention and response policies aimed at preventing public health hazards associated with exposure to sewage (City 2022). The City's JRMP is a written set of procedures and policies, as well as the physical implementation of those policies, that are designed to prevent polluted water and other debris from entering its Municipal Separate Storm Sewer System (MS4) also known as the storm drain system. Once polluted runoff enters the storm drain system, it can reach local surface waters with the potential of negatively impacting human health, wildlife, and habitats. Storm drain systems do not lead to a treatment facility, like sewage water goes to sewage treatment plants.

The JRMP is a dynamic plan that is adapted over time to reflect the City's proactive approach to protecting and improving surface water quality and municipal stormwater pollution prevention. Watershed management and pollution prevention strategies of the City's JRMP are closely aligned with the priority water quality conditions described in the Carlsbad and San Luis Rey Water Quality Improvement Plans. After new programmatic strategies were implemented to further improve water quality in the City, the JRMP was updated in Fiscal Year 2021-2022 (City 2024). Applicable BMPs from the JRMP include sewage spill prevention and response procedures, illicit discharge detection and elimination measures, municipal good housekeeping practices, emergency spill containment within the MS4, public and employee education programs, and watershed-based monitoring and adaptive management strategies designed to protect downstream surface waters.

3.7.1.2 Hazardous Materials Sites

A records search was conducted in May 2025 by HELIX of federal, state, and local databases of sites that generate, store, treat, or dispose of hazardous materials, or sites for which a hazardous materials release or incident has occurred. Specifically, this included review of the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2025) and the State Water Board GeoTracker database (State Water Board 2026). The EnviroStor database is a geographic information system that lists Federal Superfund Sites; State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School Cleanup sites. The GeoTracker database is a data management system for tracking potential impacts to groundwater and activities that involve groundwater cleanup, such as remediation for leaking underground storage tanks (LUSTs). The results of the identified database searches are summarized below.

The EnviroStor database lists the following sites within one-quarter mile of the proposed Program components:

- Foster Metal Products (37340140): Evaluation; 600 feet southeast of the Land Outfall Replacement Project alignment
- Oceanside Truck Center (377500002): Historical Site; 300 feet south of the Land Outfall Replacement Project alignment
- Agri Chemical and Supply (37510116): Historical Site; adjacent to the Existing Land Outfall (not proposed for replacement alignment)
- Oceanside Site Discovery (60002805): Active State Response Site; 330 feet northwest of the Land Outfall Replacement Project alignment
- Tri-City Plating, Incorporated (37340034): Active State Response Site; 150 feet southeast of the Land Outfall Replacement Project alignment
- Ditmar Elementary School (37820018): Closed School Investigation; 100 feet northwest of the Land Outfall Replacement Project alignment

There are no sites listed on the EnviroStor database specifically within the Program alignment (DTSC 2025).

The GeoTracker database identified 25 LUST sites and 19 cleanup program sites located within one-quarter mile of the proposed Program components. All except two of the listed LUST sites and three of the Cleanup Program sites are currently classified as completed, and the cases are closed. The two open LUST sites are the Surf Bowl former UST soil and groundwater contamination site and H.G. Fenton former gasoline service station soil and groundwater contamination site, both located west of South Coast Highway and approximately 350 and 850 feet south of the Land Outfall Replacement alignment, respectively. The three open Cleanup Program sites are the Greenbrier Village site, a vacant commercial property, and the Oceanside KAMP site, summarized below:

- Greenbrier Village, located west of Greenbriar Drive approximately 150 feet north of the Land Outfall Replacement alignment: Voluntary Assistance Program case was opened in June 2021, for oversight of vapor mitigation for the construction of residential housing units for the

homeless, which has been constructed and is operational. A Phase I report had identified a former dry cleaner in the area and a Phase II investigation identified concentrations of vinyl chloride in soil vapor above the residential screening level (RSL). Volatile organic compounds (VOCs) were not detected in soil. An Operation, Maintenance and Monitoring Plan and Land Use Covenant has been filed and the County Department of Environmental Health and Quality recommended closure of the case with long-term monitoring of the vapor intrusion mitigation system.

- Vacant commercial property, located at 601 Oceanside Boulevard east of South Coast Highway adjacent to and south of the Land Outfall Replacement alignment: Voluntary Assistance Program case was opened in February 2021 for soil contamination by tetrachloroethene (PCE) and associated VOCs.

- Oceanside KAMP, located at 3480 W Mission Avenue, approximately 150 feet west of the Land Outfall Replacement and MALS FM Replacement alignments: Voluntary Assistance Program case was opened in July 2025 for relocation of pesticide-impacted soil that had been previously buried on site and is planned for relocation within the project site.

There are no sites listed on the GeoTracker database specifically within the Program alignment (State Water Board 2026). Details of the listed sites are provided in Table 3.7-1, *GeoTracker Database Listings*, with the open sites shown in **bold**.

Table 3.7-1
GEOTRACKER DATABASE LISTINGS

Listing	Location	Case Number	Status
LUST Sites			
Solus Western Portfolio	3520 Mission Avenue Oceanside, CA 92054	T0607301285	Completed – Case Closed December 30, 1993
City of Oceanside Household Hazardous Waste Collection Facility	2880 Industry Street Oceanside, CA 92054	T0607302273	Completed – Case Closed March 31, 1998
Mission Linen Supply	2727 Industry Street Oceanside, CA 92054	T0607303010	Completed – Case Closed September 13, 1995
Chevron	2601 Oceanside Boulevard Oceanside, CA 92054	T0607303023	Completed – Case Closed March 4, 2013
Markstein Beverage Co	2511 Industry Road Oceanside, CA 92054	T0607303149	Completed – Case Closed November 14, 1989
H A Lavezzi Dist	2515 Industry Road Oceanside, CA 92054	T0607302018	Completed – Case Closed April 17, 1997
Edwin Frazee Inc.	2511 Oceanside Boulevard Oceanside, CA 92054	T0607303222	Completed – Case Closed November 6, 1991
Data Properties	2372 Industry Road Oceanside, CA 92054	T0607300604	Completed – Case Closed September 26, 1996
Waste Management Inc. North County	2141 Oceanside Boulevard Oceanside, CA 92054	T0607300341	Completed – Case Closed December 16, 1991
Agri Chemical and Supply Inc.	2002 Oceanside Boulevard Oceanside, CA 92054	T10000002619	Completed – Case Closed September 14, 2020
Seven Day Tire and Brake	2001 Oceanside Boulevard Oceanside, CA 92054	T0607300151	Completed – Case Closed February 24, 2009

Listing	Location	Case Number	Status
PSI/ARCO	1990 Oceanside Boulevard Oceanside, CA 92054	T0607301067/ T0608188283	Completed – Case Closed March 14, 2017/ June 6, 2008
California State Highway Patrol	1888 Oceanside Boulevard Oceanside, CA 92054	T0607301482	Completed – Case Closed March 17, 2014
Herzog Contracting	1833 Oceanside Boulevard Oceanside, CA 92054	T0607302786	Completed - Case Closed June 27, 1997
Express Gas	1720 Oceanside Boulevard Oceanside, CA 92054	T0607300730/ T0607301968	Completed – Case Closed October 21, 2009
Oceanside Mobil	1701 Oceanside Boulevard Oceanside, CA 92054	T0607300120	Completed – Case Closed February 6, 1997
Oceanside Texaco	1660 Oceanside Boulevard Oceanside, CA 92054	T0607300155	Completed – Case Closed March 31, 2000
Former Winston Tire	1106 S Coast Highway Oceanside, CA 92054	T0608103264	Completed - Case Closed September 13, 2004
Rashid Southhill Shell	1202 S Coast Highway Oceanside, CA 920545	T0607399423	Completed – Case Closed January 14, 2018
Rite Aid	1201 S Coast Highway Oceanside, CA 920545	T0607301407	Completed – Case Closed April 18, 2008
One Stop Aviation, Inc.	1119 S Cleveland Street Oceanside, CA 920545	T0607300462	Completed – Case Closed May 16, 1990
F Fashions	1414 S Tremont Street Oceanside, CA 920545	T0607302669	Completed – Case Closed January 13, 1998
Surf Bowl	**1401-1407 S Coast Highway Oceanside, CA 92054**	**T10000010353**	**Open – Site Assessment as of December 1, 2023**
Oceanside Imports Volkswagen	1426 S Coast Highway Oceanside, CA 92054	T0607300983	Completed – Case Closed May 2, 1996
H.G. Fenton	**1517 S Coast Highway Oceanside, CA 92054**	**T10000007751**	**Open – Eligible for Closure as of December 23, 2025**
Cleanup Program Sites			
Zephyr-Oceanside	3480 West Mission Avenue Oceanside, CA 92054	SLT19752423	Completed – Case Closed December 19, 2019
City of Oceanside Household Hazardous Waste Collection Facility	2880 Industry Street Oceanside, CA 92054	T0608172161	Completed – Case Closed June 14, 1995
Mobil Automotive Lube Inc.	2420 Industry Street Oceanside, CA 92054	T0608191948	Completed – Case Closed January 13, 2000
Agri Chemical and Supply Inc.	2010 Oceanside Boulevard Oceanside, CA 92054	T10000001471	Completed – Case Closed August 10, 2009
Greenbrier Square Shopping Center	1950 Oceanside Boulevard Oceanside, CA 92054	T0608144771	Completed – Case Closed June 4, 1991
Greenbrier Village	**0 Greenbrier Drive Oceanside, CA 92054**	**T10000017152**	**Open- Long-term management as of August 18, 2025**
California State Highway Patrol	1888 Oceanside Boulevard Oceanside, CA 92054	T0608148876	Completed – Case Closed February 15, 1994
Herzog Contracting	1833 Oceanside Boulevard Oceanside, CA 92054	T06019713768	Completed – Case Closed March 24, 2005
Express Gas	1720 Oceanside Boulevard Oceanside, CA 92054	T0608156373	Completed – Case Closed October 21, 1991

Listing	Location	Case Number	Status
Oceanside Texaco	1660 Oceanside Boulevard Oceanside, CA 92054	T0608134350	Completed – Case Closed January 4, 1991
Tri City Plating Inc.	1307 South Coast Highway Oceanside, CA 92054	T0608186223	Completed – Case Closed April 16, 2013
D&L Auto Repair	1302 South Tremont Street Oceanside, CA 92054	T0608127020	Completed – Case Closed October 5, 2011
Oceanside KAMP	**3480 W Mission Avenue Oceanside, CA 92054**	**T10000023464**	**Open – Remediation as of July 8, 2025**
Oceanside Mobil	1701 Oceanside Boulevard Oceanside, CA 92054	T0608180575	Completed – Case Closed July 7, 1997
Vacant Commercial Property	**601 Oceanside Boulevard Oceanside, CA 92054**	**T10000016884**	**Open – Site Assessment as of February 17, 2021**
Tri City Plating Inc	1307 S Coast Highway Oceanside, CA 920545	T0608186223	Completed – Case Closed April 16, 2013
D&L Auto Repair	1302 S Tremont Street Oceanside, CA 920545	T0608127020	Completed – Case Closed October 5, 2011
SANDAG Coastal Rail Phase 2B	0 S Myers Street Oceanside, CA 92054	T10000004803	Completed – Case Closed August 15, 2013
1125 South Cleveland Street	1125 S Cleveland Street Oceanside, CA 92054	T10000008306	Completed – Case Closed March 14, 2017

Source: State Water Board 2025

3.7.1.3 Emergency Response and Evacuation

The Public Safety Element of the City's General Plan identifies emergency relocation and evacuation routes for the City. These include South Coast Highway, Interstate (I-) 5, State Route (SR) 76, SR 78, Oceanside Boulevard, El Camino Real, College Boulevard, Lake Boulevard, Sante Fe Avenue, and Vista Way (City 1975). Evacuation routes are determined by emergency responders who decide at the time of the emergency the routes that should be used for evacuation after assessing the conditions and location of the emergency. Emergency response and evacuation planning and implementation within the City are outlined below under Section 3.7.2. Portions of these evacuation routes fall within the proposed Program alignments, including the Land Outfall Replacement along Oceanside Boulevard.

3.7.1.4 Airport Safety Hazards

Oceanside Municipal Airport, also referred to as Bob Maxwell Memorial Airfield, is located on a 70-acre property north of SR 76 approximately 0.4 mile west of the Land Outfall Replacement, MALS FM Replacement, and OMG FM alignments at the closest point. The airport is a general aviation airport featuring a dual runway and fuel services. Development in areas surrounding the airport is subject to land use restrictions and requirements relative to specific safety zones, as outlined below under Section 3.7.2.

3.7.1.5 Wildfire Hazards

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped Fire Hazard Severity Zones for San Diego County, and identifies responsibility areas for fire protection, including Federal, State, and Local responsibility areas. CAL FIRE maintains mapping datasets that estimate fire threat potential throughout California based on presence of flammable vegetation (e.g., fuel), topography, fire history, and climate. Areas are mapped within three zones of fire hazard: moderate, high, and very high.

According to the Fire Hazard Severity Zone Viewer (CAL FIRE 2025), the majority of the areas mapped as Very High Fire Hazard Severity Zones (VHFHSZs) in the City are concentrated along a northwestern portion of the City containing undeveloped land along the San Luis Rey River, as well various pockets along the southeastern border with the City of Carlsbad. Portions of the Program area located within areas designated as Local Responsibility Area VHFHSZs are limited to approximately 0.5 mile of the northernmost portion of the Land Outfall Replacement, MALS FM Replacement, and OMG FM alignments located within the SLRWRF property and along Whalen Lake Road.

3.7.2 Regulatory Framework

3.7.2.1 Federal

Resource Conservation and Recovery Act of 1976

The Resource Conservation and Recovery Act (RCRA) is the predominant federal law governing the ongoing generation and management of hazardous waste. Regulations under RCRA are codified in Title 40 of the CFR, parts 260 through 282, and provide a framework for "cradle to grave" handling of hazardous waste. Specifically, this requires entities to track their hazardous waste management from the point of generation to the point of recycling, reuse, or permanent disposal. The Federal Hazardous and Solid Waste Amendments of 1984 called for waste minimization and phasing out disposal of hazardous wastes to landfills, developed standards for underground storage tanks, and prescribed the process for corrective action following releases. The USEPA has the primary role of implementing RCRA, although individual states (including California, as outlined below) are also authorized to carry out provisions of the law.

Hazardous Materials Transportation Act of 1975

The U.S. Department of Transportation has the authority to regulate the transportation of hazardous materials under Title 49 of the CFR. Last amended in 2005, the Hazardous Materials Transportation Act provides minimum regulations for the transport of hazardous materials by air, land, rail, or water. The four key provisions of the law are the establishment of procedures and policies, rules for material designations and labeling, packaging requirements, and operational rules. The California Highway Patrol and Caltrans are the state agencies with primary responsibility for governing hazardous materials transportation permits in California, enforcing federal and state regulations, and responding to hazardous materials transportation emergencies.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, provides national guidelines for responding to releases or threatened releases of hazardous substances and maintains a trust fund to clean up known hazardous waste sites. Federal actions related to CERCLA are limited to sites on the National Priorities List (NPL) for cleanup activities, with NPL listings based on the USEPA Hazard Ranking System (HRS). The HRS is a numerical ranking system used to screen potential sites based on criteria such as the likelihood and nature of hazardous material release, and the potential to affect people or environmental resources. CERCLA was passed in 1980, and was amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA).

Superfund Amendments and Reauthorization Act

SARA made the following changes and additions to the Superfund program under CERCLA:

- The budget allotted to the trust fund for cleanup actions was increased.
- The HRS was revised to more accurately reflect risks that hazardous waste sites pose to human health and the environment.
- State involvement was increased, and changes were made to ensure consistency with other state and federal laws and regulations.
- There was a greater focus on permanent remedies and innovative treatment technologies.
- Citizen participation in the decision-making process was encouraged.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA) was authorized by Title III of SARA. The purpose of EPCRA is to support emergency response preparedness and to provide the public with information regarding potential chemical hazards in their communities. The law directs emergency planning committees at the local and state level to develop emergency response plans for chemical releases. It also requires industry to provide information to local, state, and federal governments on the storage, use, and release of hazardous chemicals.

3.7.2.2 State

Title 22 of the California Code of Regulations

Most state and federal regulations and requirements for hazardous waste are codified in Title 22 of the CCR, Division 4.5. Title 22 contains detailed compliance requirements for hazardous waste generation, transport, treatment, storage, and disposal facilities. California is a fully authorized state to implement RCRA; therefore, most RCRA regulations are integrated into Title 22. The DTSC regulates hazardous waste more stringently than the USEPA, however, so Title 22 does not contain as many exemptions or exclusions as the equivalent federal regulations. Similar to the California Health and Safety Code (as outlined below), Title 22 also regulates a wider range of waste types and waste management activities than RCRA. While California has compiled a number of additional regulations from various CCR titles related to hazardous materials, such as wastes and toxics in CCR Titles 26 (Toxics), 23 (Waters) and 27 (Environmental Protection), state hazardous waste regulations are still commonly referred to as Title 22.

California Health and Safety Code, Hazardous Materials Release Response Plans and Inventory

The DTSC has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Section 25531, et seq., incorporates the requirements of SARA and the Clean Air Act as they pertain to hazardous materials. Under the California Accidental Release Prevention (CalARP) Program, certain businesses that store or handle more than 500 pounds, 55 gallons, or 200 cubic feet (for gases) of acutely hazardous materials at their facilities are required to develop and submit a Risk Management Plan (RMP) to the appropriate local authorities, the

designated local administering agency, and the USEPA for review and approval. The RMP is intended to satisfy federal "right-to-know" requirements and provide basic information to regulators and first responders, including identification/quantification of regulated substances used or stored on site, operational and safety mechanisms in place (including employee training), potential on- and off-site consequences of a release, and emergency response provisions.

Under California Health and Safety Code, Division 20, Chapter 6.95, businesses handling or storing certain amounts of hazardous materials are required to prepare a Hazardous Materials Business Plan (HMBP). Recent updates to the Code, such as those enacted under AB 1716 (effective January 1, 2024), have strengthened the HMBP requirements by mandating more detailed emergency response plans and documented employee training. The HMBPs must include a comprehensive inventory of hazardous materials stored on site (above specified quantities), a site-specific emergency response plan, an employee training program, and a written set of procedures and information created to help minimize the effects and extent of a release or threatened release of a hazardous material. HMBPs must be prepared prior to facility operation and updated if there are significant changes in business location, ownership, or operations.

Pursuant to California Health and Safety Code Chapter 6.11, CalEPA established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which consolidated six existing state programs related to hazards and hazardous materials. The six programs consolidated under the Unified Program are Aboveground Petroleum Storage Act Program, CalARP, Hazardous Materials Business Plan, Hazardous Materials Management and Inventory Program, Hazardous Waste and Hazardous Waste Treatment Program, and Underground Storage Tank Program. The Unified Program also allows the designation of Certified Unified Program Agencies (CUPAs) to implement associated state regulations within their jurisdiction.

California Department of Forestry and Fire Protection

Legislative mandates passed in 1981 (SB 81) and 1982 (SB 1916) require CAL FIRE to develop and implement a system to rank fire hazards in California. Areas are rated as unzoned, moderate, high, or very high, based primarily on the assessment of potential fuels and terrain. CAL FIRE also identifies responsibility areas for fire protection, including Federal, State, and Local responsibility areas.

3.7.2.3 Local

San Diego County Department of Environmental Health and Quality/Hazardous Materials Division

The County Department of Environment Health and Quality (DEHQ) is the designated CUPA for San Diego County, and is responsible for regulating all uses within the County that handle, store, generate, or treat hazardous wastes and materials. The Hazardous Materials Division provides oversight, permitting, and compliance monitoring for several programs, including those related HMBPs, Hazardous Waste Generator Program, Underground Storage Tanks, Aboveground Petroleum Storage Act, CalARP, and hazardous materials release response plans and inventory. Projects that would encounter or use hazardous materials are required by law to develop applicable HMBPs, obtain and maintain a valid Unified Program Facility Permit, and submit their facility information electronically to the California Environmental Reporting System.

San Diego County Emergency Operations Plan

The San Diego County Emergency Operations Plan is a comprehensive emergency management system that provides for a planned response to disaster situations associated with natural disasters, technological incidents and nuclear defense operations (County 2022). The Plan includes operational concepts relating to various emergency situations, identifies components of the Emergency Management Organization and describes the overall responsibilities for protecting life and property and assuring the overall well-being of the population. The plan also identifies the sources of outside support that might be provided (through mutual aid and specific statutory authorities) by other jurisdictions, state and federal agencies and the private sector.

San Diego County Multi-Jurisdictional Hazard Mitigation Plan

The San Diego County Multi-Jurisdictional Hazard Mitigation Plan was prepared to meet federal and state requirements for disaster preparedness to make the County eligible for funding and technical assistance from state and federal hazard mitigation programs. The plan includes a risk assessment to enable local jurisdictions to identify and prioritize appropriate mitigation actions that will reduce losses from potential hazards, including flooding, earthquakes, fires, and humanmade hazards. To address potential hazards, the plan then incorporates mitigation goals and objectives, mitigation actions and priorities, an implementation plan, and documentation of the mitigation planning process for each of the twenty-one participating jurisdictions, including the City of Oceanside (County 2023).

City of Oceanside Municipal Code

Hazardous materials requirements at the local level are documented in the Oceanside Municipal Code, which adopts and enforces the California Fire Code and related fire prevention regulations. These codes establish standards for hazardous materials storage, handling, spill prevention, emergency access, and fire protection systems within the City.

The Oceanside Fire Department serves as the primary local authority responsible for enforcing hazardous materials regulations pursuant to Chapter 11 of the Municipal Code. This includes oversight of hazardous materials storage and handling practices, review of hazardous materials disclosures, conducting inspections and responding to hazardous materials incidents, and coordination with other local and regional agencies for emergency response.

City of Oceanside Emergency Operations Plan

The City Emergency Operations Plan (City of Oceanside 2017) provides guidance for the City's response to emergency situations associated with natural and human-made disasters and technological incidents. The Plan defines responsibilities, establishes an emergency organization, defines lines of communications, and is part of the statewide Standardized Emergency Management System (SEMS) and the federal National Incident Management System.

Oceanside Municipal Airport Land Use Compatibility Plan

The San Diego County Regional Airport Authority (SDCRAA) is responsible for developing and adopting Airport Land Use Compatibility Plans (ALUCPs) for each public use and military airport within its jurisdiction. The Oceanside Municipal ALUCP, as amended in December 2010, provides policies to ensure compatibility with the airport and surrounding land uses. These policies address key issues such

as noise, overflight zones, and safety (SDCRAA 2010). The ALUCP is based upon the Federal Aviation Administration (FAA) approved Airport Layout Plan. The ALUCP identifies several safety zones, each with specific restrictions intended to reduce potential hazards to people and property on the ground in the event of an aircraft accident. These zones include the Runway Protection Zone, where land uses are heavily restricted, and additional surrounding safety zones that limit certain high-intensity or public assembly uses. In addition to the ALUCP, the FAA's Part 77 regulations define airspace protection surfaces—such as approach and transitional surfaces—intended to prevent obstructions to navigable airspace. Projects within or near these zones may be subject to height limitations, notification requirements, or additional safety considerations.

City of Oceanside General Plan

The Hazardous Waste Management Element of the City's General Plan (City 1990) serves as primary guidelines for policies as they relate to effective management of hazardous materials within the City of Oceanside's influence. This element emphasizes policies that minimize hazardous waste within the City and contains siting criteria for specified hazardous waste facilities.

The Public Safety Element of the General Plan (City 1975) identifies hazards, such as earthquakes, fires, and tsunamis, and provides guidelines for proper mitigation measures, such as evacuation routes, to ensure safety. Along with long range policies regarding seismic, flooding, and fire hazards, this element also includes a Public Safety Plan. The Public Safety Plan includes maps of indicating areas that have increased susceptibility to these hazards and relocation routes during emergency evacuations.

3.7.3 Thresholds of Significance

The following criteria from Appendix G of the CEQA Guidelines are used as thresholds of significance to determine the impacts of the proposed Program as related to hazards and hazardous materials. The proposed Program would have a significant impact if it would:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;

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;

3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

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, create a significant hazard to the public or the environment;

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 or excessive noise for people residing or working in the project area;

6. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

7. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

3.7.4 Program Impacts and Mitigation

3.7.4.1 Issues 1 and 2: Transport, Use, Disposal of Accidental Release of Hazardous Materials

Would the proposed Program create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Would the proposed Program 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?

Impact Analysis

Construction activities associated with the proposed Program would require transportation and use of limited quantities of fuel, oil, sealants, and other typical hazardous materials related to construction. These materials would be used in small quantities and in a manner consistent with standard construction practices. No acutely hazardous materials would be used on site during construction and the materials that would be handled would not pose a significant risk to the public.

The use, handling, storage, and disposal of hazardous materials during construction would be subject to federal, state, and local health and safety regulations, including requirements related to spill prevention, secondary containment, and proper materials management. The Oceanside Fire Department enforces such hazardous materials regulations. City regulations include spill mitigation, containment, and securing of hazardous materials containers to prevent spills. Compliance with these requirements is mandatory as standard permitting conditions and would minimize the potential for the accidental release or upset of hazardous materials, thus ensuring public safety. In the event of an accidental release during construction, containment and clean up would be conducted in accordance with existing applicable regulatory requirements. As a result, hazardous material impacts related to construction activities would be less than significant.

Operation of the facilities included in the Program may require the occasional transport and use of hazardous materials as part of routine operation and maintenance. Typical hazardous materials include fuels, lubricants, oils, paints, and solvents. Operation of the pipelines associated with the Program would be similar to existing conditions, while the OMG Lift Station would be a new operation component introduced by the Program. The OMG Lift Station may utilize an odor scrubber that would require the use of treatment chemicals such as bioxide and sodium hypochlorite and would include a standby emergency generator that would use diesel fuel.

The transport, use, and disposal of hazardous materials would be conducted in compliance with applicable regulations, including, but not limited to, the RCRA, CERCLA, Hazardous Materials Transportation Act, and implementing regulations enforced by the County Department of Environmental Health and Quality (DEHQ), Air Pollution Control District (APCD), and Oceanside Fire Department. These regulatory programs require proper chemical classification, labeling, employee training, inventory reporting, secondary containment, spill prevention, and emergency response planning, thereby

minimizing the potential for accidental releases, exposure to workers or the public, or impacts to environmental resources.

Hazardous materials would be stored on site in a designated chemical storage area and provided with separate containment areas for incompatible chemicals as specified in the 2024 International Fire Code. Substances would be handled and applied by trained personnel and used in accordance with label and manufacturer specifications, safety data sheets, and permit conditions. The OMG Lift Station would operate under applicable County DEHQ and APCD permits governing the usage of treatment chemicals and operation of the generator. DEHQ, acting as the CUPA, would require preparation and maintenance of a Unified Program Facility Permit and Hazardous Materials Business Plan, which is required if hazardous materials are stored or handled in reportable quantities (55 gallons or more of liquid, 500 pounds or more of solid, or 200 cubic feet or more of compressed gas). The permit addresses requirements related to secondary containment, incompatible chemical separation, employee training, emergency response procedures, and routine inspections. Fuel storage associated with the emergency generator would also be subject to applicable petroleum storage requirements. APCD permits would be obtained for operation of the emergency generator, including Authority to Construct and Permit to Operate, to regulate air emissions, fuel type, operating hours, testing and maintenance schedules, and recordkeeping, and would limit generator operation primarily to emergency conditions.

In the event of an accidental release during operation, containment and clean up would be implemented in accordance with existing spill containment and cleanup regulations, including immediate containment, notification of appropriate agencies, and remediation as required. Compliance with these regulatory and permitting requirements would ensure that hazardous materials associated with Program operations are managed safely and responsibly, such that potential impacts to the public or the environment through the routine transport, use, disposal, and accidental release of hazardous materials would be **less than significant**.

Mitigation Measures

Impacts related to the transport, use, disposal, and accidental release of hazardous materials would be less than significant; therefore, no mitigation is necessary.

