

# La Jolla View Reservoir Project

## Draft Environmental Impact Report

SCH No. 2018041020 - Project No. 331101



December 2020

*Prepared for:*



**Engineering and Capital Projects**  
525 B Street, Suite 750, MS 908A  
San Diego, CA 92101



THE CITY OF SAN DIEGO

**DATE OF NOTICE:** December 31, 2020

**PUBLIC NOTICE OF AVAILABILITY**  
**DRAFT ENVIRONMENTAL IMPACT REPORT**  
**DEVELOPMENT SERVICES DEPARTMENT**

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The City of San Diego Development Services Department has prepared a draft Environmental Impact Report (EIR) for the following project and is inviting your comments regarding the adequacy of the document. The draft EIR and associated technical appendices have been placed on the City of San Diego website and can be accessed using the following link at <https://www.sandiego.gov/ceqa/draft> under the heading of "California Environmental Quality Act (CEQA) Notices & Documents."

**Your comments must be received by February 15, 2021**, to be included in the final document considered by the decision-making authorities. Please send your written comments to the following address: **Rachael Ferrell, City of San Diego Development Services Center, 1222 First Avenue, MS 501, San Diego, CA 92101** or e-mail your comments to [DSDEAS@sandiego.gov](mailto:DSDEAS@sandiego.gov) with the Project Name and Number in the subject line.

**General Project Information:**

- Project Name: La Jolla View Reservoir
- Project No. 331101 / SCH No. 2018041020
- Community Plan Areas: La Jolla
- Council Districts: 1

**Project Location:** The project is located at the existing La Jolla View Reservoir within the La Jolla Heights Natural Park, approximately 500 feet east of Country Club Drive and 150 feet north of existing residences on Remley Place. The project is also located at the Exchange Place Reservoir which is east of the intersection of Country Club Drive and Pepita Way. The project also includes improvements along Country Club Drive between Soledad Avenue and Romero Drive.

**Project Description:** The City of San Diego has prepared an Environmental Impact Report to evaluate the effects of the proposed La Jolla View Reservoir project. The project will require approval of a Coastal Development Permit and Site Development Permit for impacts to Environmentally Sensitive Lands. The project would replace the existing Exchange Place Reservoir and La Jolla View Reservoir with a new 3.1-million-gallon reservoir within the La Jolla Heights Natural Park. The existing reservoirs and the Exchange Place Pump Station would be demolished and their sites would be returned to historical contours and restored with native vegetation. The proposed new reservoir would be entirely buried, except for reservoir access hatches and supervisory control and data acquisition equipment. The new reservoir would include an approximately 200-foot-long, 18-inch overflow pipe with an at-grade outlet and energy dissipation structure. In addition, an 8-inch utility water connection to the new reservoir would be provided from the existing water main in Brodiaea Way.



The project also includes construction of approximately 2,790 linear feet of 30-inch pipeline. The pipeline would run from the new La Jolla View Reservoir in a general east-to-west direction through the La Jolla Heights Natural Park to connect with the existing 16-inch Muirlands Pipeline in County Club Drive. Approximately 1,050 linear feet of the 2,790 linear feet total would be replacing the 16-inch pipeline up to the existing Muirlands Pump Station. In addition, approximately 780 feet of an 8-inch pipeline would parallel the 30-inch pipeline along Country Club Drive to serve existing customers. An altitude valve vault would be located along the pipeline adjacent to Country Club Drive. The existing pipeline segment through the La Jolla Heights Natural Park would be abandoned in place.

An existing paved access road from Encelia Drive would be reconstructed to allow access to the new reservoir site for maintenance vehicles. This road would terminate at the reservoir access hatches where two parking spaces and paved turnaround area would be provided. The remaining portion of the existing access road to the existing La Jolla View Reservoir would be demolished, and the area would be revegetated.

**Applicant:** The City of San Diego, Engineering and Capital Projects

**Recommended Finding:** The draft EIR concludes that the project would result in: significant and unavoidable environmental impacts with regard to Land Use and Noise. The project would result in less than significant environmental impacts with implementation of mitigation measures with regard to Biological Resources, Historical Resources, Tribal Cultural Resources, and Paleontological Resources.

**Availability in Alternative Format:** To request this Notice, the draft EIR, and/or supporting documents in alternative format, call the Development Services Department at 619-446-5460 or (800) 735-2929 (TEXT TELEPHONE).

**Additional Information:** For environmental review information, contact Rachael Ferrell at (619) 446-5129. For information regarding public meetings and/or hearings on this project, contact Project Manager, Catherine Rom at (619)-446-5277. This notice was published in the SAN DIEGO DAILY TRANSCRIPT and distributed on December 31, 2020.

Raynard Abalos  
Deputy Director  
Development Services Department



THE CITY OF SAN DIEGO

# ENVIRONMENTAL IMPACT REPORT

Project No. 331101  
SCH No. 2018041020

**SUBJECT: La Jolla View Reservoir:** The City of San Diego has prepared an Environmental Impact Report to evaluate the effects of the proposed La Jolla View Reservoir project. The project will require approval of a Coastal Development Permit and Site Development Permit for impacts to Environmentally Sensitive Lands. The project would replace the existing Exchange Place Reservoir and La Jolla View Reservoir with a new 3.1-million-gallon reservoir within the La Jolla Heights Natural Park. The existing reservoirs and the Exchange Place Pump Station would be demolished and their sites would be returned to historical contours and restored with native vegetation. The proposed new reservoir would be entirely buried, except for reservoir access hatches and supervisory control and data acquisition equipment. The new reservoir would include an approximately 200-foot-long, 18-inch overflow pipe with an at-grade outlet and energy dissipation structure. In addition, an 8-inch utility water connection to the new reservoir would be provided from the existing water main in Brodiaea Way. The project also includes construction of approximately 2,790 linear feet of 30-inch pipeline. The pipeline would run from the new La Jolla View Reservoir in a general east-to-west direction through the La Jolla Heights Natural Park to connect with the existing 16-inch Muirlands Pipeline in County Club Drive. Approximately 1,050 linear feet of the 2,790 linear feet total would be replacing the 16-inch pipeline up to the existing Muirlands Pump Station. In addition, approximately 780 feet of an 8-inch pipeline would parallel the 30-inch pipeline along Country Club Drive to serve existing customers. An altitude valve vault would be located along the pipeline adjacent to Country Club Drive. The existing pipeline segment through the La Jolla Heights Natural Park would be abandoned in place. An existing paved access road from Encelia Drive would be reconstructed to allow access to the new reservoir site for maintenance vehicles. This road would terminate at the reservoir access hatches where two parking spaces and paved turnaround area would be provided. The remaining portion of the existing access road to the existing La Jolla View Reservoir would be demolished, and the area would be revegetated.

**APPLICANT:** The City of San Diego, Engineering and Capital Projects

## ENVIRONMENTAL DETERMINATION:

This document has been prepared by the City of San Diego's Environmental Analysis Section under the direction of the Development Services Department and is based on the City's independent analysis and conclusions made pursuant to 21082.1 of the California Environmental Quality Act (CEQA) Statutes and Sections 128.0103(a) and 128.0103(b) of the San Diego Land Development Code.

Based on the analysis conducted for the project described above, the City of San Diego, as the Lead Agency, has prepared the following Environmental Impact Report. The analysis addressed the following issue area(s) in detail: **Land Use, Visual Quality/Neighborhood Character, Noise, Transportation/Circulation, Biological Resources, Historical Resources, Tribal Cultural Resources, Paleontological Resources, Air Quality, Greenhouse Gas Emissions, Energy, Hydrology/Water Quality, Geology and Soils, Health and Safety, and Utilities and Service Systems.**

The Environmental Impact Report concluded that the project would result in significant but mitigated environmental impacts to **Biological Resources, Historical Resources, Tribal Cultural Resources, and Paleontological Resources** and significant and unmitigated impacts to **Land Use and Noise**. All other impacts analyzed in the draft EIR were determined to be less than significant.

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

## PUBLIC REVIEW DISTRIBUTION:

The following agencies, organizations, and individuals received a copy or notice of the draft Environmental Impact Report and were invited to comment on its accuracy and sufficiency. Copies of the environmental document, Mitigation Monitoring and Reporting Program, and associated project-specific technical appendices, if any, may be accessed on the City's CEQA webpage at <https://www.sandiego.gov/ceqa/final>.

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City of San Diego

Mayor's Office  
City Attorney (93C)  
Councilmember LaCava, District 1  
Councilmember Campbell, District 2  
Councilmember Whitburn, District 3  
Council member Montgomery, District 4  
Councilmember von Wilpert, District 5  
Councilmember Cate, District 6  
Councilmember Campillo, District 7  
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Development Services Department  
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    Transportation  
    Engineering  
    Geology  
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    MMC  
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Open Space Division  
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Police Department  
Public Utilities Department  
Transportation & Stormwater Department

Other Interested Groups, Organizations, and Individuals

Air Pollution Control District (65)



County Water Authority (73)  
 Department of Environmental Health  
 City of Coronado  
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La Jolla Shores Permit Review Committee  
La Jolla Traffic & Transportation Board  
Friends of La Jolla Heights Park  
La Jolla Parks & Beaches, Inc.  
La Jolla Village Merchants Association  
La Jolla Parks & Recreation, Inc.  
La Jolla Shores Merchant Association Improvement District  
The La Jolla Shores Association for Credible Representation  
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Shanda Campos  
Martha Welch



# **LA JOLLA VIEW RESERVOIR PROJECT**

## **Draft Environmental Impact Report**

SCH No. 2018041020; Project No. 331101

**December 2020**

*Prepared for:*

City of San Diego  
Engineering and Capital Projects  
525 B Street, Suite 750, MS 908A  
San Diego, CA 92101

# La Jolla View Reservoir Project

## Draft Environmental Impact Report

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## LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ADD	Assistant Deputy Director
ADRP	Archaeological Data Recovery Program
ADT	average daily traffic / average daily trips
AME	Archaeological Monitoring Exhibit
AMSL	above mean sea level
ASCE	American Society of Civil Engineers
ASLA	American Society of the Landscape Architects
ATS	advanced treatment systems
Basin Plan	Water Quality Control Plan for the San Diego Basin
BAT	best available technology economically achievable
BCT	best conventional pollutant control technology
BI	Building Inspector
BMP	best management practice
BTR	Biological Technical Report
BTU	British thermal unit
C&D	construction and demolition
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CAL FIRE	California Department of Forestry and Fire Protection
CalARP	California Accidental Release Prevention Program
CalEEMod	California Emissions Estimator Model
Cal-OSHA	California Occupational Safety and Health Administration
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CASQA	California Stormwater Quality Association
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDC	California Department of Conservation
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	California Fire Code
CFR	Code of Federal Regulations
cfs	cubic feet per second
CGS	California Geological Survey
CH <sub>4</sub>	methane

CHP	California Highway Patrol
CHSC	California Health and Safety Code
City	City of San Diego
CLSM	controlled low strength material
CM	Construction Manager
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
CO <sub>2</sub> e	carbon dioxide equivalent
CPA	Community Plan Amendment
CRC	California Residential Code
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSMP	Construction Site Monitoring Program
CSVR	Consultant Site Visit Record
CUPA	Certified Unified Program Agencies
CWA	Clean Water Act
cy	cubic yard(s)
dB	decibel
dBA	A-weighted decibel
DEH	Department of Environmental Health
DPM	diesel particulate matter
DSD	Development Services Department
DTSC	Department of Toxic Substances Control
DU/AC	dwelling units per acre
DWR	California Department of Water Resources
EAS	Environmental Analysis Section
EIR	Environmental Impact Report
EO	Executive Order
EOC	Emergency Operations Center
EPIC	Energy Policy Initiatives Center
ESA	Endangered Species Act
ESD	Environmental Services Department
ESL	Environmentally Sensitive Lands
F	Fahrenheit
f/cc	fibers per cubic centimeter
FEMA	Federal Emergency Management Agency
FRA	federal responsibility area
FTA	Federal Transit Administration
FUDS	Formerly Used Defense Site
GC	Grading Contractor
GHG	greenhouse gas

GPA	General Plan Amendment
gpm	gallons per minute
GWP	global warming potential
H <sub>2</sub> S	hydrogen sulfide
HA	hydrologic area
HAP	hazardous air pollutant
HELIX	HELIX Environmental Planning, Inc.
HFCs	hydrofluorocarbons
HGL	hydraulic grade line
HMBEP	Hazardous Materials Business Emergency Plan
HMD	Hazardous Materials Division
HMTA	Hazardous Materials Transportation Act of 1975
HRA	health risk assessment
HRG	Historical Resources Guidelines
HRR	Historical Resources Regulations
HRS	Hazard Ranking System
HU	Hydrologic Unit
HVAC	heating, ventilation, and air conditioning
Hz	Hertz
I-	Interstate
IBC	International Building Code
IEC	Infrastructure Engineering Corporation
IPCC	United Nations Intergovernmental Panel on Climate Change
IWMA	Integrated Waste Management Act
IWMP	Integrated Waste Management Plan
Kc	Cretaceous Cabrillo Formation
kHz	kilohertz
kWh	kilowatt hour
LAS	Landscape Architecture Section
LCD	Landscape Construction Documents
LCP	Local Coastal Program
LDC	Land Development Code
LDR	Land Development Review
LEA	Local Enforcement Agency
L <sub>EQ</sub>	one-hour average sound level
LID	low impact development
LOS	level of service
LRA	local responsibility area
MBAS	Methylene Blue Activated Substances
MBTA	Migratory Bird Treaty Act
MEI	maximally exposed individual
MEP	maximum extent practicable

MG	million-gallon
MHPA	Multi-habitat Planning Area
MLD	Most Likely Descendent
MMC	Mitigation Monitoring Coordination / Mitigation Monitoring Coordinator
MMRP	Mitigation, Monitoring and Reporting Program
MMT	million metric tons
MOU	Memorandum of Understanding
mpg	miles per gallon
mph	miles per hour
MRZ	Mineral Resource Zone
MSCP	Multiple Species Conservation Program
MT	metric ton
MTBM	microtunneling boring machine
MTS	Metropolitan Transit System
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NASA	National Aeronautics and Space Administration
NCCP	Natural Community Conservation Planning
NDP	Neighborhood Development Permit
NEPA	National Environmental Policy Act
NHTSA	U.S. Department of Transportation's National Highway Traffic Safety Administration
N <sub>2</sub> O	nitrous oxide
NO	nitric oxide
NO <sub>2</sub>	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NOP	Notice of Preparation
NO <sub>x</sub>	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
NSLU	noise-sensitive land use
O <sub>3</sub>	ozone
OES	Office of Emergency Services
OHWM	ordinary high-water mark
Pb	lead
PCE	passenger car equivalent
PFCs	perfluorocarbons
PGA	peak ground acceleration
PI	Principal Investigator
PM <sub>10</sub>	respirable particulate matter
PM <sub>2.5</sub>	fine particulate matter
PME	Paleontological Monitoring Exhibit

POC	Point of Compliance
ppm	parts per million
PPV	peak particle velocity
PQB	Principal Qualified Biologist
PRC	Public Resources Code
Province	Peninsular Ranges Geomorphic Province
PRP	Paleontological Recovery Program
PRS	Principal Restoration Specialist
psi	pounds per square inch
PUD	Public Utilities Department
QBM	Qualified Biological Monitor
QVOP	Quaternary Very Old Paralic Deposits
RAQS	Regional Air Quality Strategy
RCRA	Resource Conservation and Recovery Act
RBC	Rocks Biological Consulting
RE	Resident Engineer
REAP	Rain Event Action Plan
RIC	Revegetation Installation Contractor
RMC	Revegetation Maintenance Contractor
RMP	Risk Management Plan
ROG	reactive organic gas
RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCADA	supervisory control and data acquisition
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SCIC	South Coastal Information Center
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SDFD	San Diego Fire-Rescue Department
SDMC	San Diego Municipal Code
SD-OHS	San Diego Office of Homeland Security
SDP	Site Development Permit
SDSU	San Diego State University
SF <sub>6</sub>	sulfur hexafluoride
SIP	State Implementation Plan
SO <sub>2</sub>	sulfur dioxide
SPL	sound pressure level
SR	State Route
SRA	state responsibility area
SRRE	Source Reduction and Recycling Element
SSSC	side-street stop controlled

STC	Sound Transmission Class
STP	shovel test pits
SWIS	Solid Waste Information System
SWPPP	Storm Water Pollution Prevention Program
SWRCB	State Water Resources Control Board
Ta	Tertiary Ardath Shale
TAC	toxic air contaminant
TCR	Tribal Cultural Resource
TDS	total dissolved solids
TIS	Traffic Impact Study
TMDL	total maximum daily load
Tmsc	Tertiary Mount Soledad Formation
UCSD	University of California, San Diego
Unified Program	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
v/c	volume to capacity ratio
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled
VOC	volatile organic compound
WDM	waste diversion measure
WLA	waste load allocation
WMP	Waste Management Plan
WQBEL	water quality based effluent limitation
µg/m <sup>3</sup>	micrograms per cubic meter



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## **S.0 SUMMARY**

### **S.1 Project Synopsis**

This summary provides a brief synopsis of the Draft Environmental Impact Report (EIR) for the La Jolla View Reservoir Project, prepared in compliance with the California Environmental Quality Act (CEQA), and includes (1) a description of the Project and its components; (2) the results of the environmental analysis contained within this EIR; (3) the major areas of controversy and issues to be resolved by the decision-makers; and (4) the alternatives to the Project that were considered. This summary does not contain the extensive background and analysis found in the EIR. Therefore, the reader should review the entire EIR to fully understand the Project and its related environmental consequences.

As the CEQA Lead Agency, the City of San Diego (City) has the primary responsibility for evaluating the environmental effects of the Project and is considering approval or disapproval of the Project in light of these effects. As required by CEQA, this EIR: (1) describes the Project, including its location, objectives, and features; (2) describes the existing conditions at the project site and surrounding areas; (3) analyzes the direct, indirect, and cumulative adverse physical effects that would occur to the existing conditions if the Project is implemented; (4) identifies feasible means of avoiding or substantially lessening the significant adverse effects, if available; (5) provides a determination of significance for each impact after mitigation is incorporated; and (6) evaluates a reasonable range of feasible alternatives to the Project that would obtain most of the basic project objectives and avoid or substantially lessen a significant project-related impact.

#### **S.1.1 Project Location and Setting**

The majority of the project site is in the 42-acre La Jolla Heights Natural Park (a part of City Parks and Recreation Open Space), which is generally bounded by Country Club Drive to the west; residences off Remley Place, Brodiaea Way, and Encelia Drive to the south; additional open space to the east; and residences off Valdes Drive, Mecca Drive, and Al Bahr Drive to the north. The existing La Jolla View Reservoir is located in the La Jolla Heights Natural Park, approximately 500 feet east of Country Club Drive and 150 feet north of the Remley Place residences. The Exchange Place Reservoir is located east of the intersection of Country Club Drive and Pepita Way, outside of the park limits. Improvements also would occur along Country Club Drive between Soledad Avenue and Romero Drive.

The La Jolla View Reservoir and the Exchange Place Reservoir are at the end of their lifecycles and need replacement. The existing 0.99-million-gallon (MG) Exchange Place Reservoir was originally constructed in 1909 and was decommissioned in 2002. The existing La Jolla View Reservoir is a 0.72-MG potable water storage facility that was constructed in 1949. Use of the existing La Jolla View Reservoir is very limited due to water system changes. Water quality in the reservoir is also poor and requires supplemental chlorine treatment when in operation. In addition, the existing 16-inch diameter cast iron Muirlands Pipeline that supplies water to the existing La Jolla View Reservoir is beyond its useful life and is undersized for current water conveyance.

## **S.1.2 Project Goals and Objectives**

The following are the primary goals and objectives of the Project:

1. Replace water storage facilities that are beyond their useful lives with a modern water storage system that meets current City Facility Design Guidelines and Standards to provide reliable water supply as well as reduce maintenance and energy costs;
2. Provide water storage at an elevation appropriate to support the southern portion of the North City 610 Pressure Zone;
3. Provide water storage sufficient to meet La Jolla community water demands as well as fire storage and emergency storage requirements;
4. Provide a system that allows for appropriate water cycling to maintain water quality and avoid or minimize the need for supplemental chlorine treatment;
5. Construct an underground water storage facility that returns the ground to existing contours to the extent feasible, in accordance with the Memorandum of Understanding (MOU) between the City Public Utilities Department and Parks and Recreation Department; and
6. Replace conveyance pipelines that are beyond their useful life with new pipelines that are sized for current water conveyance needs.