3.7.4.2 Issue 3: Hazards Near Schools

Would the proposed Program emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Impact Analysis

The following two schools are located within 0.25 mile of the proposed Program area:

- Pablo Tac School of the Arts (3535 Hacienda Drive) – 500 feet (0.09 mile) southeast of Mission Avenue Gravity Sewer Lining and Replacement Project; 720 feet (0.14 mile) east of Land Outfall Replacement Project and OMG FM Project; 950 feet (0.18 mile) southeast of MALS FM Replacement Project

- Surfside Educational Academy (1125 South Ditmar Street) – 50 feet (less than 0.01 mile) northwest of Land Outfall Replacement Project

As discussed above in Section 3.7.4.1, construction of the Program would require the limited use of typical construction-related hazardous materials such as gasoline, diesel, oils, and lubricants, some of which may be present during construction activities occurring within 0.25 mile of the two above-listed schools. These materials are not acutely hazardous, are commonly used in construction activities throughout urban areas, and do not pose a significant risk of off-site exposure when handled in small quantities and in accordance with applicable regulations. In addition, construction activities would be temporary and would not involve the storage or use of large quantities of hazardous materials near school sites. All construction-related hazardous materials would be managed in compliance with existing federal, state, and local regulations governing transport, storage, use, and disposal. Compliance with these regulations reduces the likelihood of accidental release and limits potential exposure pathways, such that construction personnel and occupied receptors, including nearby schools, would not be subject to substantial hazard effects.

Similarly, operation of the Program components, including the pipelines within 0.25 mile of the two above-listed schools, would involve the routine and limited transport and use of non-acute hazardous materials, such as fuels, lubricants, oils, paints, and solvents, associated with pipeline maintenance activities. Operation of the pipelines would be comparable to existing conditions and would not introduce new hazardous materials or increase hazardous materials usage in proximity to school sites. While operation of the proposed OMG Lift Station is anticipated to require the use of treatment chemicals such as bioxide and sodium hypochlorite, there are no schools located within 0.25 mile of the OMG Lift Station site, and these substances would not be transported, stored, or used near a school. Therefore, impacts related to hazardous materials use within 0.25 mile of a school would be **less than significant**.

Mitigation Measures

Impacts related to the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school would be less than significant; therefore, no mitigation is necessary.

3.7.4.3 Issue 4: Listed Hazardous Materials Sites

Would the proposed Program 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?

Impact Analysis

As discussed in Section 3.7.1.2, a records search was conducted of federal and state regulatory databases of sites that generate, store, treat, or dispose of hazardous materials, or sites for which a hazardous materials release or incident has occurred, including the DTSC EnviroStor database and the State Water Board GeoTracker database. The EnviroStor database search identified six sites near the Program alignment; however, none of the six sites are located within the Program alignment or within areas proposed for ground disturbance. The closest listed site (Agri Chemical and Supply) is adjacent to the portion of the existing Land Outfall that is not proposed for replacement. Therefore, Program construction would not occur at or immediately adjacent to this listed site and would not create a disturbance (e.g., excavation into affected soil or dewatering of impacted groundwater) that would expose people to hazardous materials potentially associated with this site. The closest site to the

Program alignment that would involve construction activities is Ditmar Elementary School, which is approximately 100 feet northwest of the Land Outfall Replacement Project alignment. This site is closed, and no further action is required as of June 20, 2003 (DTSC 2025). Other listed sites are located at greater distances (150 feet or more from the Program alignment) and, based on their separation from the construction footprint, would not represent a reasonably potential risk for Program-related exposure.

The GeoTracker database lists a total of 44 sites adjacent to the proposed Program alignment, including 25 LUST sites and 19 cleanup program sites (refer to Table 3.7-1). No GeoTracker-listed site is located within the Program alignment or within areas proposed for excavation, and the large majority of nearby cases are closed/completed, reducing the likelihood of active contaminant sources that could be disturbed by construction. The five open sites are located more than 150 feet away from Program components; given this separation and the linear nature of the trenching work, these listings would not reasonably be expected to be encountered during construction. In addition, Program construction would primarily occur within disturbed urban corridors and would not include activities that would typically create new exposure pathways to off-site contamination (such as extensive groundwater pumping or deep soil excavation beyond the planned trench depths).

If contaminated soil, unusual odors, or groundwater discoloration are encountered during excavation, construction activities in the vicinity would cease and the condition would be evaluated and handled in accordance with applicable hazardous materials and waste management regulations and standard construction practices (e.g., segregation, characterization, and appropriate disposal). Therefore, because the Program would not be located on a site listed as active in a hazardous materials database and or involve ground disturbance within identified cleanup sites, and because regulatory compliance procedures would apply if unexpected contamination is encountered, **impacts would be less than significant**.

Mitigation Measures

Impacts related to listed hazardous materials sites would be less than significant; therefore, no mitigation is necessary.

3.7.4.4 Issue 5: Airport Hazards

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 Program result in a safety hazard or excessive noise for people residing or working in the project area?

Impact Analysis

Oceanside Municipal Airport is located as close as 0.5 mile west of the Program alignment. The Program alignment, specifically the Land Outfall Replacement Project, Mission Avenue Gravity Sewer Project, MALS FM Replacement Project, and OMG FM Project, is within Airport Influence Area Review Area 1, which consists of locations where noise and safety concerns may necessitate limitations on the types of land use actions. Specifically, Review Area 1 encompasses locations exposed to aircraft noise levels of 60 Community Noise Equivalent Level (CNEL) or greater together with all of the safety zones mapped in the ALUCP. Specific noise contour mapping for Oceanside Municipal Airport, however, shows that the Program alignment is outside the 60 CNEL contour (SDCRAA 2010); therefore, temporary construction

workers and occasional maintenance workers during operations would not be exposed to excessive noise levels.

The Program alignment is within Safety Zone 4 (SDCRAA 2010), which restricts density for residential development. Since the Program does not involve the construction of residential development, the Program would not result in safety concerns associated with Oceanside Municipal Airport. In addition, proposed Program facilities within Safety Zone 4 would include belowground pipelines that would not have the potential to result in safety hazards related to aircraft. As such, construction and operation of the Program would not result in a safety hazard or excessive noise for people residing or working in the Program area. Impacts would be less than significant.

Mitigation Measures

Impacts related to airport hazards resulting from the proposed Program would be less than significant; therefore, no mitigation is necessary.

3.7.4.5 Issue 6: Emergency Response and Evacuation Plans

Would the proposed Program impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact Analysis

Construction of the Program's proposed pipelines would occur within public roadway rights-of-way and would therefore result in partial and/or full lane closures, which could interfere with emergency response and evacuation along portions of local roadways, including, but not limited to, North River Road, Whalen Lake Road, Mission Avenue, Hacienda Drive, Las Vegas Drive, Mesa Drive, Garrison Street, Oceanside Boulevard, South Ditmar Street, Godfrey Street, South Coast Highway, Tait Street, and Crosswaithe Street. As such, construction of the Program may conflict with the San Diego County Emergency Operations Plan and Public Safety Element of the General Plan, which identifies Oceanside Boulevard and South Coast Highway as emergency response and evacuation routes. Therefore, Program construction within roadway rights-of-way would result in potentially significant impacts related to emergency response and evacuation.

Implementation of **TRA-1** (detailed in Section 3.9.4.1 of this PEIR) would ensure that construction activities within roadway rights-of-way maintain adequate emergency access throughout the construction period. The TCP would require advanced coordination with the agency of jurisdiction, identification of detours and alternative routes, and installation of appropriate signage and traffic control devices to safely guide vehicles, pedestrians, bicyclists, and emergency responders through or around construction areas. The measure also requires advance written notification to local fire, police, and emergency medical services of planned lane closures or access restrictions, allowing emergency response providers sufficient time to coordinate alternate response routes. In addition, the measure requires that vehicular access to residential driveways be maintained or promptly restored at the end of each workday and that disruptions to essential services, including emergency response, be minimized. Implementation of the TCP would ensure consistency with the San Diego County Emergency Operations Plan and Public Safety Element of the General Plan, thereby reducing potential impacts to **less than significant**.

Following the completion of construction, the Program facilities would not interfere with emergency response or evacuation. The pipelines would be located below ground, and the additional aboveground Program components, including the proposed OMG Lift Station and potential small pipeline accessory structures, would be located out of roadways and would not block land uses that may require emergency access or physically impede the movement of emergency vehicles. In addition, the Program would not generate a high level of traffic on local roadways that would interfere with emergency response or evacuation. Therefore, operational impacts would be **less than significant**.

Mitigation Measures

TRA-1 (see Section 3.9, *Transportation*) would be implemented during Program construction to minimize potential impacts associated with emergency response and evacuation plans.

Significance After Mitigation

With implementation of **TRA-1**, potential impacts associated with emergency response and evacuation plans during Program construction would be less than significant.

3.7.4.6 Issue 7: Wildland Fires

Would the proposed Program expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Impact Analysis

The majority of the proposed Program alignment is not located within a VHFHSZ (CAL FIRE 2025). Approximately 0.5 mile of Program alignment (specifically for the Land Outfall Replacement Project, MALS FM Replacement Project, and OMG FM Project) occurs within a Local Responsibility Area VHFHSZ within the SLRWRF and along Whalen Lake Road. Construction of these facilities would involve the use of equipment with combustion engines, which could increase fire hazards from ignition of flammable vegetation where such vegetation is present along Whalen Lake Road. However, construction work would involve initial clearing of vegetation as part of site preparation activities, which would result in the removal of potentially flammable vegetation. As such, construction of these pipelines would not exacerbate fire risks in a VHFHSZ. Upon completion of construction, the pipelines would be located underground and would not result in risk associated with wildland fires. Impacts would be less than significant.

Mitigation Measures

Impacts related to wildland fires resulting from the Program would be less than significant; therefore, no mitigation is necessary.

3.7.5 Level of Significance After Mitigation

As described above, impacts related to the routine transport, use, disposal, or accidental release of hazardous materials, hazards near schools, hazardous materials sites compiled pursuant to Government Code Section 65962.5, airport hazards, or wildland fires would be **less than significant without mitigation.** Impacts related to conflicts with an adopted emergency response plan or emergency evacuation plan would be **potentially significant** for temporary construction of the Program

components, requiring implementation of mitigation. **TRA-1**, which includes the implementation of a Traffic Control Plan and notifications to local emergency responders of planned or partial lane closures or blocked access, would be implemented during Program construction to minimize potential impacts associated with emergency response and evacuation plans. As such, impacts related to emergency response and evacuation would be **less than significant with mitigation.**

3.7.6 References

California Department of Forestry and Fire Protection (CAL FIRE). 2025. Fire Hazard Severity Zone Viewer. Available at: https://experience.arcgis.com/experience/6a9cb66bb1824cd98756812af41292a0.

County of San Diego. 2023. Multi-Jurisdictional Hazard Mitigation Plan: City of Oceanside Annex. Available at: https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/HazMit/2023/2023%20City%20of%20Oceanside%20Haz%20Mit%20Annex_Final.pdf.

2022. Emergency Operations Plan. September. Available at: https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/plans/op-area-plan/2023-eop/EOP2023_Complete%20Plan.pdf.

Department of Toxic Substances Control (DTSC). 2025. EnviroStor. Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed May 13.

Oceanside, City of. 2022. City of Oceanside 2022 Jurisdictional Runoff Management Plan. January. Available at: https://www.ci.oceanside.ca.us/home/showpublisheddocument/6036/637968430194800000.

1990. Oceanside General Plan Hazardous Waste Management Element. September 12. Available at: https://www.ci.oceanside.ca.us/home/showpublisheddocument/3866/637952805788270000.

1975. Oceanside General Plan Public Safety Element. September 9. Available at: https://www.ci.oceanside.ca.us/home/showpublisheddocument/3874/637952805817430000.

San Diego County Regional Airport Authority (SDCRAA). 2010. Oceanside Municipal Airport Land Use Compatibility Plan. December 20. Available at: https://www.san.org/DesktopModules/Bring2mind/DMX/API/Entries/Download?EntryId=16149&Command=Core_Download&language=en-US&PortalId=0&TabId=807.

State Water Resources Control Board (State Water Board). 2025. GeoTracker. Available at: https://geotracker.waterboards.ca.gov/. Accessed May 13.

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3.8 NOISE

This section addresses the potential noise impacts associated with the proposed Program. The following discussion includes a description of the environmental setting as related to noise, a summary of applicable regulations, and an evaluation of the proposed Program's potential environmental effects associated with temporary and permanent increases in noise, vibration, and aircraft noise. This section is based on information from the *Noise Assessment for the Oceanside Sewer Improvements Program* letter prepared by HELIX (2026; Appendix E). The analysis presented in this section is specific to human receptors; potential noise impacts to wildlife are addressed in Section 3.2, *Biological Resources*.

3.8.1 Environmental Setting

3.8.1.1 Fundamentals of Environmental Noise

Noise is commonly defined as unwanted sound. Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). Sound pressures in the environment have a wide range of values. The sound pressure level is the logarithm of the ratio of the unknown sound pressure to a reference quantity of the same kind. To account for the pitch of sounds and the corresponding sensitivity of human hearing to them, the raw sound pressure level is adjusted with an A-weighting scheme based on frequency that is stated in units of decibels (dBA). Typical A-weighted noise levels are listed in Table 3.8-1, *Typical A-Weighted Noise Levels*.

Table 3.8-1
TYPICAL A-WEIGHTED NOISE LEVELS

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	**— 70 —**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**— 60 —**	
		Large business office
Quiet urban daytime	**— 50 —**	Dishwasher next room
Quiet urban nighttime	**— 40 —**	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	**— 0 —**	Lowest threshold of human hearing

Source: Caltrans 2013
dBA = A-weighted decibel

A given level of noise may be more or less tolerable depending on the sound level, duration of exposure, character of the noise sources, the time of day during which the noise is experienced, and the activity affected by the noise. For example, noise that occurs at night tends to be more disturbing than that which occurs during the day because sleep may be disturbed. Additionally, rest at night is a critical requirement in the recovery from exposure to high noise levels during the day. In consideration of these factors, different measures of noise exposure have been developed to quantify the extent of the effects anticipated from these activities. Some indices consider the 24-hour noise environment of a location by using a weighted average to estimate its habitability on a long-term basis. Other measures consider portions of the day and evaluate the nearby activities affected by it as well as the noise sources. The most commonly used indices for measuring community noise levels are the Equivalent Sound Level (L_{EQ}), the Day-Night Sound Level (L_{DN}), and the CNEL.

L_{EQ} is the average acoustical or sound energy content of noise, measured during a prescribed period, such as 1 minute, 15 minutes, 1 hour, or 8 hours. It is the decibel sound level that contains an equal amount of energy as a fluctuating sound level over a given period of time.

L_{DN} is a 24-hour average, where sound levels during the nighttime hours of 10 p.m. to 7 a.m. have an added 10 dB weighting. This measurement applies weights to noise levels during nighttime hours to compensate for the increased disturbance response of people at those times.

CNEL is similar to the L_{DN}. CNEL is the average equivalent A-weighted sound level over a 24-hour period. This measurement applies weights to noise levels during evening and nighttime hours to compensate for the increased disturbance response of people at those times. CNEL is the equivalent sound level for a 24-hour period with a 5 dBA weighting applied to all sound occurring between 7:00 p.m. and 10:00 p.m. and a 10 dBA weighting applied to all sound occurring between 10:00 p.m. and 7:00 a.m.

The decibel level of a sound decreases (or attenuates) exponentially as the distance from the source of that sound increases. For a single point source such as a piece of mechanical equipment, the sound level normally decreases by about 6 dBA every time the distance between the source and listener is doubled (doubling of distance). Sound that originates from a linear, or “line” source such as a heavily traveled traffic corridor, attenuates by approximately 3 dBA per doubling of distance, provided that the surrounding site conditions lack ground effects or obstacles that either scatter or reflect noise. Noise from roadways in environments with major ground effects due to vegetation and loose soils may either absorb or scatter the sound yielding attenuation rates as high as 4.5 dBA for each doubling of distance. Other contributing factors that affect sound reception include meteorological conditions and the presence of manmade obstacles such as buildings and sound barriers.

Noise has a significant effect on the quality of life. An individual’s reaction to a particular noise depends on many factors such as the source of the noise, its loudness relative to the background noise level, and the time of day. The reaction to noise can also be highly subjective; the perceived effect of a particular noise can vary widely among individuals in a community. Because of the nature of the human ear, a sound must be about 10 dBA greater than the reference sound to be judged as twice as loud. In general, a 3 dBA change in community noise levels is perceivable, while 1 to 2 dBA changes generally are not perceived. Although the reaction to noise may vary, it is clear that noise is a significant component of the environment, and excessively noisy conditions can affect an individual’s health and well-being. The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on a community can be organized into six broad categories:

sleep disturbance, permanent hearing loss, human performance and behavior, social interaction of communication, extra-auditory health effects, and general annoyance.

Community noise environments are typically represented by noise levels measured for brief periods throughout the day and night, or during a 24-hour period (e.g., CNEL). The one-hour period is especially useful for characterizing noise caused by short-term events, such as operation of construction equipment or concert noise (e.g., L_{EQ}). Community noise levels are generally perceived as quiet when the CNEL is below 50 dBA, moderate in the 50 to 60 dBA range, and loud above 60 dBA. Along major thoroughfares, roadside noise levels are typically between 65 and 75 dBA.

3.8.1.2 Fundamentals of Groundborne Vibration

Vibration consists of waves transmitted through solid material. Groundborne vibration propagates from the source through the ground to adjacent buildings by surface waves. Vibration may be comprised of a single pulse, a series of pulses, or a continuous oscillatory motion. The frequency of a vibrating object describes how rapidly it is oscillating, measured in Hertz (Hz). The normal frequency range of most groundborne vibration that can be felt generally starts from a low frequency of less than 1 Hz to a high of about 200 Hz.

Vibration energy spreads out as it travels through the ground, causing the vibration amplitude to decrease with distance away from the source. Ambient and source vibration are often expressed in terms of the peak particle velocity or root mean square velocity in inches per second (in/sec) that correlates best with human perception. Groundborne vibration can be a concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard. In contrast to airborne noise, groundborne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, buses on rough roads, and construction activities such as blasting, pile-driving, and operating heavy earth-moving equipment.

3.8.1.3 Existing Noise Conditions

The primary noise source in the vicinity of the Program alignment is roadway traffic, most notably along I-5, SR 76, Oceanside Boulevard, El Camino Real, and Mission Avenue. Noise from aircraft utilizing Oceanside Municipal Airport, which is located approximately 0.5 mile from the closest point of the Program alignment, is also audible in the Project area; however, the Program alignment is outside of the 60 CNEL noise contour as shown on Exhibit III-1, Compatibility Policy Map: Noise, of the Oceanside Municipal Airport Land Use Compatibility Plan (San Diego County Regional Airport Authority 2010).

3.8.1.4 Noise-Sensitive Land Uses

Noise-sensitive land uses (NSLUs) include uses where an excessive amount of noise would interfere with normal activities. Typical NSLUs include residences, public and private educational facilities, hospitals, convalescent homes, hotels/motels, daycare centers, and passive recreational parks. Sleep disturbance is the most critical concern for a NSLU on a two-hour basis or longer compared to activities that are occupied only a portion of a day. NSLUs in the Program area include residences, hotels, parks, and schools, with the closest NSLUs occurring immediately adjacent to the Program alignment (e.g., residences along Los Arbolitos Boulevard, Fireside Park).

3.8.1.5 Vibration-Sensitive Land Uses

Vibration-sensitive land uses include facilities where vibration would interfere with operations within the building, such as vibration-sensitive research and manufacturing, hospitals with vibration-sensitive equipment, and university research operations. The degree of sensitivity to vibration depends on the specific equipment that would be affected by the vibration. Electron microscopes and high-resolution lithography equipment function within certain scientific and manufacturing tolerances that can be compromised in high vibration environments. Certain fragile older or historic buildings may be vulnerable to damage from excessive vibration. Residential uses are also sensitive to excessive levels of vibration of either a regular or an intermittent nature. Vibration-sensitive land uses in the Program area include residences and hotels, with the closest vibration-sensitive land uses occurring immediately adjacent to the Program alignment (e.g., residences along Los Arbolitos Boulevard).

3.8.2 Regulatory Framework

3.8.2.1 State

California Noise Control Act of 1973

Sections 46000 through 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 the 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 Vibration Guidance

The Caltrans Transportation and Construction Vibration Guidance Manual (Caltrans 2020) provides guidance for the analysis of structure damage and human annoyance impacts due to groundborne noise and vibration relating to transportation and construction projects. The guidance presents criteria from multiple sources that are relevant to different vibration sources (e.g., blasting, traffic) and receptors (e.g., new structures, old structures, humans).

3.8.2.2 Local

City of Oceanside General Plan Noise Element

The General Plan Noise Element for the City of Oceanside (2002) states that noise generated by construction activity should not exceed 85 dBA when measured 100 feet from the source.

Additionally, the General Plan states that construction equipment shall not be operated within any residential zone or 500 feet from any residential zone between 8:00 p.m. and 7:00 a.m., generating an ambient noise level of 50 dBA at any property line. Construction activities also shall not occur between 6:00 p.m. and 7:00 a.m. when construction noise levels exceed the ambient noise level by 5 dBA.

City of Oceanside Noise Control Ordinance

Chapter 38 of the City of Oceanside Municipal Code states that it shall be unlawful for any person to cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property in the applicable base district zone on which the sound is produced, exceeds the applicable limits set forth in Table 3.8-2.

Table 3.8-2
CITY OF OCEANSIDE GENERAL SOUND LEVEL LIMITS

Base District Zone	7:00 a.m. to 9:59 p.m.	10:00 p.m. to 6:59 a.m.
RE (Residential Estate)	50	45
RS (Single-family)	50	45
RM (Medium Density)	50	45
RH (High Density)	55	50
RT (Residential Tourist)	55	50
C (Commercial)	65	60
I (Industrial)	70	65
D (Downtown)	65	55
A (Agricultural)	50	45
OS (Open Space)	50	45

Source: City of Oceanside Municipal Code Section 38.12

The Noise Control Ordinance further states that the city manager, or the manager's designee, on a case-by-case basis, may authorize construction, maintenance or other public improvement activities by a government agency or a public utility, that exceed the noise, duration or hour of work limits established by this chapter, upon a determination that the authorization furthers the public interest.

3.8.3 Thresholds of Significance

The following criteria from Appendix G of the CEQA Guidelines are used as thresholds of significance to determine the impacts of the proposed Program as related to noise. The proposed Program would have a significant impact if it would:

1. Result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

2. Result in the generation of excessive groundborne vibration or groundborne noise levels; or

3. Expose people residing or working in the project area to excessive noise levels by being located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.

3.8.4 Program Impacts and Mitigation

3.8.4.1 Issue 1: Increase in Ambient Noise

Would the proposed Program result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact Analysis

Construction Noise

Construction of the Program components would include both below and above-ground elements. A variety of construction equipment would be used throughout Program implementation based on the proposed construction activity, as shown in Table 3.8-3, *Construction Equipment Assumptions*. The OMG FM Project, Land Outfall Replacement Project, MALS FM Replacement Project, and Mission Avenue Gravity Sewer Lining and Replacement Project would involve pipeline improvements that would require open-cut trenching and trenchless construction methods. Trenching would require above-ground excavation along the pipeline alignment. Trenchless methods would require digging launching and receiving pits at either end of the section of pipeline. The Program components are linear projects, with work occurring along each alignment. Construction equipment is anticipated to progress at approximately 80 to 100 feet per day. Construction of the OMG Lift Station would involve site clearing and grubbing, grading and excavation, shoring, and facility construction. It is expected that construction would occur primarily during daytime hours, but there is potential for construction to occur during nighttime hours as well, for activities such as pipeline installation work within major roadways. A list of anticipated key noise-generating construction equipment by activity is provided in Table 3.8-3.

Table 3.8-3
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Phase	Equipment
Dewatering	Backhoe
	Bore/Drill Rig
	Excavator
	Generator
Pavement Removal/ Excavation	Backhoe
	Concrete Saw
	Excavator Pavement Scarifier
Trenched Pipe Installation/Fuse Pipe/Backfill	Backhoe
	Excavator
Trenchless Pipe Installation	Backhoe
	Bore/Drill Rig
	Crane
	Excavator
	Forklift
	Generator

Construction Phase	Equipment
Pressure Test Pipeline and Valve Installation	Backhoe
	Crane
	Generator
	Pump
Paving	Paver
	Roller
	Skid-steer Loader
Lift Station Construction	Backhoe
	Crane
	Dozer
	Excavator
	Generator
	Grader
	Paver
	Plate Compactor
	Roller
	Skid-steer Loader

Source: City 2025

On a given workday, construction equipment would be utilized at individual locations along the approximately seven-mile Program alignment. Equipment may therefore be used at different distances from residential uses depending on the day and location along the Program alignment. Table 3.8-4, *Construction Equipment Noise Levels,* provides the percent operating time, or percent of a given hour that each equipment would be used. The table also provides the one-hour noise levels for each of the assumed loudest construction equipment at a distance of 100 feet.

Table 3.8-4
CONSTRUCTION EQUIPMENT NOISE LEVELS

Unit	Percent Operating Time	dBA L_{EQ} (one hour) at 100 feet
Backhoe	40	67.6
Bore/Drill Rig	20	71.3
Concrete Saw	20	76.6
Crane	16	66.6
Dozer	40	71.7
Excavator	40	70.7
Forklift	20	61.7
Generator	50	71.6
Grader	40	75.0
Pavement Scarifier	20	76.5
Paver	50	68.2
Compactor	10	70.2
Pump	50	71.9
Roller	20	67.0
Loader	40	69.1
Excavator/Loader/Dump Truck	40	73.9

Source: RCNM

Daytime Construction

The City General Plan Noise Element states that at 100 feet, noise levels from construction equipment shall not exceed 85 dBA. As shown in Table 3.8-4, none of the individual pieces of anticipated equipment would exceed those limits; however, nearby NSLUs such as residences, hotels, and parks would be located within 100 feet of construction, given that such uses occur immediately adjacent to the Program alignment. Furthermore, daytime construction noise impacts would occur if noise exceeds existing ambient conditions at neighboring properties by more than 10 dBA, which is a perceived doubling of loudness and an appropriate increase-over-ambient limit for temporary construction activities. For residential neighborhoods, it is assumed that impacts would occur if noise levels exceed 60 dBA, based on an assumed ambient daytime noise level of 50 dBA per the City's general sound level limits (see Table 3.8-2).

Because construction would not be used at a standard distance from nearby land uses, this analysis considers individual pieces of construction equipment to determine the distances within which construction noise would be significant. Table 3.8-5, *Construction Equipment Setback Distances*, provides the setback distances for residential uses based on a limit of 60 dBA L_{EQ} (1 hour).

Table 3.8-5
CONSTRUCTION EQUIPMENT SETBACK DISTANCES

Equipment Type	Distance Within Which Noise Levels Would Exceed Threshold[2]	Potential to Exceed Noise Threshold at Closest Residential Land Uses[3]
Backhoe	240 feet	Yes
Bore/Drill Rig	234 feet	Yes
Concrete Saw	675 feet	Yes
Crane	57 feet	Yes
Dozer	234 feet	Yes
Excavator	343 feet	Yes
Forklift	77 feet	Yes
Generator	379 feet	Yes
Grader	355 feet	Yes
Pavement Scarifier	210 feet	Yes
Paver	255 feet	Yes
Compactor	35 feet	Yes
Pump	392 feet	Yes
Roller	224 feet	Yes
Loader	128 feet	Yes
Excavator/Loader/Dump Truck (Trenching)[1]	493 feet	Yes

Source: HELIX 2026; Appendix E

1 Equipment is assumed to be used for 4 hours out of an 8-hour workday.

2 Threshold is noise levels exceeding 60 dBA L_{EQ} (1 hour).

3 The closest residential land uses are immediately adjacent to the Program alignment.

Because residential land uses would be located immediately adjacent to the Program alignment, there is potential for construction equipment to be used within the setback distances provided in Table 3.8-5, in which case the 60-dBA L_{EQ} limit would be exceeded. Impacts from temporary daytime construction noise are therefore considered to be **potentially significant**.