## **S.1.3 Project Description**

The Project would replace the existing Exchange Place Reservoir and La Jolla View Reservoir with a new 3.1-MG reservoir within the La Jolla Heights Natural Park. The Project also includes associated pipelines providing connections between the reservoir and other portions of the water system, as well as access and other related improvements, as detailed in the following sub-sections.

### **Reservoirs**

The Project would include demolition of two existing reservoirs and construction of one new reservoir. The existing Exchange Place Reservoir and Pump Station would be demolished. The site would be backfilled with soil, recontoured, and planted with drought-tolerant native species. The existing La Jolla View Reservoir also would be demolished. Its site would be returned to historical contours and restored with native vegetation.

The proposed new La Jolla View Reservoir would be located north of Encelia Drive, at a site with existing elevations ranging from approximately 596 to 612 feet above mean sea level (AMSL). It would be constructed as a 3.1-MG cylindrical, concrete reservoir, with a diameter of approximately 120 feet and a height of 40 feet. The proposed new reservoir would be located below ground, with a base elevation of 548 feet AMSL, a high water elevation of 590 feet AMSL, and a top of tank elevation of 596 feet AMSL. Upon completion of construction, the reservoir would be entirely buried, except for reservoir access hatches and supervisory control and data acquisition (SCADA) equipment.

## **Pipelines**

In association with the reservoir, new pipelines would be constructed for water supply, overflow, conveyance, and customer service. The new reservoir would include an approximately 200-foot long, 18-inch overflow pipe with an at-grade outlet and energy dissipation structure. The outlet would be situated near the head of the north-central on-site drainage. Approximately 480 feet of an 8-inch utility water connection to the new reservoir would be provided from the existing water main in Brodiaea Way.

The Project also includes construction of approximately 2,790 feet of 30-inch pipeline. The pipeline would run from the new La Jolla View Reservoir in a general northeast-to-southwest direction through the La Jolla Heights Natural Park to connect with the existing Muirlands Pipeline in Country Club Drive. Approximately 1,050 feet of the 2,790 feet total would be replacing the 16-inch pipeline within Country Club Drive between the existing Muirlands Pump Station and Soledad Avenue. In addition, approximately 780 feet of an 8-inch pipeline would parallel the 30-inch pipeline in the northwestern portion of Country Club Drive to serve existing customers. The existing Muirlands Pipeline segment and reservoir drain in La Jolla Heights Natural Park would be abandoned in place.

## **Appurtenant Features**

A new altitude valve vault would be constructed along the Muirlands Pipeline within La Jolla Heights Natural Park, across Country Club Drive from the Muirlands Pump Station. It would be located primarily below grade, with an 8-inch air exhaust extending above ground. A buried telecommunications conduit would be installed between the valve vault and the pump station.

The security and communication pole and appurtenant equipment located adjacent the proposed reservoir site would be temporarily relocated during construction, and then moved back to a permanent location adjacent to the new reservoir. A weather station with wind, temperature, and humidity sensors would be added to the current data/security tower.

## **Permanent Access**

An existing paved access road from Encelia Drive would be reconstructed to allow access to the new reservoir site for maintenance vehicles. This road would terminate at the reservoir access hatches, where two parking spaces and paved turnaround area would be provided. The remaining portion of the existing access road that extends to the existing La Jolla View Reservoir would be demolished, and the area would be recontoured and restored with native habitat.

## **Vegetation**

The backfilled new La Jolla View Reservoir areas and the ground above the proposed pipelines through La Jolla Heights Natural Park would be revegetated with drought-tolerant, native species. The former La Jolla View Reservoir site and other areas temporarily disturbed during construction would be restored with southern maritime chaparral. The backfilled Exchange Place Reservoir site would be revegetated with low-maintenance, drought-tolerant planting. Restored and revegetated areas would be temporarily irrigated during the establishment period. Revegetated areas would be subject to a 25-month establishment period, while restored habitat areas would be maintained for five years or until biological success criteria are met.

## Construction

Construction activities would occur within La Jolla Heights Natural Park, along Country Club Drive, and near the intersection of Country Club Drive and Pepita Way at the site of the existing Exchange Place Reservoir. The Project is anticipated to be constructed over 12 phases spanning approximately two and one-half years.

Excavation to install the new reservoir would result in approximately 78,000 cubic yards (cy) of cut. Approximately 5,000 cy of this material would be used to backfill the demolished Exchange Place Reservoir. To minimize the need for hauling all of the backfill material to and from an off-site location, approximately 56,000 cy would be temporarily stockpiled within La Jolla Heights Natural Park near Country Club Drive. Approximately 17,000 cy would be disposed of off site during the rough grading phase, with another approximately 5,000 cy disposed of off site during the final grading phase, requiring approximately 4,500 truck trips. The Construction Manager would be responsible for ensuring that the number of haul truck trips is limited to no more than 50 round trips per day.

A temporary access road would be constructed from the new reservoir site to (and partially on) the stockpile area. Once constructed, the temporary roadway would reduce by approximately one-half mile the distance that earthwork trucks, material delivery trucks, and other construction vehicles would need to travel on residential streets. Traffic control would be provided in accordance with a Traffic Control Plan reviewed and approved by the Engineering and Capital Projects Department, Construction Management and Field Engineering Division. During pipeline installation, portions of Country Club Drive and a small portion of Brodiaea Way near its intersection with Encelia Drive would be temporarily reduced to a single lane, with flaggers directing traffic. All trenches through roadways would be covered with steel plates at the end of each workday. Upon completion of construction, the contractor would repair or replace all existing improvements within the right-of-way that are not designated for permanent removal.

Construction work would occur for up to approximately 18 hours per day for concrete pouring of the concrete slab roof and floor/footing and would, therefore, require evening and nighttime work. In addition, concrete pouring of the walls may involve extended hours. It is conservatively estimated there would be 20 days with extended hours. All other activities would occur during normal construction hours.

## S.2 Summary of Significant Effects and Mitigation Measures that Reduce or Avoid the Significant Effects

Table S-1, *Summary of Significant Impacts and Mitigation*, located at the end of this chapter, summarizes the results of the environmental analysis completed for the Project. Table S-1 identifies the significant impacts associated with the Project, includes mitigation measures to reduce and/or avoid significant environmental effects, and concludes if the impact would be mitigated to a level below significance with implementation of mitigation measures. The mitigation measures listed in Table S-1 are also discussed within each relevant topic area, and fully contained in Chapter 9.0, Mitigation, Monitoring and Reporting Program (MMRP).

Based on the evaluations in Chapter 5.0, *Environmental Analysis*, the Project was determined to result in significant or potentially significant impacts related to the environmental resource areas discussed below.

The Project would result in significant and unmitigable impacts related to conformance to environmental goals and objectives of applicable local land use plans, specifically in association with noise impacts during nighttime construction activities. These impacts are considered significant and unmitigable.

For the majority of activities, noise would be in compliance with the City's Noise Ordinance or would be reduced to compliance levels through use of appropriate noise barriers. Pouring of concrete for portions of the reservoir, however, would occur continuously (up to approximately 18 hours per day) for a maximum of 20 days. These extended construction hours would result in significant and unmitigable noise impacts.

With regard to biological resources, the Project would result in impacts to southern maritime chaparral, Diegan coastal sage scrub, and jurisdictional drainages, as well as potential impacts to coastal California gnatcatcher and nesting birds. These impacts would be reduced to below a level of significance through the identified mitigation requirements.

Project grading activities have the potential to result in disturbance of currently unknown archaeological resources, tribal cultural resources (TCRs), human remains, and/or paleontological resources. These impacts would be reduced to below a level of significance through implementation of required monitoring and evaluation programs.

### **S.3 Areas of Controversy**

The Project's Notice of Preparation (NOP) was distributed on April 5, 2018 for public review and comment. The comment period was 32 days long and closed on May 7, 2018. A public scoping meeting was held on April 19, 2018. The NOP, comment letters, public scoping meeting sign-in sheet, and public scoping meeting transcript are included in this EIR as Appendix A.

A total of 24 written comments were mailed or emailed to the City during the NOP period, including 2 letters from state agencies (Department of Toxic Substances Control and Native American Heritage Commission), 2 tribes (Rincon Band of Luiseño Indians and Viejas Band of Kumeyaay Indians), 1 other organization (San Diego Archaeological Society), and 25 individuals. A total of 24 written comments were received at the scoping meeting, from 1 organization (Friends of La Jolla Heights Park) and 14 individuals. Three individuals provided verbal comments at the scoping meeting.

Issues raised in response to the NOP include concerns regarding aesthetics, air quality, biological resources, cultural resources, geology/soils, greenhouse gas (GHG) emissions, hazards and hazardous materials, land use/parks, noise/vibration, public services, recreation, transportation/traffic, tribal cultural resources, and utilities/service systems. Each of these issues is analyzed within this EIR.

## **S.4 Issues to be Resolved by the Decision-Making Body**

The City decisionmaker must review the Project and this EIR and determine if the Project or one of the alternatives presented in Chapter 8.0, *Project Alternatives*, should be approved and implemented. If the Project is selected for adoption, the decisionmaker will be required to certify the Final EIR, determine whether and how to mitigate significant impacts, and adopt associated Findings pursuant to CEQA Guidelines Section 15091 for the following significant impacts identified in the EIR:

- Land Use
- Noise
- Biological Resources
- Historical Resources
- Tribal Cultural Resources
- Paleontological Resources

Furthermore, a Statement of Overriding Considerations pursuant to CEQA Guidelines Section 15093 would be required for significant and unmitigable land use and noise impacts.

## **S.5 Project Alternatives**

Section 15126.6 of the CEQA Guidelines requires the discussion of “a reasonable range of alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project” and evaluation of the comparative merits of the alternatives. The alternatives discussion is intended to “focus on alternatives to the project or its location, which are capable of avoiding or substantially lessening any significant effects of the project,” even if these alternatives would impede to some degree the attainment of the project objectives.