Nighttime Construction

As mentioned above in Section 3.8.2.2, the City's General Plan states that construction equipment shall not be operated within any residential zone or 500 feet from any residential zone between 8:00 p.m. and 7:00 a.m., generating a noise level of 50 dBA at any property line. Construction activities also shall not occur between 6:00 p.m. and 7:00 a.m. when construction noise levels exceed the ambient noise level by 5 dBA. The assumed ambient nighttime noise level for residential uses is 45 dBA per the City's general sound level limits (see Table 3.8-2). Since a 5-dBA increase over this assumed ambient noise level is 50 dBA, a 50-dBA limit is used herein to assess the potential for nighttime noise impacts.

It is assumed that the same construction equipment presented above in Table 3.8-5 for daytime construction would also have the potential to be used for nighttime construction, and at the same locations. Given that all analyzed pieces of construction equipment would have the potential to exceed 60 dBA L_{EQ} based on the location of residential uses immediately adjacent to the Program alignment, the construction equipment would also have the potential to exceed the 50 dBA L_{EQ} limit for nighttime construction. Nighttime construction noise impacts are therefore considered to be **potentially significant**.

Operational Noise

Operation of the proposed OMG Lift Station would include equipment that would generate elevated noise levels. The two primary operational noise-generating components of the lift station would be (1) lift station pump motors and ventilation system, and (2) a diesel backup generator. Although project-specific equipment location information and equipment noise data are not yet available, the noise analysis uses assumptions based on typical lift station design and equipment.

This analysis assumes two pump motors would be in use at a time. It is assumed that the pump would operate during daytime and nighttime hours. The pumps would be located within the lift station structure and are expected to generate interior noise levels ranging from 75 to 90 dBA. The structure would include vents for air ventilation, and the pump motor noise would transfer from the interior to the exterior of the structure through the vents. Additional noise would be generated from a ventilation fan near the vent opening. Exterior noise levels would be dependent on the specific type of equipment, location and size of the vent, and any other openings in the structure. For the purposes of this analysis, exterior noise levels are expected to be up to approximately 80 dBA at 10 feet from the lift station building. Based on this noise level, the noise levels emanating from the lift station could exceed the City Noise Control Ordinance daytime residential noise limit of 50 dBA within 300 feet and exceed the nighttime limit of 45 dBA within 550 feet. The lift station would be developed within approximately 3 acres of an 11.2-acre property that is immediately adjacent to a residential property located to the west. While the exact location of the 3-acre lift station site within the 11.2-acre property is yet to be determined, it is assumed that the lift station vent would be located within the above-mentioned distances to the nearest property line(s), and that noise levels would have the potential to exceed the applicable City limits for operational noise as shown in Table 3.8-2. Impacts associated with noise from operation of the lift station are therefore considered potentially significant.

Implementation of the lift station would also require a backup generator that would be used to power the lift station in the instance of normal power failure. The backup generator would also be tested at regular intervals, which is assumed to occur during daytime hours. A standard generator of the size anticipated to be required for the lift station is estimated to generate a noise level of approximately 75 dBA at 23 feet. Based on this noise level, the generator noise levels may exceed 50 dBA within

400 feet. Since the generator may be located within this distance to the property line(s), noise levels would have the potential to exceed the applicable 50-dBA L_{EQ} daytime limit during regular generator testing. Impacts associated with noise from operation of the generator are therefore considered **potentially significant**.

Mitigation Measures

The following mitigation measures would be implemented during Program construction and operations to minimize noise impacts to surrounding noise-sensitive land uses:

NOI-1 **Construction Noise Management Plan**. A Construction Noise Management Plan(s) shall be prepared to reduce noise at noise-sensitive land uses (NSLUs; e.g., residences, public and private educational facilities, hospitals, convalescent homes, hotels/motels, daycare centers, and passive recreational parks) from construction of the Program components. The plan(s) shall be prepared by the Contractor and approved by the City of Oceanside or its Designated Representative(s). The plan(s) shall include noise control measures to achieve the following standards, to the extent feasible, and allow for completion of the Program in light of necessary work methods and the physical constraints of available work areas:

- Noise from construction activities shall comply with the thresholds and hours specified by the City of Oceanside.
- Construction noise shall not exceed 85 dBA L_{EQ} (one hour) when measured at 100 feet from the source at the nearest NSLU.
- Construction noise shall not exceed the ambient noise levels of a given area by 10 dBA L_{EQ} (one hour) at the nearest NSLU between 7:00 a.m. and 6:00 p.m.
- Construction noise shall not exceed 50 dBA at any property line when equipment is operated within any residential zone or 500 feet from any residential zone between 8:00 p.m. and 7:00 a.m.
- Construction noise shall not exceed the ambient noise levels of a given area by 5 dBA L_{EQ} (one hour) at the nearest NSLU between 6:00 p.m. and 7:00 a.m.

Appropriate measures shall be implemented to reduce construction noise including, but not limited to, the following:

- Construction equipment shall be properly outfitted and maintained with manufacturer-recommended noise-reduction devices.
- Diesel equipment shall be operated with closed engine doors and equipped with factory-recommended mufflers.
- Mobile or fixed “package” equipment (e.g., arc-welders and air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment.

- Electrically powered equipment shall be used instead of pneumatic or internal-combustion powered equipment, where feasible.

- Unnecessary idling of internal combustion engines (e.g., in excess of 5 minutes) shall be prohibited.

- 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 sensitive receptor.

- Any truck or equipment equipped with back-up alarm moving within 300 feet of a noise-sensitive land use should have the normal back-up alarm disengaged and safety provided by lights and flagman, or broad-spectrum noise backup alarm (as appropriate for conditions) used in compliance with the Occupational Safety and Health Administration safety guidelines.

- Temporary sound barriers or sound blankets shall be installed between construction operations and adjacent noise-sensitive land uses. The project Contractor shall construct a temporary noise barrier at least six feet in height meeting the specifications listed below (or of a Sound Transmission Class 19 rating or better) to attenuate noise.

- If a temporary barrier is used instead of a sound blanket, the temporary barrier shall be solid and constructed of wood, plastic, fiberglass, steel, masonry, or a combination of those materials, with no cracks or gaps through or below the wall. Any seams or cracks must be filled or caulked. If wood is used, it can be tongue and groove or close butted seams and must be at least ¾-inch thick or have a surface density of at least 3.5 pounds per square-foot. Sheet metal of 18-gauge (minimum) may be used if it meets the other criteria and is properly supported and stiffened so that it does not rattle or create noise itself from vibration or wind. Noise blankets, hoods, or covers also may be used, provided they are appropriately implemented to provide the required sound attenuation.

- Residents within 200 feet of a project's disturbance area shall be notified in writing within one week of any construction activity. The notification shall describe the activities anticipated, provide dates and hours, and provide contact information with a description of a complaint and response procedure.

- The on-site construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. The on-site construction supervisor shall confirm that all steps identified in this mitigation measure are employed as directed. A clear appeal process for the affected resident shall be established prior to construction commencement to allow for resolution of noise problems that cannot be immediately solved by the site supervisor.

NOI-2 **OMG Lift Station Operation Noise Attenuation.** Noise generated by operation of the OMG Lift Station pumps and ventilation system shall comply with the City's sound level limits of 50 dBA during the hours of 7:00 a.m. to 10:00 p.m. and 45 dBA during the hours of 10:00 p.m. to 7:00 a.m. at nearby residential property lines. To adequately reduce noise levels, noise attenuating equipment and/or acoustical shielding shall be incorporated into the design plans of the lift station. Such features may include, but not be limited to, acoustical louvers, in-line silencers, and/or noise walls. Prior to building plan approval, planning for the lift station noise sources shall be required to show noise compliance with the relevant daytime limit and nighttime limit at the affected property lines. A final operational test shall be required with the pumps and ventilation system in operation to ensure noise levels are below the required standards. Should the operational test fail to show the required noise attenuation, additional attenuating design features, technologies, or methods shall be employed until the operational test demonstrates the noise levels do not exceed the City's sound level limits.

NOI-3 **Generator Noise Attenuation**. Noise generated by the generator during regular testing shall comply with the City's sound level limits of 50 dBA during the hours of 7:00 a.m. to 10:00 p.m. and 45 dBA during the hours of 10:00 p.m. to 7:00 a.m. at nearby residential property lines. To adequately reduce noise levels, noise attenuating equipment and/or acoustical shielding shall be incorporated into the Project design. Such features may include, but not be limited to, noise walls, noise control enclosures, and/or noise absorbing paneling. Prior to building plan approval, planning for the generator shall be required to show noise compliance with the applicable limits at the property lines. A final operational test shall be required with the generator in operation to ensure noise levels are below the required standards. Should the operational test fail to show the required noise attenuation, additional attenuating design features, technologies, or methods shall be employed until the operational test demonstrates the noise levels do not exceed the City's sound level limits.

3.8.4.2 Issue 2: Vibration

Would the proposed Program generate excessive groundborne vibration or groundborne noise levels?

Impact Analysis

Construction

Excessive levels of groundborne vibration of either a regular or an intermittent nature may result in annoyance to residential uses. The construction activities required for the Program are not anticipated to generate excessive groundborne vibrations or noise levels. No pile driving is anticipated to be necessary as part of Program construction. The potential use of a vibratory roller for Program construction would not occur frequently during construction. As there is a relatively limited need for this piece of equipment during construction, it would likely be used very briefly and would affect an individual location for only a matter of minutes during a pass-by. Due to the temporary and transient nature of construction activities, the limited and infrequent potential use of a vibratory roller, and the fact that no other equipment known to cause significant vibrations is anticipated for use, impacts related to vibration are considered **less than significant**.

Operation

Operation of the proposed Program facilities would not involve equipment or processes that would generate substantial groundborne vibration. The primary operational components of the OMG Lift Station facility include stationary mechanical equipment such as pumps with motors that would not produce groundborne vibration at levels that would be perceptible or cause structural damage. Thus, impacts associated with operational vibration would be **less than significant**.

Mitigation Measures

Impacts associated with vibration would be less than significant; therefore, no mitigation is necessary.

3.8.4.3 Issue 3: Aircraft Noise

Would the proposed Program expose people residing or working in the project area to excessive noise levels by being located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport?

Impact Analysis

As its closest point, the proposed Program alignment would be located approximately 0.5 mile from the Oceanside Municipal Airport. It would, however, be outside of the 60 CNEL noise contour as shown on Exhibit III-1, Compatibility Policy Map: Noise, of the Oceanside Municipal Airport Land Use Compatibility Plan (San Diego County Regional Airport Authority 2010). As such, while distant aircraft activity may be audible, neither the Program's temporary construction workers nor permanent facility workers would be exposed to excessive aircraft noise. Impacts would be **less than significant**.

Mitigation Measures

Impacts associated with aircraft noise would be less than significant; therefore, no mitigation is necessary.

3.8.5 Level of Significance After Mitigation

As described above, impacts related to substantial temporary or permanent increases in ambient noise levels in the vicinity of the Program area in excess of established standards would be **potentially significant** for temporary construction of Program components and operation of the OMG Lift Station. The proposed mitigation measure **NOI-1** would address compliance with the thresholds and hours specified by the City through implementation of a Construction Noise Management Plan with appropriate measures meant to reduce construction noise. Implementation of mitigation measure **NOI-1** would reduce noise generated by construction noise. Due to the proximity of noise-sensitive land uses to the Program area, construction noise may still significantly exceed existing ambient conditions. Construction noise is therefore conservatively assessed to be **significant and unavoidable**.

Mitigation measures **NOI-2** and **NOI-3** would be implemented at the OMG Lift Station to address operational and generator noise impacts. These measures involve incorporating noise attenuation equipment/acoustic shielding into the design of the lift station such that operations would comply with the City's sound level limits. Implementation of mitigation measures **NOI-2** and **NOI-3** would require

compliance with property line noise limits and would therefore reduce operational noise impacts to **less than significant with mitigation**.

Impacts related to generation of groundborne vibration, groundbourne noise levels, and excessive noise levels by being located within the vicinity of aircraft would be **less than significant** and mitigation is not required**.**

3.8.6 References

California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual. April.

2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. September.

HELIX Environmental Planning Inc. (HELIX). 2026. Noise Assessment for the Oceanside Sewer Improvements Program. January.

Los Angeles, City of. 2021. Los Angeles Municipal Code Chapter XI Noise Regulation.

Oceanside, City of. 2002. General Plan Noise Element. June.

San Diego County Regional Airport Authority. 2010. Oceanside Municipal Airport Land Use Compatibility Plan. Available: https://www.san.org/DesktopModules/Bring2mind/DMX/API/Entries/Download?EntryId=16149&Command=Core_Download&language=en-US&PortalId=0&TabId=807.

3.9 TRANSPORTATION

This section addresses the potential impacts of the proposed Program related to transportation. The following discussion includes a description of environmental setting as related to transportation, a summary of applicable regulations, and an evaluation of the proposed Program's potential environmental effects associated with circulation system conflicts, generation of VMT, traffic hazards, and emergency access.

3.9.1 Environmental Setting

3.9.1.1 Regional Roadway Circulation System

The proposed Program is located in the City of Oceanside in northwestern San Diego County. The regional transportation system where vehicles associated with construction and operation of the Program would travel to access the Program improvement areas consists of the following regional highways:

- **Interstate 5** – I-5 is a north-south interstate highway that extends from San Ysidro, California in the south to Blaine, Washington in the north. I-5 intersects with the alignment of the Land Outfall Replacement located near Oceanside Boulevard; however, I-5 intersects with a segment that would not be replaced under the proposed Program.

- **State Route 76** – SR 76, also known as the San Luis Rey Mission Expressway, is an east-west expressway that extends from its junction with I-5 in Oceanside to the west, and ends at its junction with SR 79 near Lake Henshaw to the east. The Land Outfall Replacement, Mission Avenue Gravity Sewer Lining and Replacement, MALS FM Replacement, and OMG FM alignments intersect SR 76 near Mission Avenue and Ocean Puente.

- **State Route 78** – SR 78 is an east-west highway that traverses nearly the entire width of California. SR 78 extends from I-5 in Oceanside eastward to the I-10 in the City of Blythe, California. SR 78 is located south of the proposed Program alignment.

3.9.1.2 Local Roadway Circulation System

The Program alignment spans approximately seven miles, initiating at the SLRWRF and ending at the LSWWTP. Roadway descriptions for the main roadways within which the Program components are proposed are as follows (I-5 and SR 76 are described above):

- **North River Road** – North River Road is an east-west roadway that connects to Whalen Lake Road at the western terminus and SR 76 at the eastern terminus. The Program alignment would intersect with the western end of North River Road at the convergence with Whalen Lake Road.

- **Whalen Lake Road** – Whalen Lake Road extends from North River Road southwest before terminating at Whelan Lake. The Program alignment would occur along most of Whalen Lake Road.

- **Mission Avenue** – Mission Avenue extends from Frazee Road in a southwest direction before terminating by the Pacific Ocean at North Pacific Street. The Mission Avenue Sewer Lining and

Replacement alignment is located along Mission Avenue. Additionally, multiple pipelines included in the Program would intersect with Mission Avenue near SR 76.

- **Hacienda Drive**– Hacienda Drive is a short residential street extending from Frontier Drive eastward before terminating at San Luis Rey Elementary School. Pipelines included with the Land Outfall Replacement and OMG FM Program components would intersect with Hacienda Drive.

- **Las Vegas Drive** – Las Vegas Drive extends from Foussat Road eastward before turning northeast and becoming Flamingo Drive. Pipelines included with the Land Outfall Replacement and OMG FM Program components would intersect with Las Vegas Drive.

- **Mesa Drive** – Mesa Drive extends from Mission Avenue in a generally northeast direction before terminating at North Santa Fe Avenue. Pipelines included with the Land Outfall Replacement and OMG FM Program components would travel along a portion of Mesa Drive.

- **Garrison Street** – Garrison Street is a short residential street that travels from Mesa Drive southward approximately 900 feet before terminating. A portion of the pipelines included with the Land Outfall Replacement and OMG FM Program components would travel along Garrison Street.

- **Oceanside Boulevard** – Oceanside Boulevard extends eastward from South Pacific Street at the Pacific Ocean before transitioning into West Bobier Drive near Melrose Drive. Pipelines included with the Land Outfall Replacement Program component travel along Oceanside Boulevard.

- **South Ditmar Street** – Ditmar Street transitions from North Ditmar Street to South Ditmar Street at Seagaze Drive, and extends in a southeast direction before terminating at Godfrey Street. Pipelines included with the Land Outfall Replacement Program component travel along South Ditmar Street.

- **Godfrey Street** – Godfrey Street is a short residential street that extends from South Ditmar Street in a southwest direction before terminating at South Tremont Street. An additional segment of Godfrey Street extends from Tait Street approximately 225 feet in a northeast direction. Pipelines included with the Land Outfall Replacement Program component travel along Godfrey Street.

- **South Coast Highway** – South Coast Highway transitions from North Coast Highway and extends in a southeast direction before transitioning into Carlsbad Boulevard near Eaton Street. Pipelines included with the Land Outfall Replacement Program component would intersect with South Coast Highway at Godfrey Street.

- **Tait Street** – Tait Street extends from Wisconsin Avenue in a southeast direction before turning northeast and transitioning into South Myers Street. Pipelines included with the Land Outfall Replacement Program component travel along Tait Street.

- **Crosswaithe Street** – Crosswaithe Street is a short roadway extending from the rail lines in a southwest direction before terminating at the Pacific Ocean. Pipelines included with the Land Outfall Replacement Program component travel along Crosswaithe Street.

3.9.1.3 Public Transportation

The North County Transit District provides public transit service (bus and rail) in North San Diego County. North County Transit District transit services include COASTER commuter rail service, SPRINTER light rail, BREEZE bus system, FLEX rural and on-demand service, and LIFT paratransit. Routes in the Program area include the COASTER railway, the SPRINTER railway, and BREEZE bus routes 101, 302, 303, 309, 311, 313, 315, 318, 323, and 325. Bus routes occurring directly along the roadways of the Program alignments include the 318 along Oceanside Boulevard, the 101 and 302 along South Coast Highway, the 313 along Mesa Drive, and the 303 along Mission Avenue. In addition, the Program alignment would intersect with railway used for the COASTER and SPRINTER lines near Godfrey Street (North County Transit District 2024).

3.9.1.4 Bicycle Facilities

The City includes the following classes of bicycle facilities:

- **Class I Bike Paths** are hard-surface routes within an exclusive right-of-way physically separated from vehicular roadways and intended specifically for non-motorized use.

- **Class II Bike Lanes** are marked bicycle lanes within roadways adjacent to the curb lane, delineated by appropriate striping and signage.

- **Class III Bike Routes** are marked by a series of signs designating a preferred route between destinations such as residential neighborhoods and shopping areas. These routes share the right-of-way with on-road vehicles.

The City is recognized by the League of American Bicyclists as a Bicycle Friendly Community, with approximately nine miles of bike paths, 17 miles of bike routes, and 70 miles of bike lanes. Bicycle facilities are present along multiple roadways that are included in or intersect with the Program alignment. This includes bike lanes present along an intersection with South Coast Highway, along Oceanside Boulevard, along Mesa Drive, and an intersection with Mission Avenue. The Program alignment also intersects with a bike trail present along the San Luis River Trail (City 2017).

3.9.1.5 Pedestrian Facilities

The City includes the following types of pedestrian facilities:

- **District sidewalks** are sidewalks along roads that support heavy pedestrian levels in mixed-use concentrated urban areas. Usually, the district is an urbanized area with special functions, such as theater districts, office parks, shopping centers, or college campuses.

- **Corridor sidewalks** are defined as sidewalks along roads that support moderate density business and shopping districts with moderate pedestrian levels. They can range from wide sidewalks along boulevards to small sidewalks along a heavily auto oriented roadway.

- **Connector sidewalks** tend to have low pedestrian levels and are along roads with moderate to high average vehicular traffic. Connector sidewalks tend to be long and, in some cases, do not have accessible land uses directly adjacent to the sidewalk.

- **Neighborhood sidewalks** are sidewalks along roads that support low to moderate density housing with low to moderate pedestrian levels. Neighborhood streets and their associated walkways are generally lower volume streets, with low to moderate widths, single lanes in each direction, and posted speed limits of 25 miles per hour.

- **Ancillary Pedestrian Facilities** are facilities away from or crossing over streets such as plazas, paseos, promenades, courtyards or pedestrian bridges and stairways. Many of these ancillary facilities attract local residents and workers, generating moderate to high pedestrian use.

- **Paths** are paved facilities with exclusive rights-of-way that act as corridors and have little or no vehicular cross flows. Many of these paths are exclusive to pedestrians and bicycles and are not associated with streets.

- **Trails** include unpaved walkways or roads used for recreational use or open space maintenance. Trails are separated from roads and support activities such as hiking, biking and walking primarily through parks and open space.

As shown in the Oceanside Pedestrian Activity Map in the City's General Plan Circulation Element, the Program alignment would cross into areas with high, medium, and low levels of pedestrian activity (City 2012). Sidewalks along the Program alignment would be located along Godfrey Street, Oceanside Boulevard, Garrison Street, and Mesa Drive. Smaller sidewalk intersections would also occur at Las Vegas Drive, Hacienda Drive, and Mission Avenue.

3.9.2 Regulatory Framework

3.9.2.1 Federal

Americans with Disabilities Act

The 1990 Americans with Disabilities Act (ADA) is a wide-ranging civil rights law that prohibits, under certain circumstances, discrimination based on disability. Pedestrian facility design must comply with the accessibility standards identified in the ADA, which applies to all projects involving new or altered pedestrian facilities. The scoping and technical provisions for new construction and alterations identified in the ADA Accessibility Guidelines can be used to help design pedestrian facilities that are ADA compliant. For example, Title II-6.600 of the Technical Assistance Manual states, "When streets, roads, or highways are newly built or altered, they must have ramps or sloped areas whenever there are curbs or other barriers to entry from a sidewalk or path."

3.9.2.2 State

California Department of Transportation Standards

Caltrans is responsible for planning, designing, building, operating, and maintaining California's state road system. Caltrans sets standards, policies, and strategic plans that aim to do the following: (1) provide the safest transportation system in the nation for users and workers, (2) maximize transportation system performance and accessibility, (3) efficiently deliver quality transportation projects and services, (4) preserve and enhance California's resources and assets, and (5) promote quality service. Caltrans has the discretionary authority to issue special permits for the use of state highways for other than normal transportation purposes. Caltrans also reviews all requests from utility

companies, developers, volunteers, nonprofit organizations, and others desiring to conduct various activities within state highway rights-of-way. The Caltrans Highway Design Manual (Caltrans 2020) establishes uniform policies and procedures to carry out highway design functions. Caltrans has also prepared a Guide for the Preparation of Traffic Impact Studies (Caltrans 2002). Objectives for the preparation of this guide include providing consistency and uniformity in the identification of traffic impacts generated by local land use proposals.

3.9.2.3 Regional

San Diego Association of Governments Regional Plan

SANDAG's *San Diego Forward: The 2021 Regional Plan* (2021 Regional Plan; SANDAG 2021) combines the Regional Comprehensive Plan (RCP), the RTP, and the SCS. The Regional Plan provides a long-term blueprint for the San Diego region that seeks to meet regulatory requirements, address traffic congestion, and create equal access to jobs, education, healthcare, and other community resources. The Final 2021 Regional Plan was adopted by the SANDAG Board of Directors on December 10, 2021. The Regional Plan was amended in 2023 to address community advocacy regarding funding sources for the transportation network. CARB approved the Amended Regional Plan in February 2025, verifying that the SCS will achieve mandated 2035 GHG reduction targets.

3.9.2.4 Local

City of Oceanside General Plan Circulation Element and Master Transportation Roadway Plan

As required by State law, the City has adopted a Master Transportation Roadway Plan as part of the City's General Plan. In tandem with the other elements of the City's General Plan, the Master Transportation Roadway Plan creates and addresses goals and policies as they relate to the City's transportation system. The Master Transportation Roadway Plan, a subsection of the Circulation Element (City 2012), focuses on maintaining and improving the City's roadways that compose the transportation network by providing service standards, objectives, and policies (City 2012). Select applicable General Plan goals and their corresponding policies are listed below:

Objective i: Implement a circulation system that provides a high level of mobility, efficiency, access, safety, and environmental consideration that accommodates all modes of travel such as vehicular, truck, transit, bicycle, pedestrian, and rail.

Policy 2.4: The City's circulation system shall promote efficient intra- and inter-city travel with minimum disruption to established and planned residential neighborhoods.

Policy 2.5: The City will strive to incorporate complete streets throughout the Oceanside transportation network which are designed and constructed to serve all users of streets, roads and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or using transit.

Policy 3.20: If the location and traffic generation of a proposed development will result in congestion on major streets or failure to meet the Level of Service D threshold, or if it creates safety hazards, the proposed development shall be required to make necessary off-site improvements. Such improvements may be eligible for reimbursement from collected impact fees. In some cases, the development may have to wait until financing for required off-site improvements is available. In other cases where

development would result in unavoidable impacts, the appropriate findings of overriding consideration will be required to allow temporary undesirable levels of service.

3.9.3 Thresholds of Significance

The following criteria from Appendix G of the CEQA Guidelines are used as thresholds of significance to determine the impacts of the proposed Program as related to transportation. The proposed Program would have a significant impact if it would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;

2. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);

3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

4. Result in inadequate emergency access.

3.9.4 Program Impacts and Mitigation

3.9.4.1 Issue 1: Traffic Circulation

Would the proposed Program conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Impact Analysis

Construction of the Program components would result in a slight increase of vehicular traffic on regional and local roadways. Construction traffic would be generated by commuting construction workers and by trucks hauling material and equipment to and from the work areas. Because the Program includes various components that would be constructed at different times and in different locations, not all construction traffic would occur on the same roadway segments or at the same time. Thus, Program-generated construction traffic on any given roadway would be minimal and would not substantially increase traffic levels in a manner that would cause congestion or decrease the performance of the circulation system. Traffic generated by Program construction would therefore not conflict with the City's General Plan Circulation Element. In addition, program-generated construction traffic would be temporary. Following the completion of construction, the various Program pipelines would not require changes to staffing needs beyond existing conditions that would increase operational vehicle trips. The addition of the OMG Lift Station, however, may require a small number of employees that would result in minimal employee commuter trips, in addition to occasional deliveries and maintenance trips. Such trips would not interfere with a program, plan, ordinance, or policy addressing the circulation system.

Construction of the Program's pipelines would occur within and adjacent to roadways, which would have the potential to temporarily affect the circulation system for motorists, bicyclists, and pedestrians. Construction would involve partial and/or full lane closures, bicycle lane closures, and sidewalk closures in areas where excavation and trenching would occur. Tunneling methods would be used to cross under the railway used for the COASTER and SPRINTER lines near Godfrey Street, and impacts to these facilities would not occur. While construction associated with the pipelines within the roadway rights-of-way

would not affect a given portion of the roadways for the entire construction duration as construction of the pipelines would continuously move along the linear alignment, the Program would potentially result in significant impacts to the circulation system during construction.

The Program would be implemented in accordance with mitigation measure **TRA-1**, which requires preparation and implementation of a Traffic Control Plan (TCP). The TCP would specify signage, striping, flagging, delineated detours, and other traffic control measures to maintain safe and continuous access for vehicles, transit, bicycles, and pedestrians through construction areas. The TCP would also include detours or alternative routes for bicycle lanes and pedestrian sidewalks where temporary closures are necessary, ensuring consistency with applicable circulation plans and complete streets policies.

In addition, **TRA-1** requires advance notification to affected residents, businesses, transit providers, and emergency responders regarding construction schedules and planned lane or access closures, as applicable. Access to residential driveways would be maintained where feasible or restored at the end of each workday, and coordination with services such as school buses, mail delivery, and solid waste collection would be required to prevent unnecessary disruption. These measures ensure that construction activities do not unreasonably interfere with circulation system operations or undermine adopted policies promoting mobility, safety, and accessibility for all transportation modes.

Upon the completion of construction, the pipelines would be located below ground and roadway and sidewalk areas disturbed during construction would be restored to pre-existing conditions. In addition, the Program's aboveground components, including the proposed OMG Lift Station and potential small pipeline accessory components, would not be located within public roadways or interfere with roadway functions. Because construction-related circulation effects would be temporary and managed through implementation of the TCP, and because the Program would not result in permanent changes to roadway configurations, transit routes, bicycle facilities, or pedestrian infrastructure, the Program would not conflict with applicable circulation plans, ordinances, or policies. With implementation of **TRA-1**, potential impacts related to conflicts with adopted circulation system programs and policies would be **less than significant**.

Mitigation Measures

The following mitigation measure would be implemented during Program construction to minimize transportation impacts:

TRA-1 **Traffic Control Plan.** Prior to the start of construction of the portions of the facilities that would be located within roadway rights-of-way, the City shall require the construction contractor to prepare a TCP and coordinate with the agency of jurisdiction, as applicable, to address vehicular traffic during construction of Program component within the public rights-of-way of the affected jurisdiction(s), including bicycle, pedestrian, and transit facilities. The TCP shall show all signage, striping, delineated detours, flagging operations, and any other devices that will be used during construction to guide motorists, bicyclists, and pedestrians safely through the construction area and allow for adequate access and circulation. The TCP shall also ensure that congestion and traffic delay are not substantially increased as a result of the construction activities. Further, the TCP shall include detours and/or alternative routes for bicyclists using on-street bicycle lanes as well as for pedestrians using adjacent sidewalks. The City shall provide written notice at least two weeks prior to the start of construction to owners/occupants along roadways to be affected during construction.

During construction, the City shall maintain continuous vehicular and pedestrian access to affected residential driveways from the public right-of-way to the private property line, except where necessary construction precludes such continuous access for reasonable periods of time. Access shall be reestablished at the end of the workday. If a driveway needs to be closed or interfered with as described above, the City shall notify the owner or occupant of the closure of the driveway at least five working days prior to the closure. The TCP shall include provisions to ensure that the construction of the Program does not interfere unnecessarily with the work of other agencies such as mail delivery, school buses, and municipal waste services.

The City shall also notify local emergency responders of planned partial or full lane closures or blocked access to roadways or driveways required for Program construction. Emergency responders include fire departments, police departments, and ambulances that have jurisdiction within the Program area. Written notification and disclosure of lane closure location must be provided at least 30 days prior to the planned closure to allow for emergency response providers adequate time to prepare for lane closures.

3.9.4.2 Issue 2: Vehicle Miles Traveled

Would the proposed Program conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Impact Analysis

CEQA Guidelines Section 15064.3 subdivision (b) sets forth specific criteria for determining the significance of transportation impacts. Subdivision (b)(1) pertains to land use projects and describes factors that may indicate whether the amount of a land use project's VMT may be significant or not. Program-related traffic would be minimal, consisting of temporary construction vehicles and occasional trips for operations and maintenance. Most Program components would be located below ground and function passively, requiring little active management and a negligible increase in operational employee trips (i.e., no more than two round trips per day from City Water Utilities Department maintenance employees). As such, the proposed Program would not generate a substantial increase in VMT and would therefore not conflict or be inconsistent with CEQA Guidelines Section 15064.3. Impacts would be **less than significant**.

Mitigation Measures

Impacts associated with inconsistencies with VMT would be less than significant; therefore, no mitigation is necessary.

3.9.4.3 Issue 3: Hazardous Design Features

Would the proposed Program substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact Analysis

Construction activities on the Program's pipelines would occur within public roadway rights-of-way and would result in partial and/or full lane closures and the presence of construction equipment and

workers, which could result in hazardous roadway conditions; therefore, Program construction within roadway rights-of-way would result in potentially significant impacts related to traffic hazards.

Following the completion of construction, the Program's pipelines would be located below ground within the roadways and would not represent hazardous conditions. The Program's aboveground components, such as the proposed OMG Lift Station and potential small pipeline accessory components, would be located outside of public roadways. The OMG Lift Station is proposed within the permanently closed Garrison Elementary School property. The OMG Lift Station site would be designed to exclude potential hazardous design features. Impacts related to hazardous design features during Program operations would be **less than significant**.

Mitigation Measures

TRA-1 would be implemented during Program construction to minimize potential impacts associated with hazardous roadway conditions.

3.9.4.4 Issue 4: Emergency Access

Would the proposed Program result in inadequate emergency access?

Impact Analysis

Construction of the Program's proposed pipelines would occur within public roadway rights-of-way and would result in partial and/or full lane closures, which could interfere with emergency access along portions of local roadways, primarily those listed in Section 3.9.1.2, above (North River Road, Whalen Lake Road, Mission Avenue, Hacienda Drive, Las Vegas Drive, Mesa Drive, Garrison Street, Oceanside Boulevard, South Ditmar Street, Godfrey Street, South Coast Highway, Tait Street, and Crosswaithe Street). Therefore, Program construction within roadway rights-of-way would result in potentially significant impacts related to emergency access.

Implementation of **TRA-1** would ensure that construction activities within roadway rights-of-way maintain adequate emergency access throughout the construction period. The TCP would require advanced coordination with the agency of jurisdiction, identification of detours and alternative routes, and installation of appropriate signage and traffic control devices to safely guide vehicles, pedestrians, bicyclists, and emergency responders through or around construction areas. The measure also requires advance written notification to local fire, police, and emergency medical services of planned lane closures or access restrictions, allowing emergency response providers sufficient time to coordinate alternate response routes. In addition, the measure requires that vehicular access to residential driveways be maintained or promptly restored at the end of each workday and that disruptions to essential services, including emergency response, be minimized. Implementation of the TCP would minimize construction-related interference with emergency response times or access routes, thereby reducing potential impacts on emergency access to a **less-than-significant level**.

Following the completion of construction, the Program facilities would not interfere with emergency access. The pipelines would be located below ground, and the additional aboveground Program components, including the proposed OMG Lift Station and potential small pipeline accessory structures, would be located out of roadways and would not block land uses that may require emergency access or physically impede the movement of emergency vehicles. In addition, the Program would not generate a high level of traffic on local roadways that would interfere with emergency response. For the proposed

OMG Lift Station, the City would incorporate sufficient emergency access to the site into the design. The Program's potential impacts associated with emergency access during program operations would therefore be **less than significant**.

Mitigation Measures

TRA-1 would be implemented during Program construction to minimize potential impacts associated with inadequate emergency access.

3.9.5 Level of Significance After Mitigation

As described above, **no impact** would occur related to conflicts or inconsistency with CEQA Guidelines Section 15064.3. Impacts related to conflicts with a program, plan, ordinance, or policy addressing the circulation system would be **potentially significant** for temporary construction of the Program components, requiring the implementation of mitigation. Mitigation measure **TRA-1** would require the preparation of a TCP and coordination with the agency of jurisdiction to address vehicular traffic during construction of the Program components within the affected public rights-of-way, which would allow for adequate circulation during construction. Therefore, impacts to circulation would result in a **less than significant impact with mitigation.**

Impacts related to hazards due to a geometric design feature or incompatible uses and inadequate emergency access would be **potentially significant**. However, implementation of measure **TRA-1** would minimize potential impacts associated with hazardous traffic conditions and inadequate emergency access, ensuring impacts would be **less than significant with mitigation**.

3.9.6 References

California Department of Transportation (Caltrans). 2020. Highway Design Manual, Seventh Edition. July 1.

2002. Guide for the Preparation of Traffic Impact Studies. December.

City of Oceanside (City). 2017. City of Oceanside 2017 Bicycle Map. Available at: https://www.ci.oceanside.ca.us/home/showpublisheddocument/5922/638055920140630000.

2012. Oceanside General Plan Circulation Element. September.

North County Transit District. 2024. System Map. October. Available at: https://gonctd.com/wp-content/uploads/NCTD-System-Map-Only-October-2024.pdf.

San Diego Association of Governments (SANDAG). 2021. San Diego Forward: The 2021 Regional Plan. Adopted December 10. Available at: https://www.sandag.org/regional-plan/2021-regional-plan/final-2021-regional-plan.

2004. *Regional Comprehensive Plan (RCP) for San Diego Region*. Available at: https://www.sandag.org/uploads/publicationid/publicationid_1094_3362.pdf.

3.10 TRIBAL CULTURAL RESOURCES

This section evaluates the potential for impacts to tribal cultural resources resulting from implementation of the Program. The following discussion includes a description of the environmental setting, a summary of applicable regulations, and an evaluation of the proposed Program's potential environmental effects associated with tribal cultural resources. This section incorporates information from the *Cultural Resources Technical Report* (HELIX 2026a; Appendix D) and *Cultural Resources Post-Review Discovery and Monitoring Plan* (HELIX 2026b; Appendix E) prepared for the proposed Program, as well as from consultation with Native American tribes pursuant to AB 52. A general discussion of cultural resources is included in Section 3.3, *Cultural Resources*, of this PEIR, which may be referenced in this section. Pursuant to PRC Section 21083.9, this section focuses solely on the Program's potential impacts to tribal cultural resources.

3.10.1 Environmental Setting

The environmental setting as it relates to cultural resources is described in detail in Section 3.3 of this PEIR, including discussion of the prehistorical and ethnohistorical context that applies to tribal cultural resources; the methods for identifying cultural and tribal cultural resources; and areas of traditional cultural significance and archaeological sites that have been recorded within or adjacent to the program area.

The presence and significance of existing tribal cultural resources within the Program Area were evaluated based on a review of institutional records and previous studies within the Program area, records searches conducted at the SCIC, a Sacred Lands File Search, Native American outreach and consultation, and a pedestrian survey that involved Native American monitors. The evaluation of tribal cultural resources is in conformance with PRC Section 21082.3, the CEQA Guidelines, and statutory requirements of CEQA (Section 15064.5). To date, no tribal cultural resources have been formally identified within the Program Area that currently serve religious or other community practices.

The Native American outreach conducted for the Program is described in detail below. Please refer to Section 3.3.1.2, *Identification of Cultural Resources*, for additional detail related to the records search, other archival research, and pedestrian survey.

3.10.1.1 Native American Contact Program

HELIX initially contacted the Native American Heritage Commission (NAHC) on September 13, 2017, to request a search of its Sacred Lands File and a list of Native American individuals and organizations that might have knowledge of, or concerns regarding, cultural resources within the Program area. Because the NAHC indicated that the San Luis Rey Band of Luiseño Indians (San Luis Rey Band) has identified significant cultural resources in the immediate vicinity of the Program, HELIX solicited input from the San Luis Rey Band as part of the 2017 study to adequately assess cultural sensitivity of the area and identify potential constraints to the Program.

The NAHC was again contacted on November 16, 2020. The NAHC indicated in a response dated January 14, 2021, that the Sacred Lands File search was positive and recommended contacting the La Jolla Band of Luiseño Indians, as well as the San Luis Rey Band; however, HELIX was unsuccessful in reaching the La Jolla Band for comments.

The San Luis Rey Band of Luiseño Indians responded in a letter dated October 10, 2017, that the entire Program area is within "multiple areas of traditional cultural significance and incredibly high sensitivity for the San Luis Rey Band and the Luiseño people." This is due to the presence of known archaeological sites that have documented burial areas, as well as the "overall use of the land in the areas that the project will impact." Given the sensitivity of the area, the San Luis Rey Band stressed the importance of a Luiseño Native American monitor being present for all ground-disturbing activity. In addition, the San Luis Rey Band would like to discuss proposed construction methods with City staff.

As described in Section 1.2.2, the City circulated an NOP of a Draft PEIR on March 9, 2021, to potentially interested parties, including to tribal contacts. The Viejas Band of Kumeyaay Indians (Viejas) responded via email on April 2, 2021, that Viejas "has reviewed the proposed project and at this time we have determined that the project site has cultural significance or ties to the Kumeyaay Nation." Viejas recommended that the City contact San Pasqual. In addition, Viejas requested that the Program follow all NEPA/CEQA/Native American Graves Protection and Repatriation Act laws and immediately contact San Pasqual on any Program changes or inadvertent discoveries.

3.10.1.2 Assembly Bill 52 Consultation

The City initiated AB 52 consultation on March 24, 2021, by mailing letters, pursuant to PCR Section 21083.3.1 to the following Native American Tribes that have requested notification of City projects in the geographic area in which they are traditionally or culturally affiliated:

- Barona Group of the Capitan Grande
- Campo Band of Diegueño Mission Indians
- Ewiiaapaayp Band of Kumeyaay Indians
- Iipay Nation of Santa Ysabel
- Inaja-Cosmit Band of Indians
- Jamul Indian Village
- Juaneño Band of Mission Indians - Acjachemen Nation
- Kwaaymii Laguna Band of Mission Indians
- La Jolla Band of Luiseño Indians
- La Posta Band of Diegueño Mission Indians
- Manzanita Band of Kumeyaay Nation
- Mesa Grande Band of Diegueño Mission Indians
- Pala Band of Mission Indians
- Pauma Band of Luiseño Indians
- Pechanga Band of Luiseño Indians
- Rincon Band of Luiseño Indians
- San Luis Rey Band of Mission Indians
- San Pasqual Band of Diegueño Mission Indians
- Soboba Band of Luiseño Indians
- Sycuan Band of the Kumeyaay Nation
- Viejas Band of Kumeyaay Indians

The letters included a description of the proposed Program; locations of Program components with regional, topographical, and aerial maps; and results of the Sacred Lands File search. The letters stated that Tribal contacts had 30 days from receipt of the letter to request, in writing, consultation. The City is

undertaking consultation under AB 52 with the three tribes who replied affirmatively to request consultation: Rincon Band of Luiseño Indians (Rincon), San Luis Rey Band, and San Pasqual. Jamul Indian Village responded that the Program is beyond the boundaries of the territory that the Tribe considers their Traditional Use Area and defers to the wishes of Tribes in closer proximity to the Program area. Information resulting from these consultations has been used to help assess Program impacts and is incorporated into Appendix D, as appropriate (only non-confidential material will be included).

Rincon Band of Luiseño Indians

A virtual Tribal consultation meeting was conducted on June 8, 2021, with representatives from the City, Rincon, and HELIX, the City's consultant. The City provided a summary overview of the Program and design-build process, the evaluation of tunnel versus open trench construction methods within specific areas of the Program alignment, and the anticipated schedule and forthcoming analyses.

Consultation was reinitiated with a letter sent by the City on September 19, 2025 to request continued consultation on the Program and to provide a status update and relevant Program documentation, including the Cultural Resources Technical Report, Geotechnical Data and Interpretive Report, Hydraulic Analysis Technical Memorandum, 90 percent design plans for the OMG Lift Station, and GIS shapefiles. The Draft Cultural Resources Post-Review Discovery and Monitoring Plan was provided to the Tribe for review and comment by the USEPA through the Section 106 consultation process. AB 52 consultation is ongoing.

San Luis Rey Band of Luiseño Indians

A virtual Tribal consultation meeting was conducted on June 8, 2021, with representatives from the City, San Luis Rey Band, and HELIX. The City provided a summary overview of the Program and design-build process, discussed use of various construction methods within specific areas of the Program alignment (e.g., removal and replacement of existing pipelines within the same location vs. placement of parallel alignments and abandonment of existing pipelines), and the anticipated schedule and forthcoming analyses. Mitigation measures and the inclusion of tribal monitoring were discussed.

Consultation was reinitiated with a letter sent by the City on September 19, 2025 to request continued consultation on the Program and to provide a status update and relevant Program documentation, including the Cultural Resources Technical Report, Geotechnical Data and Interpretive Report, Hydraulic Analysis Technical Memorandum, 90 percent design plans for the OMG Lift Station, and GIS shapefiles. The Draft Cultural Resources Post-Review Discovery and Monitoring Plan was provided to the Tribe for review and comment by the USEPA through the Section 106 consultation process. AB 52 consultation is ongoing.

San Pasqual Band of Mission Indians

A virtual Tribal consultation meeting was conducted on June 17, 2021, with representatives from the City, San Pasqual, and HELIX. The City provided a summary overview of the Program and design-build process and the anticipated schedule and forthcoming analyses. San Pasqual indicated that they would defer to Rincon and the San Luis Rey Band; however, they would like to be involved if other tribes would not be providing monitors or consultation in the event of a discovery.

3.10.2 Regulatory Framework

Regulations specific to tribal cultural resources and relevant to this analysis are described below. Additional federal, state, and local regulations relevant to this analysis, including the National Historic Preservation Act, California Environmental Quality Act, and City of Oceanside regulations, are discussed in Section 3.3.2.

3.10.2.1 California Assembly Bill 52

California State AB 52 revised PRC Section 21074 to include TCRs as an area of CEQA environmental impact analysis. Further, per new PRC Section 21080.3, a CEQA lead agency must consult with any California Native American tribe that requests consultation and that is traditionally and culturally affiliated with the geographic area of a proposed project to identify resources of cultural or spiritual value to the tribe, even if such resources are already eligible as historical resources as a result of cultural resources studies.

3.10.2.2 California Environmental Quality Act

Tribal cultural resources are addressed in PRC Section 21074 of the CEQA Statute, which reads:

(a) "Tribal cultural resources" are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

(b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

3.10.2.3 Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of a study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed Program.

Potentially relevant to archaeological sites is the category termed Traditional Cultural Properties in discussions of cultural resource management performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), "traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Cultural resources can include Traditional Cultural Properties, such as gathering areas, landmarks, and ethnographic locations, in addition to archaeological districts. Generally, a Traditional Cultural Property may consist of a single site, or group of associated archaeological sites (district or traditional cultural landscape), or an area of cultural/ethnographic importance.

In California, the Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American Tribes during the project planning process, specifically before adopting or amending a General Plan or a Specific Plan, or when designating land as open space for the purpose of protecting Native American cultural places. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of precontact, archaeological, cultural, spiritual, and ceremonial importance. State AB 52, effective July 1, 2015, introduced the Tribal Cultural Resource as a class of cultural resource and additional considerations relating to Native American consultation into CEQA. As a general concept, a tribal cultural resource is similar to the federally defined Traditional Cultural Property; however, it incorporates consideration of local and state significance and required mitigation under CEQA. A tribal cultural resource may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in PRC Section 5024.1; or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC Section 21084.1, a unique archaeological resource described in PRC Section 21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.

3.10.3 Thresholds of Significance

The following criteria from Appendix G of the CEQA Guidelines are used as thresholds of significance to determine the impacts of the proposed Program as related to cultural resources and tribal cultural resources. The proposed Program would have a significant impact if it would:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;

2. Cause a substantial adverse change in the significance of an archaeological resources pursuant to Section 15064.5;

3. Disturb human remains, including those interred outside of formal cemeteries; or

4. Cause a substantial change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

    a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or

    b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.10.4 Program Impacts and Mitigation

3.10.4.1 Issue 1: Tribal Cultural Resources

Would the proposed project cause a substantial change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

1. *Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or*

2. *A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.*

Impact Analysis

The Program area is in the San Luis Rey River Valley, in proximity to Mission San Luis Rey and to ethnohistoric Luiseño village sites. The Wanis site complex (CA-SDI-5130, CA-SDI-5133/H, CA-SDI-6014, and CA-SDI-6015), located a short distance west of the Program area on the west side of the San Luis Rey River; and P-37-005445, which is crossed by the Program, both contain significant deposits. The City is undertaking consultation under AB 52 with the three California Native American tribes who requested consultation: San Luis Rey Band, Rincon, and San Pasqual. Information resulting from these consultations has been used to help assess Program impacts and is incorporated into this PEIR. Consultation will be ongoing throughout the design and construction of the Program in order to avoid impacts to tribal cultural resources to the extent feasible and maintain communication regarding adequate mitigation of those impacts that cannot be avoided.

Based on the cultural sensitivity of the area, tribal cultural resources have the potential to be present within the Program alignment. Therefore, the Program has the potential to affect tribal cultural resources during ground-disturbing activities, such as clearing, trenching, and grading. Impacts are considered to be potentially significant. As such, an archaeological and Native American monitoring

program and post-review discovery and monitoring plan would be implemented, as outlined in mitigation measures **CUL-1** through **CUL-9** described in Section 3.3.4.2 (Issue 2). Mitigation measure **CUL-10** would also be implemented to reduce impacts to Native American human remains, if encountered.

Mitigation Measures

Mitigation measures **CUL-1** through **CUL-10** described in Section 3.3.4.2 (Issue 2) and Section 3.3.4.3 (Issue 3) and the *Cultural Resources Post-Review Discovery and Monitoring Plan* (Appendix E) would be implemented during Program construction to address potential impacts to tribal cultural resources.

3.10.5 Level of Significance After Mitigation

As described above, impacts related to a substantial change in the significance of a tribal cultural resource would be **potentially significant** due to the cultural sensitivity of the Program area and the potential to affect tribal cultural resources during ground-disturbing activities. Implementation of the affirmation measures **CUL-1** through **CUL-10**, including the Cultural Resources Post-Review Discovery and Monitoring Plan (Appendix E), would ensure that impacts to tribal cultural resources would be **less than significant with mitigation**.

3.10.6 References

HELIX Environmental Planning Inc. (HELIX). 2026a. Oceanside Sewer Improvements Program Cultural Resources Post-Review Discovery and Monitoring Plan. January.

2026b. Oceanside Sewer Improvements Program Cultural Resources Technical Report. January.

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4.0 ENVIRONMENTAL EFFECTS FOUND NOT TO BE SIGNIFICANT

This chapter of the PEIR provides information regarding environmental effects that were determined not to be significant and why they do not require in-depth analysis in this PEIR. Implementation of the proposed Program would not result in significant impacts to following environmental resource categories, which were analyzed in accordance with Appendix G of the CEQA Guidelines (California Code of Regulations [CCR] Section 15000 *et seq.*): aesthetics, agriculture and forestry resources, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, utilities and service systems, or wildfire.

4.1 AESTHETICS

Would the proposed Program have a substantial adverse effect on a scenic vista?

While the City of Oceanside General Plan Environmental Resource Management Element does not identify scenic vistas, it does identify scenic areas to preserve as visual open space, including the San Luis Rey River and Buena Vista Lagoon. During construction of the Program components, construction equipment and vehicles could partially interfere with public views of visual resources in the Program area; however, such effects on scenic vistas would be minimal and brief as any interference would be the result of transitory construction activities, which would continue to move along the proposed alignment. Upon completion of construction, the majority of proposed Program components (pipelines) would be underground and would have no impact on scenic vistas. The proposed Oceanside Mesa Garrison (OMG) Lift Station would include small above-ground structures located near existing residential development. The proposed lift station would not obstruct views. Overall, the proposed Program does not include the construction of new structures or facilities that could obstruct scenic vistas or substantially change the composition of an existing scenic resource in a manner that would adversely alter the visual quality; therefore, the proposed Program would result in less than significant impacts to scenic vistas.

Would the proposed Program substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

There are no designated state scenic highways in the Program vicinity. The segments of Interstate 5 (I-5) and State Route (SR) 78 within the City are neither eligible nor officially designated state scenic highways. SR 76 is eligible but not officially designated by the California Department of Transportation (Caltrans). Because the proposed Program is not located within the viewshed of a state scenic highway, no impact to scenic resources within a state scenic highway would occur.

In nonurbanized areas, would the proposed Program substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If in an urbanized area, would the Program conflict with applicable zoning and other regulations governing scenic quality?

The Program would occur in an urbanized area. The majority of proposed Program components (pipelines) would be underground and would not conflict with applicable zoning or other regulations governing scenic quality. The primary permanent visible component of the Program would be the OMG

Lift Station. This would be located at the former Garrison Elementary school site, which has a zoning designation of Civic/Public. The lift station would not conflict with the applicable zoning, and impacts would be less than significant.

Would the proposed Program create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Construction activities for the pipelines may occur during nighttime hours, requiring construction lighting. Such construction lighting would be set to direct light only to active work areas. This would avoid light and glare impacts on surrounding businesses and residences during construction. Moreover, nighttime construction activities and the associated use of lighting would be temporary for any given section of pipeline installation. As such, nighttime construction lighting would not create substantial sources of light that would affect day or nighttime views in the area. Impacts would be less than significant.

The primary permanent visible component of the Program would be the OMG Lift Station, which would include standard site lighting, such as security lighting. Lighting sources would be minimal and would be directed away from residences and other sensitive uses. In addition, the Program area is built-up where night lighting is a common feature. Light sources in the area include streetlights, building lighting, security lighting, and sidewalk lighting. As such, the Program would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would be less than significant.

4.2 AGRICULTURE AND FORESTRY RESOURCES

Would the proposed Program convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

According to the California Department of Conservation (DOC) California Important Farmland Finder (DOC 2024) the Program alignment traverses mostly Urban and Built-Up Land, as well as some areas of Farmland of Local Importance and Other Land. Urban and Built-Up Land is defined as land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes. Farmland of Local Importance is defined as land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. Other Land is defined as land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than forty acres. The Program would therefore not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Impacts would be less than significant.

Would the proposed Program conflict with existing zoning for agricultural use, or a Williamson Act contract?

The Program alignment traverses land zoned for agricultural use where is routes along Whelan Lake Road between the San Luis Rey Water Reclamation Facility (SLRWRF) and the San Luis Rey River. This land, as well as additional land extending south along the San Luis Rey River that the alignment is in, is enrolled in a Williamson Act Contract, according to the California DOC Williamson Act Enrollment Finder (DOC 2025). The Williamson Act Contract enrollment status is Nonprime Agricultural Land, which is land that is enrolled in a Williamson Act Contract and does not meet any of the criteria for classification as Prime Agricultural Land. This land is currently not utilized for agricultural purposes. In addition, the proposed Program components that would be constructed in this area (belowground pipelines) would not change the current land use, and would therefore not conflict with existing zoning for agricultural use or a Williamson Act contract. Impacts would be less than significant.

Would the proposed Program conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

According to the Public Resource Code, "Forest land" is land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. "Timberland" means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. "Timberland production zone" means an area which has been zoned pursuant to Government Code Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses.

The Program area does not contain forest land, timberland, or timberland production zones. The majority of the Program area is surrounded by residential development and Urban and Built-Up Land. The Proposed Program would therefore not conflict with or cause rezoning of forest land, timberland, or timberland production zones. No impact would occur.

Would the proposed Program result in the loss of forest land or conversion of forest land to non-forest use?

The Program area does not contain forest land. The majority of the Program area is surrounded by residential development and Urban and Built-Up Land. The proposed Program would therefore not cause loss or conversion of forest land. No impact would occur.

Would the proposed Program involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

The proposed Program components would not be constructed in areas currently utilized for agriculture or forestry uses. In addition, the majority of the Program components would be belowground pipelines that would not change existing land uses. The primary aboveground component (OMG Lift Station)

would be located at a former school site where no agriculture or forestry uses exist. The proposed Program would therefore not involve changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

4.3 HYDROLOGY AND WATER QUALITY

Would the proposed Program violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The Program is within the San Luis Rey River Watershed and underlain by the Lower San Luis Rey Valley Groundwater Basin. The basin has a surface area of 46 square miles and underlies an east-west-trending alluvium-filled valley located along the western coast of San Diego County. The major hydrologic feature is the San Luis Rey River, which drains the valley overlying the basin. The basin is bounded on the east, northeast and southeast by the contact of alluvium with impermeable Mesozoic granitic and Pre-Cretaceous metamorphic rocks. In the northwest and southwest of the lower portion of the basin, alluvium is in contact with the semi-permeable Eocene marine deposits and Tertiary non-marine deposits. The basin is bounded on the west by the Pacific Ocean. Average annual precipitation ranges from 7 to 21 in (California Department of Water Resources [DWR] 2004). The basin is recharged by imported irrigation water applied on upland areas and by storm-flow in the San Luis River and its tributaries. Movement of groundwater in the alluvial aquifer is westward towards the Pacific Ocean. Water levels in the basin declined drastically in the 1950s and 1960s due to groundwater development and over pumping. Since the advent of imported water sources, groundwater levels have risen to near pre-development levels and averages range from 0 to 20 feet below land surface (DWR 2004). The City operates groundwater wells to extract brackish groundwater from the Mission Basin, which is part of the San Luis Rey Valley basin.