In addition to the Project, the EIR addresses in detail the following two alternatives per the above-noted CEQA requirements: the No Project Alternative and the Encelia Drive Construction Access Alternative. These alternatives are summarized below, and evaluated in full in Chapter 8.0, *Project Alternatives*, of this document. A summary of the alternative impacts compared with those of the Project is included in Table S-2, *Comparison of Project and Alternative Impacts*.

### **S.5.1 No Project Alternative**

Section 15126.6(e) of the CEQA Guidelines provides that the “no project” analysis shall discuss the existing conditions at the time the NOP is published, as well as what would be reasonably expected to occur in the foreseeable future if a project were not approved, based on current plans and consistent with available infrastructure and community services. Accordingly, the No Project Alternative assumes that the Project would not be adopted and a new La Jolla View Reservoir and associated pipelines would not be constructed. The existing Exchange Place Reservoir would remain inoperable and would presumably be demolished at some point in the future. The existing La Jolla View Reservoir could continue to be operable, but with severely limited function, for a period of time. Eventually, however, its deteriorating condition would require it to be taken out of service and demolished. Upon demolition, the foundation and all associated structures and appurtenant items

would be removed, the original grade for the hillside would be restored, and the hillside would be replanted with native vegetation. Access for the demolition and grading activities would occur via the existing Encelia Drive access road. The Muirlands Pipeline would be abandoned in place from the existing reservoir location to Country Club Drive.

As part of the Planning Study (City 2010), modeling was conducted to determine what water flow conditions would be without an operational La Jolla View Reservoir. With 2030 peak hour demands, the lowest pressure in the service area would be 39.43 pounds per square inch (psi), relative to a minimum pressure requirement of 40 psi. This is considered barely acceptable. In the event of a major water facility (i.e., the 30-inch La Jolla Shores pipeline) out of service, however, the lowest pressure in the service area would be 19.20 psi, which is substantially below the minimum pressure requirement.

The No Project Alternative would avoid significant and unmitigable impacts related to nighttime construction noise, including associated conflicts with the General Plan Noise Element. It would also avoid significant, but mitigable, impacts to biological resources and potential impacts to cultural and paleontological resources. Less-than-significant impacts to visual resources, transportation/circulation, air quality, GHGs, energy, hydrology/ water quality, geology and soils, health and safety, and waste management that would result from the Project also would be reduced under this alternative.

This alternative would not replace water storage facilities that are beyond their useful lives with a modern water storage system that provides appropriate water storage and conveyance capabilities. Specifically, as described above, modeling conducted for this alternative determined that in the event of a major water facility being out of service, pressure in the service area would be substantially below the minimum pressure requirement. This alternative would, therefore, fail to meet any of the basic project objectives listed above in Section S.1.2.

## **S.5.2 Encelia Drive Construction Access Alternative**

The Encelia Drive Construction Access Alternative proposes that all temporary access for construction of the La Jolla View Reservoir would occur from Encelia Drive. Under this alternative, a temporary access road between Country Club Drive and the new reservoir site would not be constructed and excess soil from excavation of the reservoir would not be stockpiled on site. Rather, a temporary access road would be cut from Encelia Drive down to the tank pad with approximately 94,000 cy of soil hauled off site during excavation. Approximately 67,000 cy would be returned to the site to cover the reservoir and fill in the temporary access road after tank and pipeline construction. The alternate access route would increase the distance traveled by each haul truck by approximately one-half mile per trip along steep, narrow residential streets, and would require approximately 32,000 truck trips. In order to minimize traffic congestion by limiting the number of daily haul truck trips, this would require 640 working days of hauling, or approximately 540 more working days than the Project. In addition, all access to/from the site, including material deliveries, equipment, and workers, would be along the small residential streets up to Encelia Drive. It could be necessary to temporarily prohibit parallel parking on Brodiaea Way to provide sufficient width for two trucks to pass each other.

The other elements of this alternative would be the same as described for the Project.



The Encelia Drive Construction Access Alternative would reduce significant, but mitigable, impacts to biological and potential cultural resources, due to the reduction in the areal extent of grading. Less-than-significant impacts to visual resources and hydrology/water quality also would be reduced under this alternative.

Impacts to geology and soils, health and safety, and utilities and service systems would be similar overall to the less-than-significant impacts that would occur from the Project. This alternative also would result in the same significant and unmitigable impacts related to the generation of noise during extended construction hours that would occur from the Project. While noise impacts from haul trucks would be the same relative to CEQA significance thresholds, the actual disruption to the community would be increased under this alternative.

Impacts related to transportation/circulation would be less than significant, consistent with those for the Project; however, the disturbance to the community would be increased under this alternative due to the substantially extended construction period.

Although still less than significant, impacts to air quality, GHG emissions, and energy under this alternative would be increased due to the substantial increase in the required number of haul trucks and increased amount of grading. The potential for disturbance of sensitive paleontological resources also would be increased, with this impact reduced to below a level of significance through the same mitigation measure as required for the Project.

This alternative would replace water storage facilities that are beyond their useful lives with a modern water storage system that meets current standards and meets identified water storage, cycling, and conveyance needs. It also would be consistent with the MOU terms that require that the facility be constructed underground and return the ground to existing contours to the extent feasible. Therefore, the Encelia Drive Construction Access Alternative would meet all of the identified project objectives.

### **S.5.3 Environmentally Superior Alternative**

The CEQA Guidelines require the identification of an environmentally superior alternative among the alternatives analyzed in an EIR. The guidelines also require that if the No Project Alternative is identified as the environmentally superior alternative, another environmentally superior alternative must be identified. The identification of the environmentally superior alternative is based on its ability to avoid or substantially lessen the effects of the project that would be significant based on CEQA thresholds.

Based on a comparison of the overall environmental impacts for the described alternatives, the No Project Alternative is identified as the environmentally superior alternative. This alternative would not result in a contribution to significant impacts related to land use, noise, biological resources, cultural resources, and paleontological resources, which would occur with the Project (refer to Table S-2, *Comparison of Project and Alternative Impacts*). The No Project Alternative does not meet the purpose and objectives of the Project, however.

Of the remaining alternatives, the environmentally superior alternative is the Encelia Drive Construction Access Alternative. This alternative would meet all of the identified project objectives and would reduce significant but mitigable impacts to biological and cultural resources. Impacts to

cultural resources are permanent; while the majority of biological resources disturbed by construction would be restored, the impacts are relatively long term in nature. Significant and unavoidable impacts (related to short-term nighttime construction noise and associated land use policy inconsistency) would remain the same under this alternative as for the Project. All other impacts would be less than significant under either scenario. Therefore, because permanent or relatively long-term significant cultural and biological impacts would be reduced under this alternative, and significant temporary impacts would be the same relative to CEQA thresholds, this alternative is considered to be environmentally superior.

It should be noted that the Encelia Drive Construction Access Alternative would result in trucks traveling on more narrow, residential streets, and the haul period being substantially extended. Although not altering the assessment of impacts relative to CEQA significance thresholds, this would result in substantial additional disruption to the community. Such community impacts may be considered by decision makers in the ultimate selection of the alternative to be implemented.

**Table S-1**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>LAND USE</b>		
<b>Land Use Standards:</b> <i>Would the Project result in an inconsistency/conflict with the environmental goals, objectives, or guidelines of the General/Community Plan in which it is located?</i>		
Extended construction hours necessary for continuous concrete pours (up to approximately 18 hours over a maximum of 20 days) would result in significant and unmitigable noise impacts. Therefore, impacts related to consistency with environmental goals and objectives contained in the General Plan Noise Element would be significant.	Due to the nature of the Project, no mitigation is available to reduce conflicts with the identified goals and policies.	Significant and unmitigable.
<b>NOISE</b>		
<b>Noise Standards:</b> <i>Would the Project result in the exposure of people to noise levels created by the Project which exceed the City's adopted noise ordinance and/or the City's Significance Determination Thresholds?</i>		
Construction noise during Phases 3, 6, 8, and 10 would be potentially significant.	<b>Mitigation Measure NOI-1: Noise Barrier for Construction Phase 3 - Demolition of Exchange Place Reservoir</b> Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and Mitigation Monitoring Coordinator (MMC) shall ensure the following notes are included on the project plans. For demolition of the existing Exchange Place Reservoir, if a breaker is used within 73 feet or if a concrete saw is used within 98 feet of a residence, a temporary 16 foot-high noise control barrier shall be erected between the breaker or concrete saw and the residence to reduce noise levels below the City Noise Ordinance construction threshold of 75 A-weighted decibels (dBA) average sound level (L <sub>EQ</sub> [12 hour]). The barrier shall be a minimum of 5 feet above the first floor foundation of the adjacent residential structure. If applicable, a construction safety barrier may be enhanced to act as a noise control barrier by meeting the specifications listed below.	Less than significant.

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>NOISE (cont.)</b>		
	<p>The temporary noise control barrier shall be tall enough to break the line of sight between the breaker and concrete saw and the sensitive receptor. The sound attenuation barrier must be solid. It can be constructed of wood, plywood, or flexible vinyl curtains that meet a rating of Sound Transmission Class (STC) 19, as long as there are no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked. If wood or plywood is used, it can be tongue and groove and must be at least 5/8-inch total thickness or have a density of at least 3.5 pounds per square foot.</p> <p>Alternative methods (including, but not limited to the use of alternative sound barriers, noise attenuation devices/modifications to construction equipment, limiting hours of operation, or a combination of these measures) may be employed to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA L<sub>EQ</sub> (12 hour); however, if alternate measures are employed, they shall be evaluated by a qualified acoustician prior to the initiation of construction activities to ensure that they will reduce noise levels to within City standards.</p>	
	<p><b>Mitigation Measure NOI-2: Noise Barrier for Construction Phase 6</b></p> <p>Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and MMC shall ensure the following notes are included on the project plans. For construction of the proposed reservoir, if concrete pouring occurs during evening and nighttime hours, a temporary 16-foot-high noise control barrier shall be erected and shall surround the construction site and operating equipment to reduce noise levels.</p> <p>The sound attenuation barrier must be solid. It can be constructed of wood, plywood, or flexible vinyl curtains that meet a rating of STC 19, as long as there are no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked. If wood or plywood is used, it can be tongue and groove and must be at least 5/8-inch total thickness or have a density of at least 3.5 pounds per square foot.</p>	Significant and unmitigable.