Construction of the Program components would avoid direct impacts to the San Luis Rey River by means of specific construction methods that would install pipeline beneath the river (e.g., jack and bore, multi-directional drilling, or tunneling). No permanent impacts or development within the San Luis Rey River are anticipated as a result of any of the Program components. However, as construction of the Program components would occur near the San Luis Rey River and within the San Luis Rey River and San Luis Rey Valley Groundwater Basin area, water quality may be affected. Construction of the proposed facilities (pipelines, lift station) may include vegetation removal, grading, excavation, and dewatering, which have the potential to affect surface water quality. Disturbed soils could be exposed to the erosive forces of wind, rain, and stream flow. Erosion and subsequent sedimentation could impair surface water quality as runoff from areas of construction could drain directly to nearby water bodies. In addition to sedimentation issues, hazardous materials associated with construction equipment (such as fuels, oils, lead solder, solvents, and glues) could adversely affect surface and groundwater quality if spilled or stored improperly.

To protect water quality, the Program would obtain coverage under State Water Resources Control Board's (State Water Board's) NPDES (National pollutant Discharge Elimination System) General Permit for Discharges of Storm Water Associated with Construction Activity (Order No. 2012- 0006-DWQ), which requires the preparation and implementation of a SWPPP (Stormwater Pollution Prevention Plan). The objectives of a SWPPP are to identify the sources of sediment and other pollutants that affect the quality of storm water discharges and describe and ensure the implementation of Best Management Practices (BMPs) to reduce or eliminate sediment and other pollutants in storm water and non-storm

water discharges. The BMPs would address source control, pollutant control, and treatment control. The SWPPP also establishes specific fueling areas for construction vehicles, handling procedures for hazardous materials, and requirements for revegetation following construction. For many of the BMPs, installation must take place before a specific date (usually October 15th, representing the onset of the rainy season), and regular maintenance is required until the end of the rainy season (usually April 15th). The SWPPP would be implemented by the contractors during construction activities and would reduce the potential to affect the quality of stormwater discharges.

Excavation for pipeline trenches and the OMG Lift Station could encounter saturated sediments and groundwater. In order for construction to occur in these conditions, local dewatering may be required that could include pumping groundwater from the construction zone and discharging the groundwater to adjacent surface waterways. Depending on the quality of the groundwater, the discharge to surface waterways could affect surface water quality. In general, the groundwater would likely be of acceptable water quality, but there is a possibility of encountering contaminated groundwater (e.g., from a leaking underground storage tank). Discharge to creeks or surface waterways, however, would be subject to permit requirements of the San Diego Regional Water Quality Control Board (RWQCB) per General Waste Discharge Requirements for Discharges from Groundwater Extraction and Similar Discharges to Surface Waters within the San Diego Region except for San Diego Bay (Order R9- 2008-0002). Compliance with permit requirements would provide adequate protection of surface water quality.

The Program would involve mostly the installation of pipelines underground as well as the addition of the OMG Lift Station at the former Garrison Elementary School site. The underground pipelines would not create additional impermeable surfaces. However, for the OMG Lift Station, conversion of bare, open ground to impermeable surfaces could increase runoff volumes and pollutants entering local water bodies. The water quality of surface runoff is directly correlated to land use. Paved and impermeable surfaces, including concrete surfaces accumulate pollutants, which are carried in stormwater runoff to nearby surface waters during rain events. Impermeable surfaces accumulate particulate matter and other pollutants (furans, dioxins, mercury) due to dry deposition. Thus, operation of the proposed above-ground facilities could generate stormwater runoff that could discharge pollutants or contribute to violation of water quality standards. Compliance with the NPDES Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds within the San Diego Region (Order R9-2013-0001) and associated municipal ordinances, including applicable policies of relevant General Plans, would ensure that all storm water runoff from Program facilities do not adversely affect surface water quality. Impacts would be less than significant.

Would the proposed Program substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

As discussed above, the Program is within the San Luis Rey River Watershed and underlain by the Lower San Luis Rey Valley Groundwater Basin. According to the San Diego Water Authority, the Lower San Luis Rey Valley Groundwater Basin is a very low priority under the Sustainable Groundwater Management Act (SGMA), meaning that the basin is not subject to the requirements in SGMA, and the basin is not high risk for depletion. The Program would not involve removing groundwater from the basin (San Diego County Water Authority 2025).

Additionally, the Program would primarily involve the installation of pipelines underground as well as the addition of the OMG Lift Station at the former Garrison Elementary School site. The underground

pipelines would not create additional impermeable surfaces. The OMG Lift station would occur on approximately three acres, the majority of which would be converted from grass to impermeable surfaces. However, this addition is very minor and would not interfere substantially with groundwater recharge. Impacts would be less than significant.

Would the proposed Program substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

i. *Result in substantial erosion or siltation on or off site;*
ii. *Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site;*
iii. *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; or*
iv. *Impede or redirect flood flows?*

Construction of the Program components would have the potential to temporarily alter the existing drainage pattern of the area through activities such as grading and excavation. Such activities may result in erosion. However, as discussed above, Program would obtain coverage under State Water Board's NPDES General Permit for Discharges of Storm Water Associated with Construction Activity (Order No. 2012- 0006-DWQ), which requires the preparation and implementation of a SWPPP. The BMPs contained in the SWPPP would reduce or eliminate sediment and other pollutants in storm water and non-storm water discharges. Compliance with the NPDES General Permit requirements and SWPPP would minimize the potential for erosion. Construction of pipelines that would cross the San Luis Rey River would occur via tunneling methods and would therefore not alter the course of the river. Temporary construction activities would also not substantially increase runoff or impede or redirect flood flows. Construction-period impacts would be less than significant.

Operationally, the proposed Program would consist of buried pipelines and an aboveground lift station. Since the pipelines would be below ground, they would not result in substantial changes to existing drainage patterns that would cause erosion, increases in runoff, or impediment or redirection of flood flows. While the pipeline alignments would cross the San Luis Rey River, they would be below the river and would not alter the course of the river. The aboveground OMG Lift station would be located outside of the 100-year and 500-year floodplains but would result in the placement of impermeable surfaces on land that is bare ground under existing conditions. The addition of impervious ground could change runoff characteristics such that drainage patterns of affected sites could cause downstream flooding. The total impervious area that would be generated would be approximately three acres, which would be relatively minor. In addition, the Program would comply with the Regional MS4 Permit (Order R9-2013-0001), as applicable for sites that drain to municipal storm sewers. Compliance with this permit would minimize the impermeable surfaces created and reduce the peak flow (e.g., through bioretention facilities) such that runoff would be minimized. Therefore, the Program would not substantially alter the existing drainage pattern of the site or area, and impacts would be less than significant.

Would the proposed Program, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

One hundred-year and 500-year floodplains are located throughout the Program area, primary along major waterways or adjacent to the coast. The Program's primary aboveground component, the OMG

Lift Station, would be located outside of the 100-year and 500-year floodplains. Therefore, no impacts related to flood hazards would occur. In regard to tsunami and seiche risks, the Program area is bounded on the west by the Pacific Ocean and there are several inland lakes/lagoons adjacent to the Program, such as Whelan Lake, which is located 0.2 miles west of the SLRWRF. Coastal areas adjacent to the Pacific Ocean are susceptible to the seismic hazard of tsunami (tidal waves) and the inland lakes and lagoons are susceptible to the seismic hazard of seiche (raising and lowering of water surface). The proposed OMG Lift Station would be located approximately 2.8 miles from the Pacific Ocean and 2.4 miles from Whelan Lake. Therefore, no impacts related to tsunami or seiche would occur.

Would the proposed Program conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The San Diego Basin Plan, most recently amended on May 17, 2016, sets forth water quality objectives for Region 9 (San Diego County Region). Specifically, the Basin Plan is designed to accomplish the following: (1) designate beneficial uses for surface and groundwater, (2) set the narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, (3) describe mitigation measures to protect the beneficial uses of all waters within the region, and (4) describe surveillance and monitoring activities to evaluate the effectiveness of the Basin Plan. The Basin Plan incorporates by reference applicable State Water Board and the San Diego RWQCB plans and policies.

The Program area is located within the San Luis Rey Watershed Water Quality Improvement Plan (WQIP) area. The ultimate goal of the WQIP is to protect, preserve, enhance, and restore water quality of receiving water bodies (City of Oceanside et al. 2016). These improvements in water quality would be accomplished through an adaptive planning and management process that identifies the highest priority water quality conditions within the watershed and implements strategies to address them. The Program is consistent with these goals by complying with the regulations as described below.

The SGMA has enacted sustainable groundwater management requirements. In San Diego County, there are four basins that meet the criteria as medium-priority and are subject to this regulation: Borrego Valley, Upper San Diego River Valley, San Luis Rey Valley, and San Pasqual Valley. While the Program alignment is located near the San Luis Rey River corridor, the alignment does not fall within the area of the San Luis Valley Groundwater Basin that is considered a medium-priority basin category that requires a Groundwater Sustainability Plan (DWR 2019). Currently there is no adopted sustainable groundwater management plan applicable to the Program area. In addition, the Program would not utilize or affect the groundwater levels or quality, as discussed above. Thus, the Program would not conflict with a sustainable groundwater management plan. Impacts would be less than significant.

4.4 LAND USE AND PLANNING

Would the proposed Program physically divide an established community?

The improvements under the proposed Program would include underground sewer utility infrastructure and an aboveground lift station. The sewer pipelines would be constructed below ground within existing easements and within public roadway ROW. The proposed lift station would be constructed within a former elementary school site. The Program would therefore not physically divide an established community, and no impacts would occur.

Would the proposed Program cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The majority of the proposed Program components would be belowground pipelines that would be constructed primary within easements and roadway ROW and would not result in changes to current land uses. The primary permanent aboveground component, the OMG Lift Station, would be constructed at the former Garrison Elementary School property, which has a land use designation of Civic Institution. The proposed lift station would be consistent with this land use designation.

The proposed Program is located within the Oceanside Draft Subarea Plan (SAP) of the North County Multiple Species Conservation Plan (North County Plan). The City has not approved or adopted the Draft SAP, and, as such, is not subject to the requirements of the North County Plan. Nevertheless, the Program would not conflict with the conservation goals and objectives of the North County Plan for the local area, as discussed in Section 3.2*, Biological Resources,* upon the implementation of mitigation measures **BIO-1a** through **BIO-8b**.

The Program would potentially conflict with local ordinances related to noise control, but these impacts would be reduced to less than significant with the implementation of mitigation measures **NOI-1** through **NOI-3**, with the exception of construction noise that would be significant and unmitigable, and discussed in Section 3.4, *Noise*.

Impacts related to conflict with an applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect would be less than significant.

4.5 MINERAL RESOURCES

Would the proposed Program result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state or result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

According to the County (2008), deposits of sand and gravel have been mapped within the Program area. Portions of the Program area are designated by the California Geologic Survey as within mineral resource zone (MRZ)-2, which is an area of known mineral occurrences with potential resource significance. However, the Program area is not currently used for mining or for production of mineral resources of value to the region or residents of California and is not planned to be used for such in the future based on land use designations. No impacts associated with mineral resources would occur as a result of implementation of the proposed Program.

4.6 POPULATION AND HOUSING

Would the proposed Program induce substantial unplanned population growth in an area, either directly (for example, by proposed new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Implementation of the proposed Program would not directly induce population growth because it does not propose new homes or businesses that would directly generate new growth. The Program consists

of wastewater infrastructure improvements designed to address existing system deficiencies and to provide adequate capacity to serve projected growth that is already anticipated and planned for under the City's adopted General Plan and related land use plans.

While the expansion of wastewater infrastructure could be considered indirectly growth-inducing in that it supports development, the Program would not facilitate growth beyond that which is already planned, approved, and evaluated in prior environmental documents. The Program would not alter land use designations, increase allowable densities, rezone land, or extend wastewater service to undeveloped or unplanned areas. Accordingly, impacts related to population and housing would be less than significant.

Would the proposed Program displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed Program would implement sewer utility improvement improvements that would not displace people or housing. No impacts would occur.

4.7 PUBLIC SERVICES

Would the proposed Program result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, parks, or other public facilities?

The proposed Program does not propose new a fire department, police station, school, or park facilities and does not propose the expansion of such existing facilities. In addition, the Program would not induce substantial population growth in the Program area that would necessitate a need for new public services or facilities, as discussed above in Section 4.6, *Population and Housing*. Construction of the Program components would require a temporary increase in employees. The temporary construction jobs anticipated to be filled by the local labor force would not result in a substantial increase in demand for fire, police, school, or park services. Operation of the Program is not expected to result in additional staffing beyond existing conditions. Therefore, no impacts associated with the construction of new or expansion of existing fire protection, police protection, school, park, or other public facilities would occur.

4.8 RECREATION

Would the proposed Program 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?

The proposed Program would not induce population growth and would therefore not increase the use of existing parks or recreational facilities such that substantial physical deterioration would occur. No impacts would occur.

Does the proposed Program include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed Program does not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. No impacts would occur.

4.9 UTILITIES AND SERVICE SYSTEMS

Would the proposed Program require or result in the relocation or construction of new or expanded water, wastewater treatment or storm drainage, electric power, natural gas or telecommunications facilities, the construction of relocation of which could cause significant environmental effects?

The proposed Program does not involve the construction of habitable structures that would generate water, electricity, or natural gas demand or require telecommunications facilities or wastewater storage and treatment facilities. The proposed sewer lines and lift station have been designed in response to existing wastewater demands and would not result in the construction or expansion of new water or wastewater treatment facilities or expansion of existing facilities. No permanent staffing requirements would be associated with the new lift station, therefore demand for wastewater services would not increase due to implementation of the Program. While the proposed lift station would require electricity to operate the wastewater pumps, the electricity demand would be minimal and not require the construction or relocation of new facilities. Impacts would be less than significant.

Would the proposed Program have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The proposed Program does not involve the construction of habitable structures that could generate water demand. Construction activities would require a limited amount of water for dust suppression; however, this water use would be temporary, minimal, and short-term, and would not result in a substantial increase in water demand or affect the availability of water supplies. Impacts associated with water supplies would not occur.

Would the proposed Program result in a determination by the wastewater treatment provider, which serves or may serve the project, that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The proposed Program is designed to meet existing and future wastewater demands and would not itself generate new wastewater flows or require the construction or expansion of new water or wastewater treatment facilities, beyond those analyzed as part of the Program in this PEIR. Program-related wastewater generation would be limited to that associated with temporary construction workers. The amount of wastewater generated would be minimal and would not exceed treatment capacities. As a result, impacts related to wastewater treatment requirements would be less than significant.

Would the proposed Program generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction needs; and would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Program construction would generate a limited amount of solid waste. Excavated soil from trenching activities would be temporarily stockpiled and reused as appropriate. The remaining excess excavation material would be hauled off site and disposed of at an appropriate facility. The total volume would be minimal and impacts to landfills would be minimal. The proposed Program does not include construction of businesses or residences that would require ongoing solid waste disposal services. Sufficient landfill capacity exists to serve the Program; therefore, impacts would be less than significant.

4.10 WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the proposed Program substantially impair an adopted emergency response plan or emergency evacuation plan?

The Program area is mapped by the California Department of Forestry and Fire Protection (CAL FIRE) as being within High and Very High Fire Hazard Severity Zones (VHFHSZs; CAL FIRE 2025). During construction of Program improvements (pipelines) within roadways, portions of existing roadways may require closing (e.g., up to one lane at a time); however, access would be maintained, as the Program would implement a Traffic Control Plan (TCP) in accordance with mitigation measure **TRA-1** (refer to Section 3.8, *Transportation*). This would involve utilizing appropriate traffic control measures to ensure continued emergency response and evacuation access.

Following the completion of construction, the Program facilities would not interfere with emergency response or evacuation. The pipelines would be located below ground, and the additional aboveground Program components, including the proposed OMG Lift Station and potential small pipeline accessory structures, would be located out of roadways and would not interfere with emergency response or evacuation routes. In addition, the Program would not generate a high level of traffic on local roadways that would interfere with emergency response or evacuation. The Program's potential impacts associated with emergency response and evacuation would therefore be less than significant.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the proposed Program, due to slope, prevailing winds, or other factors, exacerbate wildfire risks, and thereby expose Program occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The proposed Program would not introduce permanent occupants. In addition, maintenance or construction workers would not be present for extended periods of time and would therefore not be exposed to substantial pollutants from wildfires that may occur in nearby areas. The Program area is mapped by the California Department of Forestry and Fire Protection (CAL FIRE) as being within High and Very High Fire Hazard Severity Zones (VHFHSZs; CAL FIRE 2025). Construction within areas of dense foliage during dry conditions would be avoided when feasible and standard brush fire prevention and management practices would be incorporated into the construction work plan to be prepared by the contractor(s) such that Program construction would not exacerbate fire risks and impacts would be less than significant.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the proposed Program require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The Program includes the installation of sewer lines and a lift station, which would not exacerbate fire risk or result in temporary or ongoing impacts to the environment. Construction and operation of the Program would be subject to compliance with applicable City Fire Department and Code Enforcement vegetation management and brush clearance requirements, including defensible space and nuisance vegetation standards applicable within High and Very High Fire Hazard Severity Zones; compliance with these existing regulations would reduce the potential for wildfire ignition or spread, and no impacts would occur.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the proposed Program expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Due to its location outside of identified flood and landslides zones, the OMG Lift Station is not anticipated to be exposed to flooding or landslides. Sewer pipelines would be located below ground and would not be subject to flooding or landslides. Therefore, the Program would not expose people or structures to significant risks associated with runoff, post-fire slope instability, or drainage changes, and impacts would be less than significant.

4.11 REFERENCES

California Department of Conservation (DOC). 2025. Williamson Act Enrollment Finder. Available at: https://maps.conservation.ca.gov/dlrp/WilliamsonAct/App/index.html.

2022. California Important Farmland Finder. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/.

California Department of Fire and Forestry (CAL FIRE). 2025. Fire Hazard Severity Zones. Available at: https://experience.arcgis.com/experience/6a9cb66bb1824cd98756812af41292a0.

California Department of Water Resources (DWR). 2004. Hydrologic Region South Coast San Luis Rey Valley Groundwater Basin, Bulletin 118. Available at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Bulletin-118/Files/2003-Basin-Descriptions/9_007_SanLuisReyValley.pdf.

County of San Diego (County). 2008. Guidelines for Determining Significance–Mineral Resources. July 30. Available at: http://www.sandiegocounty.gov/dplu/docs/Mineral_Resources_Guidelines.pdf

Oceanside, City of et al. 2024. Draft Program Environmental Impact Report for the City of Oceanside General Plan Update, Smart and Sustainable Corridors Specific Plan, and Climate Action Plan Update. June. Available at: https://www.ci.oceanside.ca.us/government/development-services/planning/ceqa/general-plan-update-phase-2-onward-oceanside.

2016. San Luis Rey River Watershed Management Area Water Quality Improvement Plan. March. Available at: https://projectcleanwater.org/watersheds/san-luis-rey-wma/#___Water_Quality_Improvement_Plan_WQIP__.

San Diego County Water Authority. 2025. Groundwater Management. Available at: https://www.sdcwa.org/your-water/local-water-supplies/groundwater/.

5.0 CUMULATIVE IMPACT ANALYSIS

5.1 INTRODUCTION

Section 15130 of CEQA Guidelines requires EIRs to include a discussion of the potential cumulative impacts of a proposed project. Cumulative impacts are defined as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." The discussion of cumulative impacts must reflect the severity of the impacts and the likelihood of their occurrence; however, the discussion need not be as detailed as the discussion of environmental impacts attributable to the project alone and should be guided by the standards of practicality and reasonableness (CEQA Guidelines Section 15130(b)).

As stated in the CEQA Guidelines, an EIR "shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable" (Section 15130(a)). "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, other current projects, and probable future projects as defined in Section 15130 (Section 15065(a)(3)). Therefore, consistent with CEQA Guidelines Section 15130, cumulative impacts are evaluated by determining whether the combined effects of the Program, when considered together with past, present, and reasonably foreseeable future projects, would result in a cumulatively significant condition, and if so, whether the Program's incremental contribution to that condition would be cumulatively considerable.

Cumulative impacts may be reduced to below the level of significance through mitigation, including providing improvements and/or contributing funds through fair share fee-payment programs designed to alleviate the cumulative impact. The EIR must examine "reasonable options for mitigating or avoiding any significant cumulative effects of a proposed project" (CEQA Guidelines Sections 15130(a)(3) and 15130(b)(5)).

5.2 CUMULATIVE IMPACT ANALYSIS METHODS

CEQA Guidelines Section 15130(b)(1) requires that a discussion of cumulative impacts be based on either: (1) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or (2) a summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. The analysis presented in this chapter relies on a combination of the list-based and projections-based approaches, using relevant plans, programs, and regional growth projections, as well as a list of known related projects within the vicinity of the Program area. The following section describes the methods used to evaluate potential cumulative impacts of the proposed Program.

5.2.1 Geographic Scope

The geographic scope of the cumulative impact analysis varies depending upon the specific environmental topic being analyzed. The geographic scope defines the geographic area within which projects may contribute to a specific cumulative impact. In accordance with CEQA Guidelines Section 15130(b)(3), Table 5-1, *Geographic Scope of Cumulative Impact Analyses*, summarizes the geographic

area within which past, present, and reasonably foreseeable future projects may contribute to a specific cumulative impact, when considered in conjunction with the impacts associated with implementation of the proposed Program.

Table 5-1
GEOGRAPHIC SCOPE OF CUMULATIVE IMPACT ANALYSES

Environmental Topic	Geographic Scope of Cumulative Impact Analyses
Air Quality	• *Consistency with Air Quality Plans*: the San Diego Air Basin (SDAB). • *Criteria Pollutants*: the SDAB. • *Sensitive Receptors*: the area in the immediate vicinity of the proposed Program components. • *Odors:* the area immediately surrounding potential odor sources. Because odors rapidly disperse beyond their source, associated impacts are generally not cumulative in nature.
Biological Resources	• *Sensitive Species, Sensitive Habitats, Wetlands, Wildlife Movement, Local Policies,* and *Conservation Planning:* the city of Oceanside and surrounding areas, particularly undeveloped lands within areas designated under the City's Draft Subarea Plan within the boundaries of the North County Multiple Habitat Conservation Program (MHCP) that support native habitats, native plant and animal species, and potentially jurisdictional waters, as well as contiguous units of U.S. Fish and Wildlife Service (USFWS) critical habitat.
Cultural Resources	• *Historical, Archaeological,* and *Cultural Resources:* areas with moderate and high cultural resource sensitivity within the city of Oceanside. • *Human Remains:* the City of Oceanside.
Energy	• *Energy Consumption and Conflict with Energy Plan:* the service area of the energy (electricity and natural gas) provider in the Program area, which is San Diego Gas and Electric (SDG&E).
Geology and Soils	• *Paleontological Resources:* areas with moderate and high paleontological resource sensitivity within the city of Oceanside.
Greenhouse Gas Emissions	• *Greenhouse Gas Emissions* and *Conflict with Plans or Policies:* the global atmosphere.
Hazards and Hazardous Materials	• *Transport, Use, and Disposal of Hazardous Materials; Release of Hazardous Materials; and Hazards Near Schools:* the Program component construction sites and operational facility sites that may involve the use of hazardous materials and the roadways and freeways used by vehicles transporting hazardous materials to and from these sites. • *Hazardous Materials Sites:* the area directly adjacent to a hazardous materials site. • *Airport Hazards:* within the Airport Influence Area or two miles of Oceanside Municipal Airport. • *Emergency Response and Evacuation:* the circulation network within and adjacent to the city of Oceanside. • *Wildland Fires:* the city of Oceanside.
Noise	• *Increase in Ambient Noise and Vibration:* those cumulative projects in the immediate vicinity of the Program component locations and any adjacent Noise Sensitive Land Uses (NSLUs). • *Aircraft Noise:* those projects located within the mapped aircraft noise contours of the Oceanside Municipal Airport.
Transportation	• *Circulation System, Vehicle Miles Traveled, Traffic Hazards, and Emergency Access*: the circulation network within and adjacent to the city of Oceanside.

Environmental Topic	Geographic Scope of Cumulative Impact Analyses
Tribal Cultural Resources	• *Tribal Cultural Resources:* areas with moderate and high cultural resource sensitivity within the city of Oceanside.

5.3 CUMULATIVE PROJECTS

Cumulative effects could result when considering the effects of the proposed Program in combination with the effects of other related projects in the area. The potential for the Program in combination with other projects to result in cumulative impacts depends on the location, size, and timing of the projects. Since a large portion of the proposed facilities would be underground pipelines that would have negligible operational impacts, the focus of this cumulative impact analysis is predominantly on potential construction-related impacts. As such, this analysis considers projects in proximity to Program components and facilities that are relatively large and have the potential to be constructed concurrently. Potential operational impacts would be limited largely to activities at the Oceanside Mesa Garrison (OMG) Lift Station. Therefore, projects in the area surrounding that site are considered relative to the potential for cumulative operational impacts.

Past, present, and reasonably foreseeable future related projects used in this analysis are shown on Figure 5-1, *Cumulative Projects,* and identified in Table 5-2, *List of Cumulative Projects*. Projects in Table 5-2 include projects within the city that are subject to CEQA, are currently under review, and involve physical construction work.