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>NOISE (cont.)</b>		
	<p><b>Mitigation Measure NOI-3: Noise Barrier for Construction Phase 8</b> Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and MMC shall ensure the following notes are included on the project plans. For trenching within the Encelia Drive access road, if a backhoe is used within 35 feet of a residence, a temporary 10-foot-high noise control barrier shall be erected between the backhoe and residence to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA <math>L_{EQ}</math> (12 hour).</p> <p>The temporary noise control barrier shall be tall enough to break the line of sight between the pieces of equipment and the residence. The sound barrier specifications and alternative compliance procedures shall be the same as those described in Mitigation Measure NOI-1.</p>	Less than significant.
	<p><b>Mitigation Measure NOI-4: Noise Barrier for Construction Phase 10</b> Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and MMC shall ensure the following notes are included on the project plans. For trenching within Country Club Drive, if a concrete saw is used within 25 feet of a residence, a temporary 6-foot-high noise control barrier shall be erected between the concrete saw and the residence to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA <math>L_{EQ}</math> (12 hour).</p> <p>The temporary noise control barrier shall be tall enough to break the line of sight between the pieces of equipment and the residence. The sound barrier specifications and alternative compliance procedures shall be the same as those described in Mitigation Measure NOI-1.</p>	Less than significant.

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES</b>		
<p><b>Biological Resources:</b></p> <p><i>Issue 1: Would implementation of the Project result in a reduction in the number of any unique, rare, endangered, sensitive, or fully protected species of plants or animals?</i></p> <p><i>Issue 2: Would the Project result in impacts to a sensitive habitat or sensitive natural community as identified in local, regional, state, or federal plans, policies, or regulations?</i></p> <p><i>Issue 3: Would the Project result in an impact on City, State, or Federally regulated wetlands through direct removal, filling, hydrological interruption, or other means?</i></p>		
<p>Construction would result in significant impacts to 5.53 acres of southern maritime chaparral and 0.14 acre of Diegan coastal sage scrub.</p>	<p><b>Mitigation Measure BIO-1:</b> The following measures shall be implemented.</p> <p>I. Prior to Construction</p> <p>A. Biologist Verification – The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.</p> <p>B. Preconstruction Meeting – The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.</p> <p>C. Biological Documents – The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), Environmentally Sensitive Lands Ordinance (ESL), project permit conditions; California Environmental Quality Act (CEQA); endangered species acts (ESAs); and/or other local, state or federal requirements.</p>	<p>Less than significant.</p>

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>D. BCME – The Qualified Biologist shall present a Biological Construction Mitigation/ Monitoring Exhibit (BCME) which includes the biological documents in C, above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coast barrel cactus), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.</p> <p>E. Avian Protection Requirements – To avoid any direct impacts to the coastal California gnatcatcher and avian species identified as a listed, candidate, sensitive, or special status species in the MSCP, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City Development Services Department (DSD) for review and approval prior to initiating any construction activities. If nesting coastal California gnatcatcher, sensitive, or MSCP-covered birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable state and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding</p>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Qualified Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.</p> <p>F. Resource Delineation – Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora &amp; fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.</p> <p>G. Education – Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).</p>	



**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>II. During Construction</p> <p>A. Monitoring – All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on “Exhibit A” and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR shall be e-mailed to MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.</p> <p>B. Subsequent Resource Identification – The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.</p> <p>III. Post Construction Measures</p> <p>A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.</p>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p><b>Vegetation Communities</b></p> <p>Under the City's Biology Guidelines, project impacts to Tiers I-III habitats must be mitigated. Project mitigation must occur at ratios outlined in Table 5.5-4 in Section 5.5.2.4 of this EIR, which also itemizes the impacts anticipated in each habitat type, and the resulting mitigation requirement. Mitigation will be achieved by conserving lands on and off site.</p> <p>With the exception of the reservoir facility, utility easement areas, and required brush management areas for adjacent homeowners, all project areas will be restored for mitigation purposes (refer to Preliminary Revegetation Plans in Appendix H to the Biological Technical Report). As native plant restoration areas (versus revegetation), these areas will require a five-year mitigation and monitoring program. It is anticipated that on-site restoration will achieve approximately 3.14 acres of mitigation, which is only a portion of the total mitigation needed for project impacts.</p> <p>With 4.57 acres of Tier I habitat land available for mitigation through on-site restoration, the balance of 6.50 acres of Tier I habitat and 0.14 acre of Tier II habitat will need to be mitigated off site. Mitigation for the remaining 6.64 acres for Project upland impacts will occur on City-owned lands in the Los Peñasquitos Canyon Preserve. At this site, 7.01 acres of combined Tier IIIB disturbed non-native grassland will be converted and Tier II disturbed Diegan coastal sage scrub will be enhanced to Tier I maritime succulent scrub. The proposed mitigation site is within the MHPA and adjacent to existing maritime succulent scrub habitat.</p> <p>To ensure long-term sustainability, the site will be maintained and monitored for five years, and remedial measures such as re-planting and invasives control will be implemented as the target species establish. The project applicant will be responsible for ensuring compliance with all revegetation and restoration performance standards as outlined in the project restoration plan. Pursuant to the Off-Site Tier I Maritime Succulent Scrub Restoration Plan for the La Jolla View Reservoir Replacement Project (HELIX 2019c), final approval of the mitigation effort will be provided by the City MMC when sustained success of the community is achieved. Please refer to Section 5.5.2.4 for additional details.</p>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p><b><i>Mitigation Measure BIO-2</i></b></p> <p>Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental Designee shall verify that the Project has ensured the restoration and preservation of upland habitats based on the ratios shown in Table 5.5-4 in Section 5.5.2.4 of this EIR. This shall be conducted in accordance with the Conceptual On-site Upland and Ephemeral Drainage Restoration and Revegetation Plan (HELIX 2019b) and Off-Site</p> <p>Tier I Maritime Succulent Scrub Restoration Plan (HELIX 2019c). Prior to the issuance of a Notice to Proceed (NTP) or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits the ADD environmental designee of the City's LDR Division shall incorporate the following mitigation measures into the project design and include them verbatim on all appropriate construction documents. Note that these requirements apply to both on-site and off-site restoration activities.</p> <p>Prior to Permit Issuance</p> <p>A. Land Development Review (LDR) Plan Check</p> <ol style="list-style-type: none"> <li>1. Prior to NTP or issuance for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, whichever is applicable, the ADD environmental designee shall verify that the requirements for the revegetation/restoration plans and specifications, including mitigation of direct impacts to southern maritime chaparral have been shown and noted on the appropriate landscape construction documents. The landscape construction documents and specifications must be found to be in conformance with the La Jolla View Reservoir Replacement Project Conceptual On-Site Upland and Ephemeral Drainage Restoration and Revegetation Plan prepared by HELIX Environmental Planning (2019b), the requirements of which are summarized below.</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>B. Revegetation/Restoration Plan(s) and Specifications</p> <ol style="list-style-type: none"> <li>1. Landscape Construction Documents (LCD) shall be prepared on D-sheets and submitted to the City of San Diego Development Services Department, Landscape Architecture Section (LAS) for review and approval. LAS shall consult with Mitigation Monitoring Coordination (MMC) and obtain concurrence prior to approval of LCD. The LCD shall consist of revegetation/restoration, planting, irrigation and erosion control plans; including all required graphics, notes, details, specifications, letters, and reports as outlined below.</li> <li>2. Landscape Revegetation/Restoration Planting and Irrigation Plans shall be prepared in accordance with the San Diego Land Development Code (LDC) Chapter 14, Article 2, Division 4, the LDC Landscape Standards submittal requirements, and Attachment "B" (General Outline for Revegetation/Restoration Plans) of the City of San Diego's LDC Biology Guidelines (July 2002). The Principal Qualified Biologist (PQB) shall identify and adequately document all pertinent information concerning the revegetation/restoration goals and requirements, such as but not limited to, plant/seed palettes, timing of installation, plant installation specifications, method of watering, protection of adjacent habitat, erosion and sediment control, performance/success criteria, inspection schedule by City staff, document submittals, reporting schedule, etc. The LCD shall also include comprehensive graphics and notes addressing the ongoing maintenance requirements (after final acceptance by the City).</li> <li>3. The Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Construction Manager (CM) and Grading Contractor (GC), where applicable shall be responsible to ensure that for all grading and contouring, clearing and grubbing, installation of plant materials, and any necessary maintenance activities or remedial actions required during</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>installation and the 120 day plant establishment period are done per approved LCD. The following procedures at a minimum, but not limited to, shall be performed:</p> <ul style="list-style-type: none"> <li>a. The RMC shall be responsible for the maintenance of the upland mitigation area for a minimum period of 120 days. Maintenance visits shall be conducted on a weekly basis throughout the plant establishment period.</li> <li>b. At the end of the 120-day period the PQB shall review the mitigation area to assess the completion of the short-term plant establishment period and submit a report for approval by MMC.</li> <li>c. MMC will provide approval in writing to begin the five-year long-term establishment/maintenance and monitoring program.</li> <li>d. Existing indigenous/native species shall not be pruned, thinned, or cleared in the revegetation/mitigation area.</li> <li>e. The revegetation site shall not be fertilized.</li> <li>f. The RIC is responsible for reseeding (if applicable) if weeds are not removed, within one week of written recommendation by the PQB.</li> <li>g. Weed control measures shall include the following: (1) hand removal, (2) cutting, with power equipment, and (3) chemical control. Hand removal of weeds is the most desirable method of control and will be used wherever possible.</li> <li>h. Damaged areas shall be repaired immediately by the RIC/RMC. Insect infestations, plant diseases, herbivory, and other pest problems will be closely monitored throughout the five-year maintenance period. Protective mechanisms such as metal wire netting shall be used as necessary. Diseased and infected plants shall be immediately disposed of</li> </ul>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>off-site in a legally acceptable manner at the discretion of the PQB or Qualified Biological Monitor (QBM) (City approved). Where possible, biological controls will be used instead of pesticides and herbicides.</p> <p>4. If a Brush Management Program is required the revegetation/restoration plan shall show the dimensions of each brush management zone and notes shall be provided describing the restrictions on planting and maintenance and identify that the area is impact neutral and shall not be used for habitat mitigation/credit purposes.</p> <p>C. Letters of Qualification Have Been Submitted to ADD</p> <p>1. The applicant shall submit, for approval, a letter verifying the qualifications of the biological professional to MMC. This letter shall identify the PQB, Principal Restoration Specialist (PRS), and QBM, where applicable, and the names of all other persons involved in the implementation of the revegetation/restoration plan and biological monitoring program, as they are defined in the City of San Diego Biological Review References. Resumes and the biology worksheet should be updated annually.</p> <p>2. MMC will provide a letter to the applicant confirming the qualifications of the PQB/PRS/QBM and all City Approved persons involved in the revegetation/restoration plan and biological monitoring of the project.</p> <p>3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the project.</p> <p>4. PBQ must also submit evidence to MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program (SWPPP) training.</p>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>Prior to Start of Construction</p> <p>A. PQB/PRS Shall Attend Preconstruction (Precon) Meetings</p> <p>1. Prior to beginning any work that requires monitoring:</p> <p>a. The owner/permittee or their authorized representative shall arrange and perform Precon Meeting that shall include the PQB or PRS, Construction Manager (CM) and/or Grading Contractor (GC), Landscape Architect (LA), Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC.</p> <p>b. The PQB shall also attend any other grading/excavation related Precon Meetings to make comments and/or suggestions concerning the revegetation/restoration plan(s) and specifications with the RIC, CM and/or GC.</p> <p>c. If the PQB is unable to attend the Precon Meeting, the owner shall schedule a focused Precon Meeting with MMC, PQB/PRS, CM, BI, LA, RIC, RMC, RE and/or BI, if appropriate, prior to the start of any work associated with the revegetation/restoration phase of the project, including site grading preparation.</p> <p>2. Where Revegetation/Restoration Work Will Occur</p> <p>a. Prior to the start of any work, the PQB/PRS shall also submit a revegetation/restoration monitoring exhibit (RRME) based on the appropriate reduced LCD (reduced to 11"x 17" format) to MMC, and the RE, identifying the areas to be revegetated/restored including the delineation of the limits of any disturbance/grading and any excavation.</p> <p>b. PQB shall coordinate with the construction superintendent to identify appropriate Best Management Practices (BMP's) on the RRME.</p>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>3. When Biological Monitoring Will Occur</p> <p>a. Prior to the start of any work, the PQB/PRS shall also submit a monitoring procedures schedule to MMC and the RE indicating when and where biological monitoring and related activities will occur.</p> <p>4. PQB Shall Contact MMC to Request Modification</p> <p>a. The PQB may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the revegetation/restoration plans and specifications. This request shall be based on relevant information (such as other sensitive species not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA) which may reduce or increase the potential for biological resources to be present.</p> <p>During Construction</p> <p>A. PQB or QBM Present During Construction/Grading/Planting</p> <p>1. The PQB or QBM shall be present full-time during construction activities including but not limited to, site preparation, cleaning, grading, excavation, landscape establishment in association with restoration or revegetation activities which could result in impacts to sensitive biological resources as identified in the LCD and on the RRME. The RIC and/or QBM are responsible for notifying the PQB/PRS of changes to any approved construction plans, procedures, and/or activities. The PQB/PRS is responsible to notify the CM, LA, RE, BI and MMC of the changes.</p> <p>2. The PQB or QBM shall document field activity via the Consultant Site Visit Record Forms (CSV). The CSVs shall be faxed by the CM the first day of monitoring, the last day of monitoring, monthly, and in the event that there is a deviation from conditions identified within the LCD and/or biological monitoring program. The RE shall forward copies to MMC.</p>	



**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<ol style="list-style-type: none"> <li>3. The PQB or QBM shall be responsible for maintaining and submitting the CSVr at the time that CM responsibilities end (i.e., upon the completion of construction activity other than that of associated with biology).</li> <li>4. All construction activities (including staging areas) shall be restricted to the development areas as shown on the LCD. The PQB/PRS or QBM staff shall monitor construction activities as needed, with MMC concurrence on method and schedule. This is to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved LCD.</li> <li>5. The PQB or QBM shall supervise the placement of orange construction fencing or City approved equivalent, along the limits of potential disturbance adjacent to (or at the edge of) all sensitive habitats, including southern maritime chaparral and Diegan coastal sage scrub, as shown on the approved LCD.</li> <li>6. The PBQ shall provide a letter to MMC that limits of potential disturbance has been surveyed, staked and that the construction fencing is installed properly.</li> <li>7. The PQB or QBM shall oversee implementation of BMP's, such as gravel bags, straw logs, silt fences or equivalent erosion control measures, as needed to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible to verify the removal of all temporary construction BMP's upon completion of construction activities. Removal of temporary construction BMP's shall be verified in writing on the final construction phase CSVr.</li> <li>8. PQB shall verify in writing on the CSVrs that no trash stockpiling or oil dumping, fueling of equipment, storage of hazardous wastes or construction equipment/material, parking or other construction related activities shall occur adjacent to sensitive habitat. These activities shall occur only within the designated staging area located outside the area defined as biological sensitive area.</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>9. The long-term establishment inspection and reporting schedule per LCD must all be approved by MMC prior to the issuance of the Notice of Completion (NOC) or any bond release.</p> <p>B. Disturbance/Discovery Notification Process</p> <p>1. If unauthorized disturbances occur or sensitive biological resources are discovered that were not previously identified on the LCD and/or RRME, the PQB or QBM shall direct the contractor to temporarily divert construction in the area of disturbance or discovery and immediately notify the RE or BI, as appropriate.</p> <p>2. The PQB shall also immediately notify MMC by telephone of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate Best Management Practices (BMPs). After obtaining concurrence with MMC and the RE, PQB and CM shall install the approved protection and agreement on BMPs.</p> <p>3. The PQB shall also submit written documentation of the disturbance to MMC within 24 hours by fax or email with photos of the resource in context (e.g., show adjacent vegetation).</p> <p>C. Determination of Significance</p> <p>1. The PQB shall evaluate the significance of disturbance and/or discovered biological resource and provide a detailed analysis and recommendation in a letter report with the appropriate photo documentation to MMC to obtain concurrence and formulate a plan of action which can include fines, fees, and supplemental mitigation costs.</p> <p>2. MMC shall review this letter report and provide the RE with MMC's recommendations and procedures.</p>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>Post Construction</p> <p>A. Mitigation, Monitoring and Reporting Period</p> <p>1. Five-Year Mitigation Establishment/Maintenance Period</p> <ul style="list-style-type: none"> <li>a. The RMC shall be retained to complete maintenance monitoring activities throughout the five-year mitigation monitoring period.</li> <li>b. Maintenance visits will be conducted twice per month for the first six months, once per month for the remainder of the first year, and quarterly thereafter.</li> <li>c. Maintenance activities will include all items described in the LCD.</li> <li>d. Plant replacement will be conducted as recommended by the PQB (note: plants shall be increased in container size relative to the time of initial installation or establishment or maintenance period may be extended to the satisfaction of MMC.</li> </ul> <p>2. Five-Year Biological Monitoring</p> <ul style="list-style-type: none"> <li>a. All biological monitoring and reporting shall be conducted by a PQB or QBM, as appropriate, consistent with the LCD.</li> <li>b. Monitoring shall involve both qualitative horticultural monitoring and quantitative monitoring (i.e., performance/success criteria). Horticultural monitoring shall focus on soil conditions (e.g., moisture and fertility), container plant health, seed germination rates, presence of native and non-native (e.g., invasive exotic) species, any significant disease or pest problems, irrigation repair and scheduling, trash removal, illegal trespass, and any erosion problems.</li> <li>c. After plant installation is complete, qualitative monitoring surveys will occur monthly during year one and quarterly during years 2 through 5.</li> </ul>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<ul style="list-style-type: none"> <li>d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 6, 12, 24, 36, 48 and 60 months by the PQB or QBM. The revegetation/restoration effort shall be quantitatively evaluated once per year (in spring) during years three through five, to determine compliance with the performance standards identified on the LCD. All plant material must have survived without supplemental irrigation for the last two years.</li> <li>e. Quantitative monitoring shall include the use of fixed transects and photo points to determine the vegetative cover within the revegetated habitat. Collection of fixed transect data within the revegetation/restoration site shall result in the calculation of percent cover for each plant species present, percent cover of target vegetation, tree height and diameter at breast height (if applicable) and percent cover of non-native/non-invasive vegetation. Container plants will also be counted to determine percent survivorship. The data will be used determine attainment of performance/success criteria identified within the LCD.</li> <li>f. Biological monitoring requirements may be reduced if, before the end of the fifth year, the revegetation meets the fifth year criteria and the irrigation has been terminated for a period of the last two years.</li> <li>g. The PQB or QBM shall oversee implementation of post-construction BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measure, as needed to ensure prevention of any significant sediment transport. In addition, the PBQ/QBM shall be responsible to verify the removal of all temporary post-construction BMPs upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSV.</li> </ul>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>B. Submittal of Draft Monitoring Report</p> <ol style="list-style-type: none"> <li>1. A draft monitoring letter report shall be prepared to document the completion of the 120-day plant establishment period. The report shall include discussion on weed control, horticultural treatments (pruning, mulching, and disease control), erosion control, trash/debris removal, replacement planting/reseeding, site protection/signage, pest management, vandalism, and irrigation maintenance. The revegetation/restoration effort shall be visually assessed at the end of 120-day period to determine mortality of individuals.</li> <li>2. The PQB shall submit two copies of the Draft Monitoring Report which describes the results, analysis, and conclusions of all phases of the Biological Monitoring and Reporting Program (with appropriate graphics) to MMC for review and approval within 30 days following the completion of monitoring. Monitoring reports shall be prepared on an annual basis for a period of five years. Site progress reports shall be prepared by the PQB following each site visit and provided to the owner, RMC and RIC. Site progress reports shall review maintenance activities, qualitative and quantitative (when appropriate) monitoring results including progress of the revegetation relative to the performance/success criteria, and the need for any remedial measures.</li> <li>3. Draft annual reports (three copies) summarizing the results of each progress report including quantitative monitoring results and photographs taken from permanent viewpoints shall be submitted to MMC for review and approval within 30 days following the completion of monitoring.</li> <li>4. MMC shall return the Draft Monitoring Report to the PQB for revision or, for preparation of each report.</li> <li>5. The PQB shall submit revised Monitoring Report to MMC (with a copy to RE) for approval within 30 days.</li> <li>6. MMC will provide written acceptance of the PQB and RE of the approved report.</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p>C. Final Monitoring Reports(s)</p> <ol style="list-style-type: none"> <li>1. PQB shall prepare a Final Monitoring upon achievement of the fifth year performance/success criteria and completion of the five year maintenance period.               <ol style="list-style-type: none"> <li>a. This report may occur before the end of the fifth year if the revegetation meets the fifth year performance /success criteria and the irrigation has been terminated for a period of the last two years.</li> <li>b. The Final Monitoring report shall be submitted to MMC for evaluation of the success of the mitigation effort and final acceptance. A request for a pre-final inspection shall be submitted at this time, MMC will schedule after review of report.</li> <li>c. If at the end of the five years any of the revegetated area fails to meet the project's final success standards, the applicant must consult with MMC. This consultation shall take place to determine whether the revegetation effort is acceptable. The applicant understands that failure of any significant portion of the revegetation/restoration area may result in a requirement to replace or renegotiate that portion of the site and/or extend the monitoring and establishment/maintenance period until all success standards are met.</li> </ol> </li> </ol>	
Impacts to 0.074 acre (854 linear feet) of potential jurisdictional areas are considered significant.	Impacts to federal and state potentially jurisdictional waters have not yet been permitted. If jurisdiction is confirmed, mitigation ratios will be determined during consultation with the U.S. Army Corps of Engineers (USACE) and will depend on mitigation type (creation, restoration, etc.), mitigation location, and quality of mitigation proposed. Accordingly, there is no mitigation table for potentially jurisdictional areas contained within this EIR; however, a 1:1 to 3:1 mitigation to impact ratio range is anticipated.	Less than significant.