Table 5-2
LIST OF CUMULATIVE PROJECTS

Project Name	Location	Brief Description	Status
1. General Plan Update (Onward Oceanside)	Citywide	Update to land use, mobility, safety, noise, and environmental justice elements of the General Plan.	Under Review
2. Ocean KAMP	Former Valley Drive-In and Drive-In Mobile Park at 3480 Mission Avenue	Mixed-use development with up to 700 residential units, hotel, retail, office, open space, and surf lagoon.	Under construction
3. The Breeze Townhomes	Southern terminus of South Ditmar Street and South Nevada Street between Oceanside Boulevard and the North County Transit District Sprinter Line	Townhome development with associated infrastructure.	Approved
4. Coast Highway Corridor Study	Approximately 3.5 miles from the northern terminus of Coast Highway at Harbor Drive to Eaton Street near the city's southern boundary	Redevelopment plan for multi-modal improvements and land use revisions.	Under Review
5. Dolphin Carwash	Northeast corner of El Camino Real and Via Las Rosas	New automated car wash facility and demolition of existing structures.	Approved
6. Inns at Buena Vista Creek	Southeastern corner of SR-78/Jefferson Street intersection	Hotel development adjacent to wetland area.	Approved
7. Loma Alta Wetlands	Mouth of the Loma Alta Creek	Restoration and enhancement of Loma Alta Slough wetlands.	Approved
8. Cypress Point	West of Los Arbolitos Boulevard at the Aspen Street and Pala Road intersections	54 single-family homes on infill parcel.	Under construction
9. Coastal Rail Trail South	Oceanside Boulevard to Morse Street	Construction of Class I bike path and pedestrian bridge.	In Design
10. Tierra Norte	4665 and 4617 North River Road	Proposed residential development.	Under Review
11. Food Waste to Energy	3950 North River Road	Anaerobic digestion system for food waste-to-energy conversion.	Operational as of 2025

Table 5-2
LIST OF CUMULATIVE PROJECTS

Project Name	Location	Brief Description	Status
12. Ocean Creek Mixed-use Development	South of the intersection of Crouch Street and South Ocean Boulevard/Skylark Drive	Mixed-use development with housing and commercial uses.	Under construction
13. Pacifica Development Project	Former Pacifica Elementary School located at 4991 Macario Drive	164 townhomes on 14.55-acre vacant site.	Approved
14. Eddie Jones Warehouse Project	250 Eddie Jones Way	Demolition of industrial building for 566,905 sq. ft. warehouse facility.	Under Review
15. Mission Basin Groundwater Purification Facility Brine Minimization and Production Well Expansion Project	At the existing Mission Basin Groundwater Purification Facility site at 215 Fireside Street and along Mission Avenue immediately east of the City's Fire Station No. 7, which is located at 3350 Mission Avenue	Expansion of groundwater recharge facilities.	Approved
16. Douglas Drive Bridge Retrofit	Douglas Drive crossing over the San Luis Rey River	Seismic retrofit and structural improvements.	In Design
17. Oceanside Transit Center	235 South Tremont Street	Expansion and improvement of multimodal transit hub.	Under Review
18. Coast Highway Bridge Replacement	South of Harbor Drive, immediately west of and parallel to Interstate 5	Replacement of bridge structure and associated bike/pedestrian improvements.	In Design
19. Nitto Denko Expansion	501 Via Del Monte	Manufacturing building expansion and parking reconfiguration.	Approved
20. Audubon Buena Vista Lagoon Restoration	Across the Buena Vista Lagoon Nature Center, between Carlsbad Boulevard and railroad tracks going across the lagoon	Development plan for the restoration of approximately 6 acres of wetland habitat, construction of 994 linear feet of pedestrian trail, and installation of 2 bioswales.	Approved
21. New Fire Station 1	602 Civic Center Drive	30,000 sq. ft. Fire Station with living accommodations and administrative offices.	Operational as of 2024
22. Mission Flats	Northeast intersection of Douglas Drive and San Luis Rey Mission Expressway	Demolition and construction of a mixed-use development comprised of commercial space and 137 rental units.	Approved
23. Grandview Pointe	1902 Grandview Street	27-lot subdivision for residential development.	Under Construction
24. Oceanside Boulevard Sewer Lift Station	1630 Oceanside Boulevard	Construction of a new sewer lift station on a vacant parcel.	Operational as of 2023

Table 5-2
LIST OF CUMULATIVE PROJECTS

Project Name	Location	Brief Description	Status
25. 901 Pier View Way Mixed-Use Project	901 Pier View Way	64-unit mixed-use project with commercial space on the ground floor.	Approved
26. 86-Room Hotel at Airport Road	375 Airport Road	Four-story 86-room hotel.	Approved
27. Alta Oceanside	1001 North Coast Highway	Five-story mixed-use development project.	Operational as of 2024
28. 1011 S Tremont Condos	1011 South Tremont Street	Demolition of an existing closed trailer and construction of a three-story 20-unit condominium development.	Under Review
29. 1602 S Coast Hwy Mixed-Use Development	1602 South Coast Highway	54-unit condo development with 3,244 sf of ground floor commercial with parking garage.	Approved
30. Seagaze Dr Mixed-Use Development	716 Seagaze Drive	Eight-story mixed-use project with 3-below-grade levels of parking with commercial ground floor and studio apartments.	Approved
31. Whaley Single Family Residential	1728 Whaley Street	Lot subdivision for the development of new single-family residences.	Under Construction
32. Avocado Rd Single Family Residential Development	1448 Avocado Road	Development of 19 single family homes on a 3.43-acre site.	Approved
33. Sandpiper Villa Project	1914-1918 Dixie Street	Development of a 94-bed residential care facility.	Approved
34. Sunset Mixed-Use Project (Revised 2023)	Southwest lot at the intersection between North Horne Street and Pier View Way	Six-story vertical mixed-use building with 180 apartment units.	Approved
35. Arena Califino (now Frontwave Arena)	3475 Hero Drive	170,000 sq. ft. multipurpose sports area and event facility.	Operational as of 2024
36. Mercantile Lofts	1931 South Coast Highway	Demolition of existing commercial suites and construction of mixed-use development of commercial retail and 20 residential units.	Operational as of 2024
37. Freeman Apartments	701-713 North Freeman Street	Construction of four-story apartment complex consisting of 24 total units.	Approved
38. Modera Neptune Mixed-Use Project	815 North Coast Highway	Demolition of existing hotel and vacant restaurant for mixed-use development 360	Approved

Table 5-2
LIST OF CUMULATIVE PROJECTS

Project Name	Location	Brief Description	Status
		apartments, 62 hotel rooms, and subterranean parking structure.	
39. El Corazon Oceanside Boulevard Commercial District Project	Northwest corner of Rancho Del Oro and Oceanside Boulevard	533,700 sq. ft. development with research and development facilities and commercial space comprised of restaurants, gas station and carwash, and retail stores.	Approved
40. Oceanside East Shopping Center	3340 Mission Avenue	Shopping Center on vacant lot consisting of gas station with convenience store, car wash, auto repair, restaurants, and retail.	Approved
41. Ocean Pointe	Area between Stage Cach Road and SR 76	158-condo unit construction	Under Construction
42. Oceanside Home 2 by Hilton	Ranch Del Oro and B Street	Hotel at the entrance of Corazon Park	Approved
43. Quiet Zone Re-Certification	Surfrider Way, Mission Ave, Wisconsin Ave, Oceanside Blvd and Cassidy Street	Re-certify the Downtown Oceanside railroad quiet zone	In Design
44. Inland Rail Trail Feasibility Study	Between Melrose Drive to the Costal Rail Trail	Evaluation of the alignment of the Inland Rail Trail along the North County Transit District Sprinter Line.	In Design
45. Oceanside Boulevard and Crouch Street Undergrounding Project (Rule 20 A)	From Greenbrier to Crouch Street along Oceanside Boulevard	Combined coordination of overhead utilities to be placed underground.	In Design
46. La Salina Wastewater Treatment Plant (LSWWTP) Flow Diversion and Buccaneer Lift Station and Force Main Project	Existing LSWWTP located at 1330 Tait Street, Oceanside, CA 92054; three-mile-long force main along Oceanside Boulevard and Garrison Street	Diverting flow from the LSWWTP, constructing a new lift station and force main, rehabilitating an existing stormwater treatment facility, adding public parking and recreation amenities, and undergrounding an SDG&E electric distribution line,	In Design

5.4 CUMULATIVE IMPACT ANALYSIS

5.4.1 Air Quality

5.4.1.1 Consistency with Air Quality Plans

Cumulative air quality impacts are typically regional in nature and are assessed based on whether a proposed project, in combination with other past, present, and reasonably foreseeable future projects, would contribute to an exceedance of federal or state ambient air quality standards or conflict with adopted air quality planning efforts. For the San Diego region, this analysis considers consistency with the SDAB portion of the State Implementation Plan (SIP) and Attainment Plan developed to demonstrate how the region would meet federal and state ambient air quality standards. The Attainment Plan and SIP are intended to address cumulative impacts in the SDAB based on future growth predicted by the San Diego Association of Governments (SANDAG). SANDAG uses growth projections from the local jurisdictions adopted general plans; therefore, development consistent with the applicable general plan would be generally consistent with the growth projections in the air quality plans and would not result in a cumulative impact.

Cumulative development in the SDAB is not expected to result in a significant impact in terms of conflicting with the Attainment Plan or SIP because the majority of cumulative projects would involve development that is consistent with the applicable projections included in the Attainment Plan and SIP. In addition, as evaluated in Section 3.1.4.1 (Issue 1), the Program would not conflict with or obstruct implementation of the San Diego Air Pollution Control District's (SDAPCD's) Attainment Plan and SIP, and would not directly induce growth, indirectly accommodate unplanned growth, or generate high levels of vehicle miles travelled (VMT) during operations. As such, the Program, in combination with cumulative development, would not result in a cumulatively significant impact relative to conflicts with or obstruction of the applicable air quality plans.

5.4.1.2 Criteria Pollutants

The SDAB is a nonattainment area for particulate matter 10 microns or less in diameter (PM_{10}), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and ozone, and therefore the baseline cumulative impact for the region is considered significant. As evaluated in Section 3.1.4.2 (Issue 2), the Program would not result in emissions of PM_{10}, $PM_{2.5}$, or the ozone precursors nitrogen oxides (NO_X) and volatile organic compound (VOCs) during construction and operation that would exceed regional or local thresholds and would therefore not result in a cumulatively considerable contribution to the regional cumulative impact.

5.4.1.3 Sensitive Receptors

While regional cumulative air quality impacts are addressed through consistency with air quality planning documents, localized cumulative impacts—particularly those related to carbon monoxide (CO) hotspots and toxic air contaminants (TACs)—require analysis of the potential for combined exposure near sensitive land uses. Sensitive receptors such as residences, schools, daycares, and healthcare facilities are considered in determining whether the Program's incremental contribution would be cumulatively considerable in areas where existing or future pollutant concentrations may already approach or exceed thresholds. Construction of cumulative projects in addition to the proposed Program could combine to generate emissions of criteria pollutants and TACs that could affect nearby

Land Outfall Replacement
Existing Land Outfall (not proposed for replacement)
Gravity Sewer Main to Oceanside Mesa Garrison Lift Station
Mission Avenue Lift Station Force Main Replacement
Oceanside Mesa Garrison Force Main
Oceanside Mesa Garrison Force Main Extension
Oceanside Mesa Garrison Lift Station
Cumulative Projects

S.D. COUNTY
OCEANSIDE
OCEANSIDE
CARLSBAD
Oceanside Mesa Garrison Lift Station
Douglas Dr
North River Rd
Frazee Rd
Mission Ave
Old Grove Rd
Oceanside Blvd
S Coast Hwy
Vista Way
El Camino Real
Carlsbad Village Dr
Carlsbad Blvd
5
76
78

0 2,800 Feet

Source: Aerial (Maxar, 2023).

I:\PROJECTS\\Infrastructure Engineering Corp_01354\IEN-05_OceansideConditionAssessment_Task10\Map\PEIR\PEIR_25.aprx Fig5-1_Cumulative 01354.5.1 1/28/2026 - SAB

HELIX Environmental Planning

Cumulative Projects

Figure 5-1

sensitive receptors. This would only happen, however, if construction of one or more cumulative projects would emit substantial emissions, occur adjacent to and simultaneously with construction activities from Program components, and occur in proximity to sensitive receptors. As described in Section 3.1.4.3 (Issue 3), construction of the Program components would occur at various locations over a large area, and a large amount of equipment would not occur near a single sensitive receptor for an extended period of time. Based on the size, location, and phasing of the cumulative projects in Table 5-2 and the planned construction of the proposed Program, it is unlikely that multiple concurrent cumulative projects would be constructed simultaneously in an area.

As disclosed in Section 3.1.4.3 (Issue 3), emissions of CO hotspots and TACs during construction of the proposed Program would be minimal and would not expose sensitive receptors to substantial pollutant concentrations. Operationally, cumulative projects have the potential to combine to increase vehicular congestion on roadways and potentially result in CO hotspots; however, as discussed in Section 3.1.4.2 (Issue 3), the increase in vehicle trips associated with the proposed Program would be negligible. Also, the potential for a CO hotspot is generally limited to the immediate vicinity of the affected roadway segment or intersection. Operation of the backup emergency generator located at the OMG Lift Station would represent a new source of TACs. However, the backup generator would only be used for testing and emergency situations and is anticipated to result in negligible emission of TACs. Proposed pumps would be electrically powered and would not generate on-site emissions of TACs. As disclosed in Section 3.1.4.2 (Issue 3), Program emissions of criteria pollutants and ozone precursors during construction and operation would not exceed the SDAPCD daily thresholds. Therefore, the proposed Program would not expose sensitive receptors to substantial pollutant concentrations and its contribution to significant cumulative impacts to sensitive receptors would not be cumulatively considerable.

5.4.1.4 Odors

Odor emissions are generally localized and rapidly disperse beyond their source; thus, associated impacts are generally not cumulative in nature. The cumulative projects include residential, mixed-use, commercial, transportation/mobility improvement, public infrastructure and utilities, and environmental restoration/resource enhancement projects, none of which would be considered major odor generators. As discussed in Section 3.1.4.4 (Issue 4), the proposed Program would not result in substantial odor generation during construction or operation and would therefore not combine with other cumulative projects to result in a cumulatively significant impact associated with objectionable odors.

5.4.2 Biological Resources

5.4.2.1 Special Status Species

Numerous special-status plant and animal species have the potential or are known to occur within the City and the Program area. The majority of projects included in Table 5-2 are located in areas that are already developed or the sites have previously been altered due to grading; therefore, they would not contribute significantly to direct impacts to sensitive biological resources. However, cumulative projects identified in Table 5-2 would have the potential to combine to directly and/or indirectly affect special-status species, particularly in previously undeveloped and undisturbed areas. As such, cumulative impacts related to sensitive species are considered potentially significant.

As detailed in Section 3.2, *Biological Resources*, the Program would have the potential to affect special-status plant species (thread-leaved brodiaea and Brand's phacelia) and special-status wildlife species (light-footed Ridgway's rail, least Bell's vireo, coastal California gnatcatcher, Cooper's hawk, Costa's hummingbird, Vaux's swift, northern harrier, white-tailed kite, California horned lark, yellow-breasted chat, and yellow warbler). For proposed Program components with potential to directly or indirectly impact special-status plant and animal species, individual project-level surveys would be required to identify impacts and guide the implementation of required avoidance, minimization, and mitigation measures that would offset potential impacts resulting from the Program by avoiding take and mitigating loss of habitat. Therefore, with implementation of mitigation measures **BIO-1a** through **BIO-6**, the Program would not result in a cumulatively considerable contribution to a potentially significant cumulative impact related to sensitive plant and animal species.

5.4.2.2 Sensitive Habitats

The City, including the Program area, supports numerous sensitive vegetation communities, including but not limited to freshwater marsh, southern riparian forest, mule fat scrub, southern willow scrub, Diegan coastal sage scrub, baccharis scrub, native grassland, and salt grass grassland. Cumulative projects identified in Table 5-2 would have the potential to combine to directly and/or indirectly affect sensitive habitats throughout and surrounding the City, particularly in previously undeveloped and undisturbed areas. As such, cumulative impacts related to sensitive habitats are considered potentially significant.

For Program components that occur in proximity to sensitive natural communities, mitigation measures **BIO-5** and **BIO-6** would ensure that sensitive natural communities occurring beyond the authorized limits of work are protected during construction through the installation of temporary work/impact limits fencing (orange silt fencing or similar) and monitoring. If direct impacts to sensitive natural communities do occur, mitigation measures **BIO-7a**, **BIO-7b**, **BIO-8a**, and **BIO-8b** would provide for compensatory mitigation. Therefore, with these mitigation measures, the Program would not result in a cumulatively considerable contribution to a potentially significant cumulative impact related to sensitive habitats.

5.4.2.3 Wetlands

Potential wetlands and waters under Section 404 of the Clean Water Act (CWA) subject to jurisdiction of U.S. Army Corps of Engineers (USACE), jurisdictional waters of the State subject to jurisdiction by Regional Water Quality Control Board (RWQCB) under Section 401 of the CWA, and protected streambed and associated riparian habitat under the jurisdiction of the California Department of Fish and Wildlife (CDFW) per Section 1602 of the CDFW Game Code are present within the City and Program area. These include southern riparian forest, southern willow scrub, mule fat scrub, beach, concreate brow ditches and drainages, and other potential drainages. The cumulative projects identified in Table 5-2 would have the potential to combine to directly and/or indirectly affect wetlands and other jurisdictional features, particularly in previously undeveloped and undisturbed areas. As such, cumulative impacts related to wetlands are considered potentially significant.

For Program components that occur in proximity to wetlands or other jurisdictional features, mitigation measures **BIO-5** and **BIO-6** would ensure that such features beyond the authorized limits of work are protected during construction through the installation of temporary work/impact limits fencing (orange silt fencing or similar) and monitoring. If impacts to wetlands or other jurisdictional features do occur,

mitigation measures **BIO-8a** and **BIO-8b** would provide for regulatory permitting and compensatory mitigation. Therefore, with these mitigation measures, the Program would not result in a cumulatively considerable contribution to a potentially significant cumulative impact related to wetlands.

5.4.2.4 Wildlife Movement

Several wildlife movement corridors and linkages occur in the City, including biological core and linkage area (BCLAs), Wildlife Corridor Planning Zone (WCPZs), and preserves. Extensive cumulative development within undeveloped lands that currently provide movement corridors could result in significant impacts. The proposed Program would either minimize (through implementation of mitigation measures **BIO-1b**, **BIO-1c**, and **BIO-2**) and/or avoid (through trenchless construction methods) riparian habitat. Therefore, the proposed Program would have less than significant impacts to wildlife movement or corridors and would not interfere with potential nursery sites. To further reduce potential impacts to wildlife movement in the survey area, avoidance and minimization measures such as construction limit delineation (**BIO-5**) and biological construction monitoring in areas where work limits occur adjacent to potential wildlife movement areas (**BIO-6**) would be required and implemented. Therefore, with these mitigation measures, the Program would not result in a cumulatively considerable contribution to a potentially significant cumulative impact related to wildlife movement.

5.4.2.5 Local Policies

Cumulative development projects would be subject to applicable local ordinances, policies, and regulatory requirements governing the protection and management of biological resources.. These include local municipal code provisions, adopted habitat conservation policies, and general plan policies that require avoidance and minimization of impacts to sensitive biological resources, riparian habitats, wetlands, and special-status species. Compliance is typically administered through discretionary review, environmental review under CEQA, and project-level permitting, which may require biological resource assessments, adherence to adopted avoidance buffers, seasonal construction limitations, and implementation of restoration or mitigation measures where impacts cannot be fully avoided. Through application of these local regulatory mechanisms, cumulative development would be guided by established biological resource protection standards intended to reduce incremental habitat loss, fragmentation, and disturbance. As a result, cumulative biological impacts would be managed within a framework of local policies designed to protect sensitive resources. The Program would not result in a cumulatively considerable contribution to a potentially significant cumulative impact related to local policies.

5.4.2.6 Conservation Planning

Cumulative development projects within the study area would be subject to applicable conservation planning frameworks and implementing regulations on an individual, project-by-project basis. In Oceanside, conservation planning is implemented through the City's General Plan Conservation and Open Space Element, the City's Local Coastal Program (LCP) within the Coastal Zone, and participation in regional habitat conservation planning efforts, including the MHCP for northern San Diego County. These plans establish policies and standards for the protection of sensitive habitats, biological corridors, coastal resources, and special-status species, and are implemented through discretionary review, CEQA compliance, and project-level permitting.

Individual cumulative projects would be required to demonstrate consistency with applicable conservation planning requirements, including avoidance and minimization of impacts to conserved lands and biological resources, and, where applicable, implementation of mitigation or conservation measures consistent with adopted policies. The proposed Program would not result in development within designated conservation lands, would not interfere with adopted habitat preserve system objectives, and would not conflict with the goals or implementation measures of any applicable local or regional conservation plan. Accordingly, the proposed Program would not result in a cumulatively considerable contribution to a potentially significant cumulative impact related to conservation planning.

5.4.3 Cultural Resources

5.4.3.1 Historical Resources

Construction associated with the implementation of cumulative development could have significant impacts to historical resources depending on the extent of disturbance associated with construction and its effect on local historical resources. Therefore, the baseline cumulative impact to historical resources is considered potentially significant.

As discussed in Section 3.3.4.1, one historic resource was identified within the proposed Program's APE: the San Luis Rey Water Reclamation Facility (SLRWRF). The proposed Program would not result in direct impacts to historical resources. In addition, the site was recorded as ineligible as a historical resource or a historic property, as defined by CEQA and Section 106 of the National Historic Preservation Act (NHPA). Therefore, the Program would not affect a historical resource and would not result in a cumulatively considerable contribution to the potentially significant cumulative impact related to historic resources.

5.4.3.2 Archaeological Resources

Ground disturbance (e.g., grading, trenching, excavation) associated with implementation of cumulative project development could have significant impacts on archaeological resources. Therefore, the baseline cumulative impact to historical and archaeological resources is considered potentially significant.

As discussed in Section 3.3.4.2, the Program would have the potential to impact both known and unknown cultural resources during ground-disturbing activities, such as clearing, trenching, and grading. However, the Program would implement an archaeological and Native American monitoring program, as outlined in mitigation measures CUL-1 through CUL-9, to reduce potential impacts to a less-than-significant level. As such, the Program would not result in a cumulatively considerable contribution to the potentially significant cumulative impact related to archaeological resources.

5.4.3.3 Human Remains

Ground disturbance (e.g., grading, trenching, excavation) associated with implementation of cumulative project development could have significant impacts on unknown human remains. Therefore, the baseline impact to human remains is considered potentially significant.

As discussed in Section 3.3.4.3, to avoid significant impacts to human remains, the Program would implement mitigation measure CUL-10. As such, the Program would not result in a cumulatively considerable contribution to the potentially significant cumulative impact related to human remains.

5.4.4 Energy

5.4.4.1 Wasteful, Inefficient, or Unnecessary Energy Consumption

The geographic scope for the cumulative analysis relative to energy is the service area of the energy (electricity and natural gas) provider in the Program area, which is SDG&E. When combined, the projects identified in Table 5-2 could contribute to a regional increase in energy use through their use of gasoline and diesel, electricity, and/or natural gas during construction and/or operation. The projects, however, would be required to comply with regulatory requirements for energy use (e.g., Title 24 requirements, CALGreen energy requirements, and fuel efficiency standards for vehicles), which would ensure the cumulative projects would not use energy in a wasteful, inefficient, or unnecessary manner.

The Program would consume energy in the forms of gasoline and diesel fuel for off-road equipment, on-road haul trucks, and worker commute vehicles during construction and would consume energy in the forms of electricity and diesel fuel for operation of the OMG Lift Station. Energy use would be limited to that which is necessary for the Program; therefore, the Program would not use energy in a wasteful, inefficient, or unnecessary manner. As such, the combined effects from cumulative projects within the geographic scope related to consistency with energy plans would not be cumulatively significant.

5.4.4.2 Conflict with Energy Plans

Cumulative new development would be required to comply with applicable plans and policies related to energy use, most notably the Title 24 Building Energy Efficiency Standards and fuel efficiency standards for vehicles, including Corporate Average Fuel Economy standards. Further, cumulative projects, in addition to the proposed Program, would be covered under SDG&E's Long-term Procurement Plan (LTPP), which plans for higher levels of demand than have actually occurred. As such, the combined effects from cumulative projects within the geographic scope related to consistency with energy plans would not be cumulatively significant.

5.4.5 Geology and Soils

Impacts relative to seismic hazards and other geologic/soil conditions (e.g., fault rupture, ground shaking, liquefaction, landslides, subsidence, collapsible soils, and expansive soils) are generally site-specific and not cumulative in nature. The presence of one project in a seismic or geologic potential hazard area would not have an effect on potential hazards to a project in another location. The amount of damage caused by each of these events would be site-specific due to various factors such as the type of base rock, the soils each of the sites are located on, and the type of structure(s) each project might construct. As a result, the amount of damage caused by a seismic or geologic event will vary between projects. As discussed in Section 3.5, the Program would not result in significant impacts related to seismic hazards, geologic instability, or expansive soils. Therefore, in combination with other cumulative projects, the Program would not result in a cumulatively significant impact related to exposure to seismic and geologic hazards.

The geographic scope for the cumulative analysis related to soil erosion is the watersheds downstream from the Program's construction sites. This is because rainfall erosion of soils exposed by ground disturbance activities during construction can lead to downstream sedimentation impacts, as sediment-laden runoff is carried along drainage facilities and natural water courses by stormwater flows. Some of the cumulative projects in Table 5-2 would involve ground disturbance activities, including vegetation

clearing, grading, excavation, and trenching that could contribute, however incrementally, to the overall sedimentation issues in runoff flows that discharge into downstream watercourses. However, projects, including the Program components, would be required to meet water quality standards and comply with water quality measures contained in federal, state, and regional requirements. This would entail obtaining an NPDES Construction General Permit and implementing a SWPPP during construction and implementing appropriate BMPs, including site restoration as applicable, at the completion of construction activities. These requirements are designed to avoid or minimize erosion and sedimentation from each project to the extent that they do not result in increased sedimentation of waterways. Therefore, impacts to the local watersheds caused by downstream sedimentation impacts from soil erosion associated with ground disturbance activities would not be cumulatively significant.

Cumulative projects would include varying degrees of ground-disturbing activities, and, therefore, have the potential to impact paleontological resources to varying degrees. Due to the presence of geologic formations with high paleontological potential in the Program area and the extent of past disturbance to those resources, potential impacts to paleontological resources from the cumulative projects are considered cumulatively significant. As discussed in Section 3.5, the Program has the potential to affect unknown paleontological resources during ground-disturbing activities in areas exceeding depths of artificial fill, previously disturbed sediments, and younger sediments with low potential for paleontological resources; however, mitigation measure GEO-1 includes implementation of a paleontological monitoring plan and management plan. Implementation of this mitigation measure would ensure that scientific information available from the fossils is appropriately collected and made available for research. As a result, the Programs contribution to the cumulative impact to paleontological resources would not be cumulatively considerable.

5.4.6 Greenhouse Gas Emissions

The geographic scope of consideration for greenhouse gas (GHG) emissions is on a global scale as such emissions contribute, on a cumulative basis, to global climate change. Given the nature of environmental consequences from GHGs and global climate change, CEQA requires that lead agencies evaluate the cumulative impacts of GHGs, even relatively small additions, on a global basis. By nature, GHG evaluations are a cumulative study. As such, the analysis in Section 3.6 considers the potential cumulative impacts of the Program related to GHG emissions. Implementation of the Program would result in less than significant impacts related to (1) the generation of GHG emissions, and (2) conflicts with applicable plans adopted for the purpose of reducing GHG emissions. As such, implementation of the Program would not result in a cumulatively considerable impact, and no mitigation is required.

5.4.7 Hazards and Hazardous Materials

5.4.7.1 Transport, Use, and Disposal of Hazardous Materials

The geographic scope for the analysis of cumulative impacts relative to the transport, use, and disposal of hazardous materials encompasses the Program component construction sites and operational facility sites that may involve the use of hazardous materials and the roadways and freeways used by vehicles transporting hazardous materials to and from these sites. Existing land uses, ongoing operations, and previously approved but not yet built projects within the Program area and surrounding region would involve the manufacture, transport, storage, use, or disposal of hazardous materials, including routine transportation of such materials along local and regional roadway networks. Construction and operation activities associated with cumulative development could similarly involve the transport, use, and

disposal of hazardous materials, and associated accidental releases; however, similar to the proposed Program, cumulative development would be required to comply with applicable federal, state, and local regulations related to the transportation, storage, use, and disposal of hazardous materials, as well as emergency response and reporting requirements. These regulatory controls are intended to minimize the risk of accidental releases and limit potential exposure to workers, the public, and the environment. As such, the Program's contribution to cumulative impacts related to the transport, use, and disposal of hazardous materials would be less than cumulatively considerable.

5.4.7.2 Release of Hazardous Materials

Similar to above, the geographic scope for the analysis of cumulative impacts relative to the accidental release of hazardous materials encompasses the Program component construction sites and operational facility sites that may involve the use of hazardous materials and the roadways and freeways used by vehicles transporting hazardous materials to and from these sites. However, accident conditions, if they occur, are generally localized and do not present a high potential to combined with other accident conditions. As such, cumulative impacts related to accidental releases would be less than significant.

5.4.7.3 Hazards Near Schools

The geographic scope for the analysis of cumulative impacts relative to the use of hazardous materials near schools encompasses the Program component construction sites and operational facility sites that may involve the use of hazardous materials and the roadways and freeways used by vehicles transporting hazardous materials to and from these sites, specifically when in proximity to schools. Based on the generally localized nature of the use and potential release of hazardous materials, and the low likelihood that multiple cumulative projects would occur and emit hazardous materials near a given school, cumulative impacts are considered would be less than significant.

5.4.7.4 Listed Hazardous Materials Sites

Impacts related to listed hazardous materials sites are generally specific and limited to the area directly adjacent to the hazardous materials site. The location of one project on or near a listed hazardous materials site would not increase potential hazard impacts at another site. Therefore, the construction and operation of Program facilities, in combination with cumulative development, would not result in a significant cumulative impact related to listed hazardous materials sites.

5.4.7.5 Airport Hazards

Impacts related to aircraft hazards are generally site-specific and limited to the area within the Airport Influence or two miles of a specific airport. Location of one project within the Airport Influence Area of an airport would not increase potential aircraft hazards at another site. Therefore, the construction and operation of proposed Program facilities, in combination with cumulative development, would not result in a significant cumulative impact related to airport hazards.

5.4.7.6 Emergency Response and Evacuation Plans

The geographic scope for the cumulative analysis related to emergency response and evacuation is the circulation network (i.e., roadways and freeways) within and adjacent to the city. Cumulative development within the city would have the potential to affect emergency response and evacuation through (1) construction work within roadways and subsequent lane closures; and (2) increased traffic

volumes causing roadway congestion. Combined with the proposed Program's anticipated work within roadways and likely lane closures, cumulative impacts related to emergency access are considered potentially significant.

To address the potentially significant direct impact related to emergency response and evacuation from Program construction, the Program would implement mitigation measure TRA-1. Mitigation measure TRA-1 would involve the preparation of a Traffic Control Plan (TCP) that would include measures to ensure adequate access and circulation during construction of the Program components. As part of mitigation measure TRA-1, the City would notify local emergency responders of planned partial or full lane closures or blocked access to roadways or driveways required for Program construction. With implementation of mitigation measure TRA-1, impacts to emergency response and evacuation from the Program would be minimized and the Program would not result in a cumulatively considerable contribution to a potentially significant cumulative impact.

5.4.7.7 Wildland Fires

The geographic scope for the analysis of cumulative impacts relative to wildland fires is the city. Most of the city is not within a Very High Fire Hazard Severity Zone (VHFHSZ). Similarly, the majority of the proposed Program is not within a VHFHSZ. As such, the cumulative impact relative to wildland fires is considered less than significant.

5.4.8 Noise

5.4.8.1 Increase in Ambient Noise

The geographic scope for the cumulative analysis of noise would be only those cumulative projects in the immediate vicinity of the proposed Program component locations and adjacent NSLUs. Generally, noise impacts are limited to the area directly surrounding the source, as noise attenuate with distance, and only have the potential to combined with other noise sources occurring simultaneously in the immediate vicinity. Construction of the Program components would generate noise; therefore, cumulative effects in these areas are considered. The Program's operational noise would be limited to the OMG Lift Station site, which would be in proximity to residential NSLUs; therefore, cumulative effects in this area are considered.

Projects in the cumulative scenario listed in Table 5-2 could generate noise during construction that would have the potential to temporarily increase ambient noise levels in the vicinity of NSLUs. Construction noise would be localized, affecting areas in the immediate vicinity of the construction sites. If construction of cumulative projects occur concurrently with the construction of the proposed Program components, the noise levels could combine to potentially create a significant noise impact to the nearby residences. As such, the combined effect of the projects in the geographic scope related to construction noise is conservatively considered to be cumulatively significant. None of the cumulative projects listed in Table 5-2 would occur within distance of the proposed OMG Lift Station that could result in combined operational noise; therefore, the combined effects of the projects related to operational noise would be less than significant.

While there is potential for Program construction activities to occur simultaneously with and in proximity to cumulative development projects, work for individual Program components would be temporary, would not all occur at once, and not all equipment would be operating at the same time or location. Pipeline projects would be constructed in a linear fashion and would only result in construction

noise at a particular receptor for a limited time. To address the Program's potential direct construction noise impacts, the Program would implement mitigation measure NOI-1, which requires compliance with the applicable construction noise limits of the County and City of Oceanside, where feasible, and includes construction and maintenance activity noise reduction measures. With these measures, and based on the temporary nature of construction of individual Program components at a given location, construction activities would not result in a cumulatively considerable contribution to a potentially significant cumulative noise impact.

5.4.8.2 Vibration

Groundborne vibration attenuates rapidly with distance and is therefore not generally cumulative in nature. Existing conditions and ongoing activities in the surrounding area that may intermittently generate vibration include roadway traffic, nearby construction, utility maintenance, and operational activities associated with existing infrastructure. These sources are typically temporary, localized, and do not overlap spatially or temporally to an extent that would result in additive vibration effects at sensitive receptors. As discussed in Section 3.7.4.2 (Issue 2), the Program would generate minimal groundborne vibration during general construction and would not involve vibration-generating activities during operation. While cumulative development projects could also involve temporary construction-related vibration, such vibration would be localized to individual sites and would dissipate with distance. Therefore, when considered in combination with cumulative projects, the proposed Program would not result in a cumulatively significant impact associated with excessive groundborne vibration.

5.4.8.3 Aircraft Noise

The area of cumulative impact that would be considered for aircraft impacts would be only those projects located within the mapped aircraft noise contours of the Oceanside Municipal Airport. As discussed in Section 3.7.4.3 (Issue 3), no portion of the Program area is within the 60 Community Noise Equivalent Level (CNEL) noise contour of Oceanside Municipal Airport, and while distant aircraft activity may be audible, neither the Program's temporary construction workers nor permanent facility workers would be exposed to excessive aircraft noise. As such, the proposed Program would not combine with cumulative projects to result in a cumulatively significant impact related to aircraft noise.

5.4.9 Transportation

The geographic scope for the cumulative analysis related to the circulation system, VMT, traffic hazards, and emergency access is the circulation network within and adjacent to the city of Oceanside. This includes roadways, bike paths/lanes, and pedestrian facilities (i.e., sidewalks). Roadways included in the geographic scope consist of regional roadways including I-5, SR 76, and SR 78, and local roadways including, but not limited to, North River Road, Whalen Lake Road, Mission Avenue, Hacienda Drive, Las Vegas Drive, Mesa Drive, Garrison Street, Oceanside Boulevard, South Ditmar Street, Godfrey Street, South Coast Highway, Tait Street, and Crosswaithe Street.

5.4.9.1 Traffic Circulation

Cumulative projects listed Table 5-2 would have the capability to generate additional vehicular traffic on the regional and local roadway systems within the geographic scope. The amount of traffic generated depends on the type and size of the project. Residential projects and hotel developments listed in Table 5-2 would consistently contribute large amounts of additional vehicles to regional and local roadways. Commercial projects would generate high amounts of additional vehicles during daytime peak hours and

on the weekends. Given the different types and sizes of the projects included in the cumulative scenario, it is reasonable to assume that the cumulative projects could combine to generate vehicular traffic that could affect regional and local roadways. In addition, infrastructure listed in Table 5-2, may involve components within public rights-of-way, which could require partial or full lane closures. In combination, cumulative projects generating increased traffic and/or resulting in lane closures could result in cumulatively considerable impacts to the local and regional roadway systems as related to traffic circulation. As such, the combined effects from the construction and/or operation of projects within the geographic scope related to transportation would be cumulatively significant.

When added to the cumulative scenario described above, construction and operation of the proposed Program would not substantially increase traffic volumes within the geographic scope. Program construction would result in an increased in vehicles, primary haul trucks; however, the increase would be temporary. Following construction, operation of the Program would generate minimal traffic, and the effects on the surrounding circulation system would be negligible and would not cause the existing roadways levels of operation to decrease. While the Program would involve construction within the roadway right-of-way which would require partial or full lane closures, the Program would implement TRA-1 that requires the preparation and implementation of a TCP. The TCP would include measures and devices, such as signage, striping, delineated detours, and flagging operations, to allow for continued roadway operations and traffic circulation. As such, with implementation of TRA-1, the proposed Program's contribution to cumulative traffic circulation impacts would not be cumulatively considerable.

5.4.9.2 Vehicle Miles Traveled

Overall growth and development within the city as represented by the cumulative projects listed in Table 5-2, would result in an increase in vehicular trips, and thus VMT, on the regional and local roadway systems within the geographic scope. The cumulative projects include numerous residential developments (single-family, townhome, apartment, and mixed-use projects), hotel and visitor-serving uses, commercial and employment-generating land uses, and large mixed-use developments that would generate both daily and peak-period vehicle trips. In addition, several infrastructure, public facility, and transportation projects would involve construction activities within public rights-of-way that could temporarily affect travel patterns, routing, and trip lengths. When considered collectively, these projects would incrementally add vehicle travel to regional and local roadways, contributing to an overall increase in VMT associated with population growth, employment growth, and expanded visitor activity within the city. As a result, the cumulative effect of past, present, and reasonably foreseeable future development would result in a potentially significant cumulative VMT condition.

As discussed in Section 3.8.4.2, because program-related traffic would be limited to temporary construction traffic and a relatively small number of operational trips, the proposed Program would not generate a substantial increase in VMT; therefore, the Program would not result in a cumulatively considerable contribution to a potentially significant cumulative VMT impact.

5.4.9.3 Hazardous Design Features

Cumulative development within the city would have the potential to result in hazardous traffic conditions from construction work within roadways and from incompatible uses. Combined with the proposed Program's anticipated work within roadways, cumulative impacts related to hazardous traffic conditions are considered potentially significant.

To address the potentially significant direct impact related to hazardous traffic conditions from Program construction, the Program would implement mitigation measure TRA-1. Mitigation measure TRA-1 would involve the preparation of a TCP that would include signage, striping, delineated detours, flagging operations, and other devices that would be used during construction to guide motorists, bicyclists, and pedestrians safely through the construction areas. With implementation of TRA-1, hazardous roadway conditions caused by the Program would be minimized and the Program would not result in a cumulatively considerable contribution to a potentially significant cumulative impact.

5.4.9.4 Emergency Access

Cumulative development within the city would have the potential to affect emergency access through (1) construction work within roadways and subsequent lane closures and (2) increased traffic volumes causing roadway congestion. Combined with the proposed Program's anticipated work within roadways and likely lane closures, cumulative impacts related to emergency access are considered potentially significant.

As discussed above, to address the potentially significant direct impact related to emergency access from Program construction, the Program would implement mitigation measure TRA-1. Mitigation measure TRA-1 would involve the preparation of a TCP that would include measures to ensure adequate access and circulation during construction of the Program components. As part of mitigation measure TRA-1, the City would notify local emergency responders of planned partial or full lane closures or blocked access to roadways or driveways required for Program construction. With implementation of mitigation measure TRA-1, impacts to emergency access from the Program would be minimized and the Program would not result in a cumulatively considerable contribution to a potentially significant cumulative impact.

5.4.10 Tribal Cultural Resources

Ground disturbance (e.g., grading, trenching, excavation) associated with implementation of cumulative project development in combination with the proposed Program could have significant impacts on unknown Tribal Cultural Resources. Therefore, the baseline impact to Tribal Cultural Resources is considered potentially significant.

As discussed in Section 3.3.4.4, the Program would have the potential to impact both known and unknown tribal cultural resources during ground-disturbing activities, such as clearing, trenching, and grading. However, the Program would implement an archaeological and Native American monitoring program, as outlined in mitigation measures CUL-1 through CUL-10, to reduce potential impacts to a less-than-significant level. As such, the Program would not result in a cumulatively considerable contribution to the potentially significant cumulative impact related to tribal cultural resources.

5.5 CONCLUSION

The proposed Program's cumulative impacts would be less than significant and/or the Program's contribution would be less than cumulatively considerable with implementation of the mitigation measures referenced above and provided in Sections 3.1 through 3.10 of this PEIR.

5.6 REFERENCES

Oceanside, City of. 2025. CEQA – Environmental Documents. Available at: https://www.ci.oceanside.ca.us/government/development-services/planning/environmental-documents-ceqa.

6.0 OTHER CEQA CONSIDERATIONS

This chapter includes a discussion of other CEQA considerations related to the potential for growth inducement; issue areas where impacts would be significant and unavoidable; and significant, irreversible environmental effects related to implementation of the proposed Program.

6.1 GROWTH INDUCEMENT

6.1.1 Introduction

In accordance with Section 15126.2(e) of the CEQA Guidelines, an EIR must include an analysis of the growth-inducing impact of a proposed project. The growth inducement analysis must address: (1) the ways 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; and (2) the potential for a project to encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. This second issue involves the potential for a project to induce growth by the expansion or extension of existing services, utilities, or infrastructure. The CEQA Guidelines further state that "[i]t must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment" (Section 15126.2[e]).

A project can have direct and/or indirect growth inducement potential. An example of a project that is directly growth-inducing is one that involves construction of new housing. An example of a project that is indirectly growth-inducing is one that requires a substantial permanent or temporary new employment demand that would then stimulate the need for additional housing and services. A project also would be considered indirectly growth-inducing if it removes an obstacle to additional growth and development, such as an existing constraint on a required public service. Typically, the growth-inducing potential of a proposed project is considered significant if it stimulates population growth or a population concentration above what is assumed in local and regional land use plans or in projections made by regional planning authorities, such as San Diego Association of Governments (SANDAG).

6.1.2 Growth Inducement Potential

Implementation of the Program would not directly induce population growth because it does not include the development of new housing that would independently attract additional population to the area. Further, the Program would not result in substantial permanent employment that could indirectly induce population growth. Although construction activities would create some short-term employment opportunities during construction of individual project improvements, the number of jobs created would not be substantial and would be expected to be filled by the local labor pool/work force. Operation of the Program would not require a substantial increase in employees as Program improvements primarily consist of upgrades to existing underground facilities.

Water and sewer services are among the public services necessary to support development, and expansion of such services can, in certain circumstances, indirectly facilitate growth by removing infrastructure constraints. The proposed Program would implement sewer facility improvements to upgrade existing infrastructure and provide capacity necessary to accommodate projected wastewater flows. These projections were developed in the City's 2015 Sewer Master Plan based on growth assumptions reflecting adopted land use plans, planned near-term development, and regional

population forecasts prepared by the San Diego Association of Governments (SANDAG). The Program is therefore responsive to growth that is already planned and reasonably foreseeable, rather than a driver of new or intensified growth beyond that previously contemplated. The City's General Plan establishes land use designations, development standards, and growth assumptions that govern the type, location, and intensity of development within the City. Growth-related environmental effects evaluated in this PEIR are analyzed in the context of development that is reasonably foreseeable under the adopted General Plan. Implementation of the Program would provide infrastructure necessary to serve such development but would not alter land use designations, increase allowable development densities, or otherwise expand the scale or pattern of growth beyond what has already been planned and approved.

Expanded and more reliable sewer service would play a role in supporting projected growth within the City, but it would not be the sole or determinative factor influencing development or population growth. Other factors—including land use regulations, availability of water supply, transportation infrastructure, public services such as schools, regional planning policies, market demand, and broader economic conditions—also substantially influence development patterns and growth rates.

Accordingly, while the Program would remove certain wastewater capacity constraints and would be supportive of growth anticipated under adopted planning documents, it would not be the cause of that growth and would not directly or indirectly induce population growth in a manner that would result in significant growth-inducing environmental effects under CEQA Guidelines Section 15126.2(e). The Program's role in supporting planned growth would be consistent with the City's General Plan and SANDAG's Regional Plan and would not conflict with approved growth-related plans or result in significant environmental effects attributable to growth inducement.

6.2 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL EFFECTS

Section 15126.2(c) of the CEQA Guidelines requires the identification of significant environmental impacts that cannot be avoided, even with the implementation of feasible mitigation/performance measures. The final determination of the significance of impacts and feasibility of the proposed mitigation/performance measures will be made by the City as part of their certification of this PEIR.

Sections 3.1 through 3.10 of this PEIR provide an evaluation of the potentially significant environmental effects and corresponding mitigation/performance measures associated with implementation of the Program to avoid or substantially reduce the environmental effect. According to this evaluation, all potentially significant environmental effects would be reduced to less-than-significant levels with implementation of identified feasible and enforceable mitigation measures, with the exception of effects related to construction noise. Due to the proximity of noise-sensitive land uses to the Program alignment, construction noise may significantly exceed existing ambient conditions even with implementation of mitigation. Construction noise is therefore conservatively assessed to be significant and unavoidable.

6.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(d) of the CEQA Guidelines requires a discussion of significant irreversible environmental changes that would be caused by a proposed project. Specifically, "Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible

area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified." Generally, a project would result in significant irreversible environmental changes if:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project involves uses in which irreversible damage would result from any potential environmental accidents associated with the project; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

The Program's sewer facilities, once constructed, may be considered permanent. Facilities are occasionally abandoned/removed or upgraded once operation has resulted in the deterioration of their working condition. The sewer system as a whole is integrally dependent on all their working facilities and components. Should components become deteriorated, malfunction, or become obsolete, replacement must occur. Because many of the Program improvements may require replacements or rehabilitations in the future, approval of the Program would leave the commitment of resources open in the future.

Development of new sewer infrastructure under the Program would allow the City to maintain and expand wastewater service to its current and projected future users in response to anticipated demand. Nonrenewable resources that would be permanently and continually consumed from implementation of the Program include electricity and fossil fuels; however, the amount and rate of consumption of these resources would not result in significant environmental impacts or the unnecessary, inefficient, or wasteful use of resources for the reasons given in Section 3.4, *Energy*, of this PEIR. The Program's energy usage would be limited to that necessary to achieve successful construction and operations; therefore, the Program's consumption of resources is justified. In addition, it is possible that new technologies and systems would emerge, or would become more cost-effective or user-friendly, upon which the City may rely to further reduce its reliance on nonrenewable energy sources.

The CEQA Guidelines also require a discussion of the potential for irreversible environmental damage caused by an accident. As discussed in Section 3.7, *Hazards and Hazardous Materials*, of this PEIR, the City would use typical hazardous materials (e.g., oil, gasoline, diesel, hydraulic fluids, paints) during construction of proposed improvements and operation of its facilities. No acutely hazardous materials would be used during construction or operations and the typical materials that would be used would not pose a substantial risk to the public. In addition, the City and its construction contractor(s) would comply with all applicable federal, state, and local regulations pertaining to hazardous materials use, handling, storage, and disposal. Therefore, the Program would not result in the potential for irreversible environmental damage caused by an accident.

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7.0 ALTERNATIVES

7.1 SCOPE OF ALTERNATIVES ANALYSIS

The CEQA statutes require an EIR to describe and evaluate a range of reasonable alternatives to a proposed project, or alternatives to the location of a proposed project. The purpose of the alternatives analysis is to explore ways that most of the basic objectives of a project could be attained while reducing or avoiding significant environmental impacts of the project as proposed. This approach is intended to foster informed decision-making and public participation in the environmental process.

This chapter evaluates alternatives to the proposed Program and examines the potential environmental impacts associated with each alternative. The CEQA Guidelines indicate that EIRs are required to evaluate a "…range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project" (Section 15126.6[a] CEQA Guidelines). According to the CEQA Guidelines, not every conceivable alternative must be addressed, nor do infeasible alternatives need be considered. Section 15126.6 of the CEQA Guidelines lists the factors that may be taken into account when addressing the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, other plans or regulatory limitations, and jurisdictional boundaries. The Guidelines also state that the discussion of alternatives should focus on "…alternatives capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives could impede to some degree the attainment of the project objectives or would be more costly" (Section 15166.6[b] CEQA Guidelines). CEQA further directs that "…the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project as proposed" (CEQA Guidelines Section 15126.6[d]).

7.2 PROGRAM OBJECTIVES

The Program includes a list of key objectives that clarify the intent of implementation of the Program, as stated in Section 2.3 of this PEIR. The objectives of the Program are as follows:

- Implement projects identified in the City's Capital Improvement Program (CIP) and Sewer Master Plan to ensure that wastewater facilities are adequately maintained and upgraded and that capital improvements are scheduled and completed in a timely and cost-effective manner.

- Provide for overall system reliability and bring existing facilities up to current design, safety, and regulatory standards by allowing for the inspection, maintenance, repair, and replacement of aging infrastructure.

- Provide adequate system capacity to meet the needs of the growing population, serve anticipated land use changes, and accommodate future wastewater demand and flow conditions through their lifespan.

- Centralize wastewater flows to the San Luis Rey Water Reclamation Facility (SLRWRF) for the City's recycled water production and indirect potable reuse, thus increasing the local water supply.

- Provide support for emerging recycled water reuse and biosolids beneficial use opportunities.

- Ensure compliance with State General Waste Discharge Requirements (GWDR) for wastewater collection agencies by providing adequate capacity within the regional wastewater conveyance system to convey wastewater flows and prevent sanitary sewer overflows.

7.3 RATIONALE FOR THE SELECTION OF ALTERNATIVES

As part of an alternatives analysis, Section 15126.6(e) of the CEQA Guidelines requires an EIR to address a "no project" alternative. The purpose of describing and analyzing a "no project" alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. EIRs should also identify alternatives that were considered by the Lead Agency but rejected and briefly explain the reasons why the Lead Agency made such a determination. Among the factors that may be used in an EIR to eliminate alternatives from detailed consideration are (1) failure to meet most of the basic project objectives, (2) infeasibility, and/or (3) inability to avoid significant environmental impacts.

In accordance with CEQA Guidelines Section 15126.6(c), the City considered a range of potential alternatives based on comments received on the NOP and during the scoping process for the proposed Program. Each alternative was evaluated against three primary screening criteria: (1) ability to meet most of the basic objectives of the proposed Program; (2) feasibility from a technical, legal, and economic standpoint; and (3) potential to avoid or substantially lessen significant environmental impacts identified for the proposed Program. Alternatives that failed to meet these criteria were eliminated from detailed consideration. Specifically, alternatives were rejected because they were infeasible due to site constraints or regulatory limitations, did not achieve the fundamental objectives of the Program, or did not offer meaningful environmental advantages compared to the proposed Program. Section 7.4 briefly summarizes the alternatives considered but rejected and the reasons for their elimination.

Alternatives to the proposed Program that were considered and analyzed compared to the proposed Program are described in Section 7.5. The alternatives analyzed in this section include the No Project Alternative, as required by CEQA Guidelines Section 15126.6(e), and other alternatives that reflect different approaches to achieving the Program's objectives while minimizing environmental effects. Each alternative is described in detail, and its environmental impacts are compared to those of the proposed Program to provide decision makers with a meaningful basis for consideration.

7.4 ALTERNATIVES CONSIDERED BUT REJECTED

7.4.1 Oceanside Mesa Garrison Force Main Constraints Alternatives

During initial planning, several alignment options were evaluated to determine feasibility for implementation of the Oceanside Mesa Garrison Force Main (OMG FM) within the pipeline corridor south of the San Luis Rey River to the main alignment just north of State Route (SR) 76. These alternative alignments were considered within existing roadway corridors and/or utility easements to minimize disturbance within undeveloped areas. However, they were ultimately eliminated from further consideration due to a combination of engineering, environmental, and community constraints identified during the screening process. Early alignments considered during constraints evaluation required proximity to existing utilities that would intersect dense utility corridors, which had the potential to significantly raise costs and construction complexity. Several routes considered for

constraints evaluation also had longer segments passing through residential neighborhoods, creating potential for prolonged traffic disruptions, noise, and access issues during construction.

One additional OMG FM alignment alternative for the San Luis Rey River crossing was considered in addition to the currently proposed location that would follow City easements west along Pilgrim Creek and the southern edge of Whelan Lake and cross the San Luis Rey River west of where the current alignment is proposed to connect just north of the intersection of Redwood Street and Los Arbolitos Boulevard. This alignment alternative would result in additional encroachment into sensitive habitat and riparian areas near the San Luis Rey River and Whelan Lake open space for the area needed to conduct trenchless construction compared to the proposed Program alignment. Therefore, this alignment was determined to result in substantial impacts on biological resources that would require extensive mitigation.

Based on these considerations, the early constraints alternatives were screened out during the preliminary design phase. The Program and alternatives analyzed below provide alignment options that better balance engineering feasibility, environmental protection, and community considerations.

7.5 ALTERNATIVES ANALYZED

This section presents an evaluation of four alternatives to the proposed Program:

- Alternative 1: No Program
- Alternative 2: Oceanside Mesa Garrison Force Main (OMG FM) Los Arbolitos Boulevard Alternative
- Alternative 3: OMG FM Fireside Street Alternative
- Alternative 4: OMG FM Pala Road Alternative

For each alternative, a brief description is included, followed by a summary impact analysis relative to the proposed Program, and an assessment of the degree to which the alternative would meet the goals and objectives of the Program.

7.5.1 Alternative 1: No Program Alternative

Under the No Program Alternative, the City would not implement the Oceanside Sewer Improvements Program. Existing wastewater infrastructure, including the Oceanside Land Outfall (OLO), Mission Avenue Lift Station Force Main (MALS FM), and trunk mains, would continue operating in the current condition. No new lift station would be constructed at the former Garrison Elementary School site, no upsizing or parallel lines would be installed, and the additional infrastructure necessary to accommodate planned growth in the area would not occur. Routine maintenance would continue consistent with current practice, but none of the capacity constraints or necessary improvements to existing aging infrastructure would be addressed.

7.5.1.1 Impact Analysis

The No Project Alternative would avoid the potentially significant environmental impacts identified for the Program because the construction activities that would generate those impacts would not occur.

Compared to the proposed Program, potentially significant impacts related to biological resources, cultural resources, paleontological resources, hazards and hazardous materials, noise, transportation, and tribal cultural resources—most of which would be reduced to less-than-significant levels with mitigation under the proposed Program, except for construction noise that would remain significant and unavoidable—would not occur under the No Program Alternative. In addition, although the proposed Program would not result in potentially significant impacts associated with greenhouse gas (GHG) emissions or energy use during construction, construction-related emissions and energy usage would be reduced under the No Program Alternative as only routine maintenance would be implemented as necessary.

However, under the No Project Alternative, the City would not implement the planned capital improvements identified in the City's CIP and Sewer Master Plan intended to address documented system needs, including replacement of aging or deficient sewer infrastructure and capacity-related improvements (e.g., upsizing and/or replacement of the Land Outfall and replacement of the Mission Force Main and other sewer mains identified as needing rehabilitation or replacement). As a result, existing capacity constraints and aging infrastructure conditions would remain and could worsen over time, which could increase the likelihood of operational failures such as breaks, leaks, or sanitary sewer overflows. Such events could result in localized public health and environmental effects (including potential releases to streets, storm drains, and downstream receiving waters), require emergency repair activities with associated short-term disturbance, and reduce overall system reliability. Therefore, while the No Project Alternative would avoid construction-related impacts of the proposed Program, it would not meet the Program objective of timely and cost-effective implementation of planned wastewater facility maintenance and upgrades, and it could increase the potential for unplanned maintenance and emergency response conditions over the long term.

7.5.1.2 Ability to Accomplish Project Objectives

This alternative would avoid short-term construction impacts but would not meet the Program objectives of upgrading and maintaining existing wastewater facilities, improving system reliability, accommodating future flows by providing adequate wastewater conveyance capacity, or supporting recycled water production.

7.5.2 Alternative 2: OMG FM Los Arbolitos Boulevard Alternative

The OMG FM Los Arbolitos Boulevard Alternative would involve the same OMG FM alignment as proposed under the Program, except the section of alignment south of Pala Road would run south through Los Arbolitos Boulevard, southwest along Fireside Street, and then west on the south side of Fireside Park back to the shared OLO and MALS FM corridor (see Figure 7-1, *Program Alternatives*). The other Program components, including the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project, would remain as proposed in the Program under this alternative.

7.5.2.1 Impact Analysis

Air Quality

Under the OMG FM Los Arbolitos Boulevard Alternative, air pollutant emissions associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would remain the

Proposed Features
- Land Outfall Replacement
- Existing Land Outfall (not proposed for replacement)
- Gravity Sewer Main to Oceanside Mesa Garrison Lift Station
- Oceanside Mesa Garrison Force Main
- Oceanside Mesa Garrison Force Main Extension
- Mission Avenue Lift Station Force Main Replacement
- Oceanside Mesa Garrison Lift Station

Oceanside Mesa Garrison Force Alternatives
- Alternative 2: OMG FM Los Arbolitos Boulevard Alternative
- Alternative 3: OMG FM Fireside Street Alternative
- Alternative 4: OMG FM Pala Road Alternative

Douglas Dr
North River Rd
Oceanside Mesa Garrison Lift Station
Mission Ave
Oceanside Blvd
Mission Ave
S Coast Hwy
Oceanside Blvd
S Coast Hwy
S Coast Hwy
Vista Way
El Camino Real
76
5
78

I:\PROJECTS\\Infrastructure Engineering Corp_01354\IEN-05_OceansideConditionAssessment_Task10\Map\PEIR\PEIR_25.aprx Fig7-1_Alts 01354.5.1 1/28/2026 - SAB

0 2,000 Feet

Source: Aerial (Maxar, 2023).

HELIX Environmental Planning

Program Alternatives

Figure 7-1

same as the proposed Program. Construction of the OMG FM would involve the same construction activities and a similar length of pipeline construction as the proposed Program, and would therefore result in similar emissions. The OMG FM within Los Arbolitos Boulevard and Fireside Street under this alternative would occur adjacent to single-family residential sensitive receptors, as with the proposed Program alignment, and would result in similar less-than-significant impacts from carbon monoxide (CO) hotspots and toxic air contaminants. The potential for odors would also be the same under this alternative as under the proposed project and would be less than significant.