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>BIOLOGICAL RESOURCES (cont.)</b>		
	<p><b><i>Mitigation Measure BIO-3</i></b> Applicable 404 permits and/or clearances shall be obtained prior to any disturbance of the jurisdictional features on site. All mitigation measures and conditions required per such permits shall be implemented. As a minimum, the following shall be completed for mitigation for impacts to Waters of the U.S. and jurisdictional streambeds. Mitigation options include on site, offsite, in lieu fee mitigation, or a combination, to replace on-site jurisdictional features. Avoided jurisdictional waters shall be fenced or flagged for avoidance. BMPs shall be implemented to avoid indirect impacts to jurisdictional waters, including the following:</p> <ol style="list-style-type: none"> <li>1. Vehicles and equipment will not be operated in ponded or flowing water except as described in the permits.</li> <li>2. Water containing mud, silt, or other pollutants from grading or other activities will not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.</li> <li>3. Spoil sites will not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages.</li> <li>4. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil, or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, will be prevented from contaminating the soil and/or entering avoided jurisdictional waters.</li> <li>5. No equipment maintenance will occur within 100 feet of jurisdictional waters and no petroleum products or other pollutants from the equipment will be allowed to enter these areas or enter any off-site state-jurisdictional waters under any flow.</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES</b>		
<p><b>Cultural Resources:</b></p> <p><i>Issue 1: Would the Project result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of a prehistoric or historic building (including an architecturally significant building), structure, or object or site?</i></p> <p><i>Issue 2: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074?</i></p> <p><i>Issue 3: Would the Project result in the disturbance of any human remains, including those interred outside of formal cemeteries?</i></p>		
<p>No historically designated properties nor identified significant cultural resources would be affected by the Project.</p> <p>However, the potential exists for additional, unidentified subsurface deposits (such as archaeological resources and/or TCRs, and human remains) to be encountered during construction activities. Their disturbance would be considered a potentially significant impact requiring mitigation.</p>	<p><b>Mitigation Measure HIS-1:</b> The following measures shall be implemented.</p> <ul style="list-style-type: none"> <li>I. Prior to Permit Issuance or Bid Opening/Bid Award               <ul style="list-style-type: none"> <li>A. Entitlements Plan Check                   <ul style="list-style-type: none"> <li>1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.</li> </ul> </li> <li>B. Letters of Qualification have been submitted to ADD                   <ul style="list-style-type: none"> <li>1. Prior to Bid Award, the applicant shall submit a letter of verification to MMC identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.</li> <li>2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.</li> <li>3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.</li> </ul> </li> </ul> </li> </ul>	<p>Less than significant.</p>



**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>II. Prior to Start of Construction</p> <p>A. Verification of Records Search</p> <ol style="list-style-type: none"> <li>1. The PI shall provide verification to MMC that a site-specific records search (1/4-mile radius) has been completed. Verification includes but is not limited to a copy of a confirmation letter from South Coastal Information Center (SCIC), or, if the search was in-house, a letter of verification from the PI stating that the search was completed.</li> <li>2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.</li> <li>3. The PI may submit a detailed letter to MMC requesting a reduction to the 1/4-mile radius.</li> </ol> <p>B. PI Shall Attend Precon Meetings</p> <ol style="list-style-type: none"> <li>1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), CM and/or Grading Contractor, RE, Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the CM and/or Grading Contractor. <ol style="list-style-type: none"> <li>a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.</li> </ol> </li> <li>2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects) <ol style="list-style-type: none"> <li>a. The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program.</li> </ol> </li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<ol style="list-style-type: none"> <li>3. Identify Areas to be Monitored               <ol style="list-style-type: none"> <li>a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11"x17") to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.</li> <li>b. The AME shall be based on the results of a site-specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation).</li> <li>c. MMC shall notify the PI that the AME has been approved.</li> </ol> </li> <li>4. When Monitoring Will Occur               <ol style="list-style-type: none"> <li>a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.</li> <li>b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as age of existing pipe to be replaced, depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.</li> </ol> </li> <li>5. Approval of AME and Construction Schedule               <ol style="list-style-type: none"> <li>a. After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Construction Schedule from the CM.</li> </ol> </li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>III. During Construction</p> <p>A. Monitor Shall be Present During Grading/Excavation/Trenching</p> <ol style="list-style-type: none"> <li>1. The Archaeological Monitor shall be present full time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. The CM is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.</li> <li>2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.</li> <li>3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.</li> <li>4. The archaeological and Native American consultant/monitor shall document field activity via the CSV. The CSVs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>B. Discovery Notification Process</p> <ol style="list-style-type: none"> <li>1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.</li> <li>2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.</li> <li>3. The PI shall immediately notify MMC by phone of the discovery and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.</li> <li>4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.</li> </ol> <p>C. Determination of Significance</p> <ol style="list-style-type: none"> <li>1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.               <ol style="list-style-type: none"> <li>a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.</li> <li>b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the program from MMC, CM and RE. ADRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume. Note: If a unique archaeological site</li> </ol> </li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>is also an historical resource as defined in CEQA Section 15064.5, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.</p> <p>Note: For pipeline trenching and other linear projects in the public right-of-way, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."</p> <p>c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.</p> <p>Note: For pipeline trenching and other linear projects in the public right-of-way, if the deposit is limited in size, both in length and depth; the information value is limited and is not associated with any other resource; and there are no unique features/artifacts associated with the deposit, the discovery should be considered not significant.</p> <p>Note: For pipeline trenching and other linear projects in the public right-of-way, if significance cannot be determined, the Final Monitoring Report and Site Record (DPR Form 523A/B) shall identify the discovery as Potentially Significant.</p> <p>D. Discovery Process for Significant Resources - Pipeline Trenching and other Linear Projects in the Public Right-of-Way</p> <p>The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities or for other linear project types within the Public Right-of-Way including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance:</p>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<ol style="list-style-type: none"> <li>1. Procedures for documentation, curation, and reporting               <ol style="list-style-type: none"> <li>a. One hundred percent of the artifacts within the trench alignment and width shall be documented in-situ, to include photographic records, plan view of the trench and profiles of side walls, recovered, photographed after cleaning, analyzed, and curated. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact.</li> <li>b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section VI-A.</li> <li>c. The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) the resource(s) encountered during the Archaeological Monitoring Program in accordance with the City's HRG. The DPR forms shall be submitted to the SCIC for either a Primary Record or SDI Number and included in the Final Monitoring Report.</li> <li>d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.</li> </ol> </li> <li>IV. Discovery of Human Remains               <p>If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (PRC; Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:</p> <ol style="list-style-type: none"> <li>A. Notification                   <ol style="list-style-type: none"> <li>1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the DSD to assist with the discovery notification process.</li> </ol> </li> </ol> </li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<ol style="list-style-type: none"> <li>2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.</li> </ol> <p>B. Isolate discovery site</p> <ol style="list-style-type: none"> <li>1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.</li> <li>2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.</li> <li>3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.</li> </ol> <p>C. If Human Remains are determined to be Native American</p> <ol style="list-style-type: none"> <li>1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, only the Medical Examiner can make this call.</li> <li>2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.</li> <li>3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health &amp; Safety Codes.</li> <li>4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:</p> <ul style="list-style-type: none"> <li>a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being granted access to the site, OR;</li> <li>b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, the landowner shall reinter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance, THEN</li> <li>c. To protect these sites, the landowner shall do one or more of the following: <ul style="list-style-type: none"> <li>(1) Record the site with the NAHC;</li> <li>(2) Record an open space or conservation easement; or</li> <li>(3) Record a document with the County. The document shall be titled "Notice of Reinterment of Native American Remains" and shall include a legal description of the property, the name of the property owner, and the owner's acknowledged signature, in addition to any other information required by PRC 5097.98. The document shall be indexed as a notice under the name of the owner.</li> </ul> </li> </ul>	