Biological Resources

The OMG FM Los Arbolitos Boulevard Alternative would route the OMG FM within Los Arbolitos Boulevard and Fireside Street, thus avoiding the undeveloped area containing southern willow scrub located to the west. Construction of the OMG FM under this alternative would therefore likely avoid direct and indirect impacts to southern willow scrub, as well as potential impacts to least Bell's vireo, yellow warbler, yellow-breasted chat, Costa's hummingbird, white-tailed kite, and California horned lake that have the potential to occur within this habitat. However, this area would still be impacted, and these biological resources affected, by construction of the OLO and MALS FM. Potential impacts to biological resources at all other Program locations would remain the same under this alternative as the proposed Program. Mitigation measures Bio-1 through Bio-8b would still be required under this alternative.

Cultural Resources

The location of the OMG FM within Los Arbolitos Boulevard and Fireside Street under the OMG FM Los Arbolitos Boulevard Alternative would not result in effects to a known archaeological resource that would not have been affected under the proposed Program or result in the avoidance of a known archaeological resource that would have been affected under the proposed Program, as no known archaeological resources are located along this portion of the alignment. The alternative route for the OMG FM would still occur within an area of moderate cultural sensitivity, as with this portion of alignment proposed under the Program. The potential to impact known and/or unknown archaeological resources and human remains would remain the same under this alternative as the proposed Program, and mitigation measures CUL-1 through CUL-10 would still be required.

Energy

Under the OMG FM Los Arbolitos Boulevard Alternative, energy usage associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would remain the same as the proposed Program. Construction of the OMG FM would involve the same construction activities and a similar length of pipeline construction as the proposed Program, and would therefore result in similar energy usage. Energy impacts would remain less than significant.

Greenhouse Gas Emissions

Under the OMG FM Los Arbolitos Boulevard Alternative, GHGs emissions associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would remain the same as the proposed Program. Construction of the OMG FM would involve the same construction activities and a similar length of pipeline construction as the proposed Program, and would therefore result in similar

GHG emissions. As with the proposed Program, impacts related to the generation of GHG emissions and conflict with GHG reduction plans would be less than significant.

Hazards and Hazardous Materials

The OMG FM Los Arbolitos Boulevard Alternative would result in the same level of impact as the proposed Program related to the use, transport, and disposal of hazardous materials during construction of the various Program projects and during operation of the OMG Lift Station. This alternative would not result in the OMG FM being located within 0.25-mile of a school or in proximity to an active hazardous materials site not identified for the proposed Program. As determined for the proposed Program, this alternative would not involve components that would result in airport hazards. Emergency response and evacuation could be affected during construction along two roadways not considered for the proposed Program: Los Arbolitos Boulevard and Fireside Street; however, mitigation measure TRA-1 identified for the proposed Program would remain applicable and would reduce potential impacts to a less-than-significant level. Similar to the proposed Program, small portions of the project components would be within a Very High Fire Hazard Severity Zone (VHFHSZ), but impacts would be less than significant.

Noise

Under the OMG FM Los Arbolitos Boulevard Alternative, potential noise generation associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would be similar to the proposed Program, although more sensitive receptors would be impacted under this alternative due to more construction occurring near residential areas. Construction of the OMG FM would involve the same construction activities and equipment as the proposed Program and would occur within similar distances to residential Noise Sensitive Land uses (NSLUs) and biologically sensitive habitat. Mitigation measures NOI-1 through NOI-3 would be required to reduce potentially significant operation noise and vibration impacts to a less-than-significant level, as under the proposed Program. Even with implementation of these mitigation measures, construction noise impacts would remain significant and unavoidable.

Transportation

As with the proposed Program, construction under the OMG FM Los Arbolitos Boulevard Alternative would result in a slight increase of vehicular traffic on roadways and would involve construction within roadways that would have the potential to temporarily affect the circulation system, increase roadway hazards, and result in inadequate emergency access. Two roadways, Los Arbolitos Boulevard and Fireside Street, would be affected under this alternative that would not be affected under the proposed Program; however, mitigation measure TRA-1, identified for the proposed Program, would be required and would reduce potential impacts to a less-than-significant level. Operationally, this alternative would result in the same trip generation as the proposed Program, which would be minimal in association with the OMG Lift Station and would not result in substantial traffic-related effects.

Tribal Cultural Resources

The location of the OMG FM within Los Arbolitos Boulevard and Fireside Street under the OMG FM Los Arbolitos Boulevard Alternative would not result in effects to a known tribal cultural resource that would not have been affected under the proposed Program or result in the avoidance of a known archaeological resource that would have been affected under the proposed Program, as no known

resources are located along this portion of the alignment. The alternative route for the OMG FM would still occur within an area of moderate sensitivity, as with this portion of alignment proposed under the Program. The potential to impact tribal cultural resources would remain the same under this alternative as the proposed Program, and mitigation measures CUL-1 through CUL-10 would still be required.

7.5.2.2 Ability to Accomplish Project Objectives

The OMG FM Los Arbolitos Boulevard Alternative would meet all Program objectives by implementing the same core components as the proposed Program while rerouting the force main through Los Arbolitos Boulevard and Fireside Street. This alignment would upgrade and maintain wastewater facilities, improve system reliability, provide adequate capacity for future flows, and support recycled water production at the SLRWRF; however, it would meet the objective of completing the system upgrades in a timely and cost-effective manner to a lesser extent than the proposed Program. Construction within the alternative alignment may conflict with recently installed or planned City recycled water infrastructure, increasing the potential for construction complexity, coordination challenges, and additional costs. While this alternative would avoid direct impacts on southern willow scrub and associated sensitive species compared to the proposed alignment, it would introduce temporary construction-related effects on additional roadways and sensitive receptors, including construction noise impacts that would remain significant and unavoidable. Overall, the Los Arbolitos Boulevard Alternative represents a feasible alternative that fulfills the Program's intent and environmental goals but is less effective than the proposed Program in achieving timely and cost-effective implementation of planned wastewater infrastructure improvements.

7.5.3 Alternative 3: OMG FM Fireside Street Alternative

The OMG FM Fireside Street Alternative would involve the same OMG FM alignment as proposed under the Program, except the section of alignment south of Pala Road would run south through Los Arbolitos Boulevard, southwest and then south along Fireside Street to Heritage Street, where it would then run west back to the shared OLO and MALS FM corridor (see Figure 7-1). The other Program components, including the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project, would remain as proposed in the Program under this alternative.

7.5.3.1 Impact Analysis

Air Quality

Under the OMG FM Fireside Street Alternative, air pollutant emissions associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would remain the same as the proposed Program. Construction of the OMG FM would involve the same construction activities and a similar length of pipeline construction as the proposed Program, and would therefore result in similar emissions. The OMG FM within Los Arbolitos Boulevard and Fireside Street under this alternative would occur adjacent to single-family residential sensitive receptors, as with the proposed Program alignment, and would result in similar less-than-significant impacts from CO hotspots and toxic air contaminants. The potential for odors would also be the same under this alternative as under the proposed project and would be less than significant.

Biological Resources

The OMG FM Fireside Street Alternative would route the OMG FM within Los Arbolitos Boulevard, Fireside Street, and Heritage Street thus avoiding the undeveloped area containing southern willow scrub located to the west. Construction of the OMG FM under this alternative would therefore likely avoid direct and indirect impacts to southern willow scrub, as well as potential impacts to least Bell's vireo, yellow warbler, yellow-breasted chat, Costa's hummingbird, white-tailed kite, and California horned lake that have the potential to occur within this habitat. However, this area would still be impacted, and these biological resources affected, by construction of the OLO and MALS FM. Potential impacts to biological resources at all other project footprint locations would remain the same under this alternative as the proposed Program. Mitigation measures Bio-1 through Bio-8b would still be required under this alternative.

Cultural Resources

The location of the OMG FM within Los Arbolitos Boulevard, Fireside Street, and Heritage Street under the OMG FM Fireside Street Alternative would not result in effects to a known archaeological resource that would not have been affected under the proposed Program or result in the avoidance of a known archaeological resource that would have been affected under the proposed Program, as no known archaeological resources are located along this portion of the alignment. The alternative route for the OMG FM was still occur within an area of moderate cultural sensitivity, as with this portion of alignment proposed under the Program. The potential to impact known and/or unknown archaeological resources, human remains, and tribal cultural resources would remain the same under this alternative as the proposed Program, and mitigation measures CUL-1 through CUL-10 would still be required.

Energy

Under the OMG FM Fireside Street Alternative, energy usage associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would remain the same as the proposed Program. Construction of the OMG FM would involve the same construction activities and a similar length of pipeline construction as the proposed Program, and would therefore result in similar energy usage. Energy impacts would remain less than significant.

Greenhouse Gas Emissions

Under the OMG FM Fireside Street Alternative, GHGs emissions associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would remain the same as the proposed Program. Construction of the OMG FM would involve the same construction activities and a similar length of pipeline construction as the proposed Program, and would therefore result in similar GHG emissions. As with the proposed Program, impacts related to the generation of GHG emissions and conflict with GHG reduction plans would be less than significant.

Hazards and Hazardous Materials

The OMG FM Fireside Street Alternative would result in the same level of impact as the proposed Program related to the use, transport, and disposal of hazardous materials during construction of the various Program projects and during operation of the OMG Lift Station. This alternative would not result

in the OMG FM being located within 0.25-mile of a school or in proximity to an active hazardous materials site not identified for the proposed Program. As determined for the proposed Program, this alternative would not involve components that would result in airport hazards. Emergency response and evacuation could be affected during construction along three roadways not considered for the proposed Program: Los Arbolitos Boulevard, Fireside Street, and Heritage Street; however, mitigation measure TRA-1 identified for the proposed Program would remain applicable and would reduce potential impacts to a less-than-significant level. Similar to the proposed Program, small portions of the project components would be within a VHFHSZ, but impacts would be less than significant.

Noise

Under the OMG FM Fireside Street Alternative, potential noise generation associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would be similar to the proposed Program, although more sensitive receptors would be impacted under this alternative due to more construction occurring near residential areas. Construction of the OMG FM would involve the same construction activities and equipment as the proposed Program and would occur within similar distances to residential NSLUs and biologically sensitive habitat. Mitigation measures NOI-1 through NOI-3 would be required to reduce potentially significant operation noise and vibration impacts to a less-than-significant level, as under the proposed Program. Even with implementation of these mitigation measures, construction noise impacts would remain significant and unavoidable.

Transportation

As with the proposed Program, construction under the OMG FM Fireside Street Alternative would result in a slight increase of vehicular traffic on roadways and would involve construction within roadways that would have the potential to temporarily affect the circulation system, increase roadway hazards, and result in inadequate emergency access. Three roadways, Los Arbolitos Boulevard, Fireside Street, and Heritage Street, would be affected under this alternative that would not be affected under the proposed Program; however, mitigation measure TRA-1, identified for the proposed Program, would be required and would reduce potential impacts to a less-than-significant level. Operationally, this alternative would result in the same trip generation as the proposed Program, which would be minimal in association with the OMG Lift Station and would not result in substantial traffic-related effects.

Tribal Cultural Resources

The location of the OMG FM within Los Arbolitos Boulevard, Fireside Street, and Heritage Street under the OMG FM Fireside Street Alternative would not result in effects to a known tribal cultural resource that would not have been affected under the proposed Program or result in the avoidance of a known archaeological resource that would have been affected under the proposed Program, as no known resources are located along this portion of the alignment. The alternative route for the OMG FM would still occur within an area of moderate sensitivity, as with this portion of alignment proposed under the Program. The potential to impact tribal cultural resources would remain the same under this alternative as the proposed Program, and mitigation measures CUL-1 through CUL-10 would still be required.

7.5.3.2 Ability to Accomplish Project Objectives

The OMG FM Fireside Street Alternative would meet all Program objectives by implementing the same core components as the proposed Program while rerouting the force main through Los Arbolitos

Boulevard, Fireside Street, and Heritage Street. This alignment would upgrade and maintain wastewater facilities, improve system reliability, provide adequate capacity for future flows, and support recycled water production at the SLRWRF; however, it would meet the objective of completing the system upgrades in a timely and cost-effective manner to a lesser extent than the proposed Program. Construction within the alternative alignment may conflict with recently installed or planned City recycled water infrastructure, increasing the potential for construction complexity, coordination challenges, and additional costs. While this alternative would reduce impacts on sensitive habitat compared to the proposed alignment, it would introduce temporary construction-related effects on additional roadways and sensitive receptors, including construction noise impacts that would remain significant and unavoidable. Overall, the Fireside Street Alternative represents a feasible alternative that fulfills the Program's intent and environmental goals but is less effective than the proposed Program in achieving timely and cost-effective implementation of planned wastewater infrastructure improvement.

7.5.4 Alternative 4: OMG FM Pala Road Alternative

The OMG FM Pala Road Alternative would involve the same OMG FM alignment as proposed under the Program, except the northern portion would run south from the SLRWRF straight to Pala Road instead of routing along Whalen Lake Road. The alignment would then run west along Pala Road to the shared OLO and MALS FM corridor (see Figure 7-1). The other Program components, including the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project, would remain as proposed in the Program under this alternative.

7.5.4.1 Impact Analysis

Air Quality

Under the OMG FM Pala Road Alternative, air pollutant emissions associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would remain the same as the proposed Program. Construction of the OMG FM would involve the same construction activities and a similar length of pipeline construction as the proposed Program, and would therefore result in similar emissions. The OMG FM south of the SLRWRF and along Pala Road under this alternative would occur adjacent to single-family residential sensitive receptors, similar to the proposed Program alignment, and would result in similar less-than-significant impacts from CO hotspots and toxic air contaminants. The potential for odors would also be the same under this alternative as under the proposed project and would be less than significant.

Biological Resources

The OMG FM Pala Road Alternative would route the OMG FM within Pala Road, thus avoiding the undeveloped area to the west. Construction of the OMG FM under this alternative would therefore likely avoid direct and indirect impacts to southern willow scrub, as well as potential impacts to least Bell's vireo, yellow warbler, yellow-breasted chat, Costa's hummingbird, white-tailed kite, and California horned lake that have the potential to occur within this habitat. However, this area would still be impacted, and these biological resources affected, by construction of the OLO and MALS FM. Additionally, impacts may be increased for sensitive biological resources near the San Luis Rey River, where staging for tunneling is more limited. Potential impacts to biological resources at all other project

footprint locations would remain the same under this alternative as the proposed Program. Mitigation measures Bio-1 through Bio-8b would still be required under this alternative.

Cultural Resources

Under the OMG FM Pala Road Alternative with the OMG FM running south from the (LRWRF to Pala Road, construction of the OMG FM would no longer occur in proximity to two cultural resource sites (P-37-011468 and P-37-011470); however, construction of the OLO and MALS FM would still occur in proximity to these resources and impacts may still occur. In addition, the OMG FM under this alternative would still be located in an area of moderate cultural sensitivity, as under the proposed Program. The potential to impact known and/or unknown archaeological resources and human remains would remain the same under this alternative as the proposed Program, and mitigation measures CUL-1 through CUL-10 would still be required.

Energy

Under the OMG FM Pala Road Alternative, energy usage associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would remain the same as the proposed Program. Construction of the OMG FM would involve the same construction activities and a similar length of pipeline construction as the proposed Program, and would therefore result in similar energy usage. Energy impacts would remain less than significant.

Greenhouse Gas Emissions

Under the OMG FM Pala Road Alternative, GHGs emissions associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would remain the same as the proposed Program. Construction of the OMG FM would involve the same construction activities and a similar length of pipeline construction as the proposed Program, and would therefore result in similar GHG emissions. As with the proposed Program, impacts related to the generation of GHG emissions and conflict with GHG reduction plans would be less than significant.

Hazards and Hazardous Materials

The OMG FM Pala Road Alternative would result in the same level of impact as the proposed Program related to the use, transport, and disposal of hazardous materials during construction of the various Program projects and during operation of the OMG Lift Station. This alternative would result in the OMG FM being located within 0.25 mile of Foussat Elementary School; however, as discussed for other components of the Program located within 0.25 mile of other schools, impacts to schools would be less than significant based on the limited quantities of hazardous materials used and compliance with federal, state, and local regulations. The OMG FM under this alternative would not occur in proximity to an active hazardous materials site not identified for the proposed Program. As determined for the proposed Program, this alternative would not involve components that would result in airport hazards. Emergency response and evacuation could be affected during construction along one roadway not considered for the proposed Program: Pala Road; however, mitigation measure TRA-1 identified for the proposed Program would remain applicable and would reduce potential impacts to a less-than-significant level. Similar to the proposed Program, small portions of the project components would be within a VHFHSZ, but impacts would be less than significant.

Noise

Under the OMG FM Pala Road Alternative, potential noise generation associated with construction and operation of the OMG Lift Station Project, OLO Replacement Project, MALS FM Replacement Project, and Mission Avenue Sewer Lining and Replacement Project would be similar to the proposed Program, although more sensitive receptors would be impacted under this alternative due to more construction occurring near residential areas. Construction of the OMG FM would involve the same construction activities and equipment as the proposed Program and would occur within similar distances to residential NSLUs and biologically sensitive habitat. Mitigation measures NOI-1 through NOI-3 would be required to reduce potentially significant operation noise and vibration impacts to a less-than-significant level, as under the proposed Program. Even with implementation of these mitigation measures, construction noise impacts would remain significant and unavoidable.

Transportation

As with the proposed Program, construction under the OMG FM Pala Road Alternative would result in a slight increase of vehicular traffic on roadways and would involve construction within roadways that would have the potential to temporarily affect the circulation system, increase roadway hazards, and result in inadequate emergency access. One roadways, Pala Road, would be affected under this alternative that would not be affected under the proposed Program; however, mitigation measure TRA-1, identified for the proposed Program, would be required and would reduce potential impacts to a less-than-significant level. Operationally, this alternative would result in the same trip generation as the proposed Program, which would be minimal in association with the OMG Lift Station and would not result in substantial traffic-related effects.

Tribal Cultural Resources

As described above under Cultural Resources, the OMG FM Pala Road Alternative would no longer occur in proximity to two cultural resource sites (P-37-011468 and P-37-011470); however, construction of the OLO and MALS FM would still occur in proximity to these resources and impacts may still occur. In addition, the OMG FM under this alternative would still be located in an area of moderate cultural sensitivity, as under the proposed Program. The potential to impact tribal cultural resources would remain the same under this alternative as the proposed Program, and mitigation measures CUL-1 through CUL-10 would still be required.

7.5.4.2 Ability to Accomplish Project Objectives

The OMG FM Pala Road Alternative would meet all Program objectives by implementing the same core components as the proposed Program while rerouting the northern portion of the force main south from the SLRWRF directly to Pala Road and then west to the shared corridor. This alignment would upgrade and maintain wastewater facilities, improve system reliability, provide adequate capacity for future flows, and support recycled water production at the SLRWRF; however, it would meet the objective of completing the system upgrades in a timely and cost-effective manner to a lesser extent than the proposed Program. Construction within the alternative alignment may conflict with recently installed or planned City recycled water infrastructure, increasing the potential for construction complexity, coordination challenges, and additional costs. While this alternative would reduce impacts on sensitive habitat compared to the proposed alignment and avoid proximity to two cultural resource sites, it would introduce temporary construction-related effects along Pala Road in proximity to

additional NSLUs and would occur within 0.25 mile of Foussat Elementary School; contributing to a potential increase in construction noise impacts that would remain significant and avoidable even with implementation of mitigation. Overall, the Pala Road Alternative represents a feasible option that fulfills the Program's intent and environmental goals but is less effective than the proposed Program in achieving timely and cost-effective implementation of planned wastewater infrastructure improvements.

7.5.5 Summary

Table 7-1, *Summary of Analysis for Alternatives to the Project,* provides a summary of the impacts of the alternatives compared to the proposed project. A summary of how each alternative fulfills each of the project objectives is provided in Table 7-2, *Summary of the Project Objectives.*

Table 7-1
SUMMARY OF ANALYSIS FOR ALTERNATIVES TO THE PROGRAM

Issue Area	Proposed Program Without Mitigation	Proposed Program With Mitigation	Alternative 1: No Program Alternative	Alternative 2: OMG FM Los Arbolitos Boulevard Alternative	Alternative 3: OMG FM Fireside Street Alternative	Alternative 4: OMG FM Pala Road Alternative
3.1 Air Quality						
Consistency with Air Quality Plans	LS	LS	▼	=	=	=
Cumulatively Considerable Net Increase of Nonattainment Criteria Pollutants	LS	LS	▼	=	=	=
Sensitive Receptors	LS	LS	▼	▲	▲	▲
Odors	LS	LS	▼	=	=	=
3.2 Biological Resources						
Special Status Species	PS	LS	▼	=	=	=
Sensitive Habitats	PS	LS	▼	=	=	=
Wetlands	PS	LS	▼	=	=	=
Wildlife Movement	PS	LS	▼	=	=	=
Local Policies	NI	NI	=	=	=	=
Conservation Planning	NI	NI	=	=	=	=
3.3 Cultural Resources						
Historical Resources	NI	NI	=	=	=	=
Archaeological Resources	PS	LS	▼	=	=	■
Human Remains	PS	LS	▼	=	=	=
3.4 Energy						
Wasteful, Inefficient, or Unnecessary Energy Consumption	LS	LS	▼	=	=	=
Conflict with Energy Plans	LS	LS	▼	=	=	=
3.5 Geology and Soils						
Seismic Hazards	LS	LS	▼	=	=	=
Erosion and Sedimentation	LS	LS	▼	=	=	=
Geologic Instability	LS	LS	▼	=	=	=
Expansive Soil	LS	LS	▼	=	=	=
Septic Tanks	NI	NI	=	=	=	=
Paleontological Resources	PS	LS	▼	=	=	=

Issue Area	Proposed Program Without Mitigation	Proposed Program With Mitigation	Alternative 1: No Program Alternative	Alternative 2: OMG FM Los Arbolitos Boulevard Alternative	Alternative 3: OMG FM Fireside Street Alternative	Alternative 4: OMG FM Pala Road Alternative
3.6 Greenhouse Gas Emissions						
Greenhouse Gas Emissions	LS	LS	▼	=	=	=
Conflict with Plans or Policies	NI	NI	=	=	=	=
3.7 Hazards and Hazardous Materials						
Transport, Use, Disposal, or Accidental Release of Hazardous Materials	LS	LS	▼	=	=	=
Hazards Near Schools	LS	LS	▼	=	=	=
Hazardous Materials Sites	LS	LS	▼	=	=	=
Airport Hazards	LS	LS	▼	=	=	=
Emergency Response and Evacuation	PS	LS	▼	=	=	=
Wildland Fires	LS	LS	▼	=	=	=
3.8 Noise						
Increase in Ambient Noise	PS	SU (Construction) / LS (Operations)	▼	▲	▲	▲
Vibration	LS	LS	▼	=	=	=
Aircraft Noise	LS	LS	▼	=	=	=
3.9 Transportation						
Traffic Circulation	PS	LS	▼	=	=	=
Vehicle Miles Traveled						
Hazardous Design Features	PS	LS	▼	=	=	=
Emergency Access	PS	LS	▼	=	=	=
3.10 Tribal Cultural Resources						
Tribal Cultural Resources	PS	LS	▼	=	=	■

▲ Alternative would result in an increased level of impact when compared to the proposed project
= Alternative would result in a similar level of impact when compared to proposed project
■ Alternative would result in a reduced level of impact when compared to the proposed project, but impacts would remain significant without mitigation.
▼ Alternative would result in a reduced level of impact when compared to proposed project and would not require mitigation.
SU=Significant and Unavoidable; PS = Potentially significant impact; LS = Less than significant impact; NI = No impact

Table 7-2
SUMMARY OF PROJECT OBJECTIVES

Project Objective	Alternative 1: No Project Alternative	Alternative 2: OMG FM Los Arbolitos Boulevard Alternative	Alternative 3: OMG FM Fireside Street Alternative	Alternative 4: OMG FM Pala Road Alternative
Implement projects identified in the City's Capital Improvement Program (CIP) and Sewer Master Plan to ensure that wastewater facilities are adequately maintained and upgraded and that capital improvements are scheduled and completed in a timely and cost-effective manner.	No	Yes*	Yes*	Yes*
Provide for overall system reliability and bring existing facilities up to current design, safety, and regulatory standards by allowing for the inspection, maintenance, repair, and replacement of aging infrastructure.	No	Yes	Yes	Yes
Provide adequate system capacity to meet the needs of the growing population, serve anticipated land use changes, and accommodate future wastewater demand and flow conditions through their lifespan.	No	Yes	Yes	Yes
Centralize wastewater flows to the San Luis Rey Water Reclamation Facility (SLRWRF) for the City's recycled water production and indirect potable reuse, thus increasing the local water supply.	No	Yes	Yes	Yes
Provide support for emerging recycled water reuse and biosolids beneficial use opportunities.	No	Yes	Yes	Yes
Ensure compliance with State General Waste Discharge Requirements (GWDR) for wastewater collection agencies by providing adequate capacity within the regional wastewater conveyance system to convey wastewater flows and prevent sanitary sewer overflows.				

*Alternative would meet this objective to a lesser extent than the proposed Program.

7.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6(e)(2) requires that an EIR identify the environmentally superior alternative among the alternatives that are evaluated. Under the No Project Alternative, the proposed project would not be implemented, and the alternative would therefore avoid potentially significant environmental impacts to biological resources, cultural resources, geology and soils (paleontological resources), noise, transportation, and tribal cultural resources identified for the proposed Program. In the short term, the No Project alternative would result in reduced impacts related to construction with respect to air quality, energy, GHG emissions (despite impacts related to air quality, energy, and GHG emissions being less than significant under the proposed project), and hydrology and water quality. However, the No Project Alternative would not meet any of the Program objectives.

CEQA Guidelines Section 15126.6(e)(2) also requires that an EIR identify another alternative as environmentally superior, besides the No Project Alternative. In this case, the next environmentally superior alternative is the OMG FM Pala Road Alternative. Overall, the OMG FM Pala Road Alternative is feasible and would meet the Program's general intent to upgrade and maintain wastewater facilities. It would avoid the intensity of construction in proximity to two cultural resource sites (P 37-011468 and P-37-011470) since the OMG FM would be constructed within Fireside Street; however, it would introduce additional temporary construction noise effects at sensitive residential receptors relative to the proposed Program, including noise impacts that would remain significant and unavoidable similar to the proposed Program.

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8.0 LIST OF PREPARERS

The following professional staff participated in preparation of the PEIR and associated technical studies:

City of Oceanside

Mabel Uyeda	Senior Civil Engineer, Project Manager
Kirill Dolinskiy, PMP	Project Manager
Shannon Vitale	Senior Planner

HELIX Environmental Planning, Inc.

PEIR Preparation and Management

Andrea Bitterling	Principal-in-Charge
Vanessa Toscano	Project Manager
Hunter Stapp	Assistant Project Manager
Luis Cabrera Medina	Environmental Planner
Molly Ryan	Environmental Planner
Sean Bohac	GIS Specialist

Air Quality, Greenhouse Gas Emissions, and Energy Technical Report

Joanne Dramko, AICP	Principal Technical Specialist, QA/QC
Victor Ortiz	Principal Air Quality Specialist, QA/QC
Hunter Stapp	Air Quality Analyst

Biological Resources Technical Report

Beth Martinez	Principal Biologist, QA/QC
Karl Osmundson	Principal Biologist, QA/QC
Jason Kurnow	Senior Biology Project Manager
Angelia Bottiani	Biologist V
Amy Mattson	Senior Scientist I
Sean Bohac	GIS Specialist
Linda Garcia, M.A.	Document Processor

Cultural Resources Technical Report

Mary Robbins-Wade, RPA	Cultural Resources Group Manager, QA/QC
Stacie Wilson, M.S., RPA	Cultural Resources Group Manager
Kassie Sugimoto, M.A., RPA	Cultural resources Project Manager
James Turner	Senior Archaeologist
Theodore G. Cooley, RPA	Senior Archaeologist

Cultural Resources Post-Review Discovery and Monitoring Plan

Mary Robbins-Wade, RPA	Cultural Resources Group Manager, QA/QC
Stacie Wilson, M.S., RPA	Cultural Resources Group Manager
Shelby Castells, M.A., RPA	Cultural Resources Group Manager
James Turner	Senior Archaeologist

Noise Assessment

Joanne Dramko, AICP	Principal Technical Specialist, QA/QC
Hunter Stapp	Noise Specialist
Jason Runyan	Senior Noise Specialist