**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and items associated and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.</p> <p>D. If Human Remains are not Native American</p> <ol style="list-style-type: none"> <li>1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.</li> <li>2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).</li> <li>3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>I. Night and/or Weekend Work</p> <p>A. If night and/or weekend work is included in the contract</p> <ol style="list-style-type: none"> <li>1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting.</li> <li>2. The following procedures shall be followed. <ol style="list-style-type: none"> <li>a. No Discoveries: In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVr and submit to MMC via fax by 8:00 a.m. of the next business day.</li> <li>b. Discoveries: All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV - Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.</li> <li>c. Potentially Significant Discoveries: If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV-Discovery of Human Remains shall be followed.</li> <li>d. Potentially Significant Discoveries: If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV-Discovery of Human Remains shall be followed.</li> <li>e. The PI shall immediately contact the RE and MMC, or by 8:00 a.m. of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.</li> </ol> </li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>B. If night and/or weekend work becomes necessary during the course of construction</p> <ol style="list-style-type: none"> <li>1. The CM shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.</li> <li>2. The RE, or BI, as appropriate, shall notify MMC immediately.</li> </ol> <p>C. All other procedures described above shall apply, as appropriate.</p> <p>II. Post Construction</p> <p>A. Submittal of Draft Monitoring Report</p> <ol style="list-style-type: none"> <li>1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the HRG (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring. It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe as a result of delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met. <ol style="list-style-type: none"> <li>a. For significant archaeological resources encountered during monitoring, the ADRP or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.</li> <li>b. Recording Sites with State of California Department of Parks and Recreation</li> <li>c. The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any</li> </ol> </li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's HRG, and submittal of such forms to the SCIC with the Final Monitoring Report.</p> <ol style="list-style-type: none"> <li>2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.</li> <li>3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.</li> <li>4. MMC shall provide written verification to the PI of the approved report.</li> <li>5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.</li> </ol> <p>B. Handling of Artifacts</p> <ol style="list-style-type: none"> <li>1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued</li> <li>2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.</li> </ol> <p>C. Curation of Artifacts: Accession Agreement and Acceptance Verification</p> <ol style="list-style-type: none"> <li>1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.</li> <li>2. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>CULTURAL RESOURCES (cont.)</b>		
	<p>show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection C.</p> <ol style="list-style-type: none"> <li>3. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.</li> <li>4. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC.</li> <li>5. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.</li> </ol> <p>D. Final Monitoring Report(s)</p> <ol style="list-style-type: none"> <li>1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report.</li> <li>2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>PALEONTOLOGICAL RESOURCES</b>		
<b>Paleontological Resources:</b> <i>Issue 1: Would the Project require over 1,000 cy of excavation in a high resource potential geologic deposit/formation/rock unit, or over 2,000 cy of excavation in a moderate resource potential geologic deposit/formation/rock unit?</i>		
<p>Based on the nature of proposed construction activities and the presence of formational units exhibiting high and moderate potential for the occurrence of sensitive paleontological resources within the project site, associated potential impacts from proposed development would be significant.</p>	<p><b>Mitigation Measure PAL-1:</b> The following measures shall be implemented.</p> <ul style="list-style-type: none"> <li>I. Prior to Permit Issuance of Bid Opening/Bid Award <ul style="list-style-type: none"> <li>A. Entitlements Plan Check <ul style="list-style-type: none"> <li>1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, Environmental Designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.</li> </ul> </li> <li>B. Letters of Qualification have been submitted to ADD <ul style="list-style-type: none"> <li>1. Prior to Bid Award, the applicant shall submit a letter of verification to MMC identifying the PI for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.</li> <li>2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.</li> <li>3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.</li> </ul> </li> </ul> </li> <li>II. Prior to Start of Construction <ul style="list-style-type: none"> <li>A. Verification of Records Search <ul style="list-style-type: none"> <li>1. The PI shall provide verification to MMC that a site-specific records search has been completed. Verification includes, but is not limited to, a copy of a confirmation letter from San Diego Natural History Museum, other institution, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.</li> </ul> </li> </ul> </li> </ul>	<p>Less than significant.</p>

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>PALEONTOLOGICAL RESOURCES (cont.)</b>		
	<ol style="list-style-type: none"> <li>2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.</li> <li>B. PI Shall Attend Precon Meetings               <ol style="list-style-type: none"> <li>1. Meeting that shall include the PI, CM and/or Grading Contractor, RE, BI, if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the CM and/or Grading Contractor.                   <ol style="list-style-type: none"> <li>a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.</li> </ol> </li> <li>2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)                   <ol style="list-style-type: none"> <li>a. The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the paleontological monitoring program.</li> </ol> </li> <li>3. Identify Areas to be Monitored                   <ol style="list-style-type: none"> <li>a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11"x17") to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or as determined by the PI in consultation with the MMC. The determination shall be based on site-specific records search data which supports monitoring at depths less than 10 feet.</li> </ol> </li> </ol> </li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>PALEONTOLOGICAL RESOURCES (cont.)</b>		
	<ul style="list-style-type: none"> <li>b. The PME shall be based on the results of a site-specific records search as well as information regarding existing known soil conditions (native or formation).</li> <li>c. MMC shall notify PI that the PME has been approved.</li> <li>4. When Monitoring Will Occur               <ul style="list-style-type: none"> <li>a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.</li> <li>b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.</li> </ul> </li> <li>5. Approval of PME and Construction Schedule               <ul style="list-style-type: none"> <li>a. After approval of the PME by MMC, the PI shall submit MMC written authorization of the PME and Construction Schedule from the CM.</li> </ul> </li> <li>III. During Construction               <ul style="list-style-type: none"> <li>A. Monitor Shall be Present During Grading/Excavation/Trenching                   <ul style="list-style-type: none"> <li>1. The monitor shall be present full-time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. The CM is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored.</li> </ul> </li> </ul> </li> </ul>	



**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>PALEONTOLOGICAL RESOURCES (cont.)</b>		
	<p>In certain circumstances, OSHA safety requirements may necessitate modification of the PME.</p> <ol style="list-style-type: none"> <li>2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.</li> <li>3. The monitor shall document field activity via the CSV. The CSVs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.</li> </ol> <p>A. Discovery Notification Process</p> <ol style="list-style-type: none"> <li>1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.</li> <li>2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.</li> <li>3. The PI shall immediately notify MMC by phone of the discovery and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.</li> </ol> <p>B. Determination of Significance</p> <ol style="list-style-type: none"> <li>1. The PI shall evaluate the significance of the resource. <ol style="list-style-type: none"> <li>a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.</li> </ol> </li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>PALEONTOLOGICAL RESOURCES (cont.)</b>		
	<ul style="list-style-type: none"> <li>b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC, MC, and/or RE. PRP and any mitigation must be approved by MMC, RE, and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.</li> <li>(1) Note: For pipeline trenching projects only, the PI shall implement the Discovery Process for Pipeline Trenching Projects identified below under "D."</li> <li>c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.</li> <li>d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.</li> <li>(1) Note: For Pipeline Trenching Projects Only. If the fossil discovery is limited in size, both in length and depth, the information value is limited and there are no unique fossil features associated with the discovery area, then the discovery should be considered not significant.</li> <li>(2) Note: For Pipeline Trenching Projects Only. If significance cannot be determined, the Final Monitoring Report and the Site Record shall identify the discovery as Potentially significant.</li> </ul>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>PALEONTOLOGICAL RESOURCES (cont.)</b>		
	<p>C. Discovery Process for Significant Resources – Pipeline Trenching Projects</p> <p>The following procedures constitute adequate mitigation of a significant discovery encountered during pipeline trenching activities including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance.</p> <ol style="list-style-type: none"> <li>1. Procedures for documentation, curation, and reporting <ol style="list-style-type: none"> <li>a. One hundred percent of the fossil resources within the trench alignment and width shall be documented in-situ, photographically drawn in plan view (trench and profiles of side walls), recovered from the trench and photographed after  cleaning, then analyzed and curated consistent with the Society of Invertebrate Paleontology Standards. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact and so documented.</li> <li>b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE and indicated in Section VI-A.</li> <li>c. The PI shall be responsible for recording (on the appropriate forms for the San Diego Natural History Museum) the resource(s) encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines. The forms shall be submitted to the San Diego Natural History Museum and included in the Final Monitoring Report.</li> <li>d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.</li> </ol> </li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>PALEONTOLOGICAL RESOURCES (cont.)</b>		
	<p>II. Night and/or Weekend Work</p> <p>A. If night and/or weekend work is included in the contract</p> <ol style="list-style-type: none"> <li>1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting.</li> <li>2. The following procedures shall be followed. <ol style="list-style-type: none"> <li>a. No Discoveries: In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSV and submit to MMC via fax by 8:00 a.m. on the next business day.</li> <li>b. Discoveries: All discoveries shall be processed and documented using the existing procedures detailed in Section III - During Construction.</li> <li>c. Potentially Significant Discoveries. If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.</li> <li>d. The PI shall immediately contact MMC, or by 8:00 a.m. on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.</li> </ol> </li> </ol> <p>B. If night and/or weekend work becomes necessary during the course of construction</p> <ol style="list-style-type: none"> <li>1. The CM shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.</li> <li>2. The RE, or BI, as appropriate, shall notify MMC immediately.</li> </ol> <p>C. All other procedures described above shall apply, as appropriate.</p>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>PALEONTOLOGICAL RESOURCES (cont.)</b>		
	<p>III. Post Construction</p> <p>A. Preparation and Submittal of Draft Monitoring Report</p> <ol style="list-style-type: none"> <li>1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring,               <ol style="list-style-type: none"> <li>a. For significant paleontological resources encountered during monitoring, the PRP shall be included in the Draft Monitoring Report.</li> <li>b. Recording Sites with the San Diego Natural History Museum: The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.</li> </ol> </li> <li>2. MMC shall return the Draft Monitoring Report to the PI for revision or for preparation of the Final Report.</li> <li>3. The PI shall submit revised Draft Monitoring Report to MMC for approval.</li> <li>4. MMC shall provide written verification to the PI of the approved report.</li> <li>5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.</li> </ol>	

**Table S-1 (cont.)**  
**SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION**

Impact	Mitigation	Significance After Mitigation
<b>PALEONTOLOGICAL RESOURCES (cont.)</b>		
	<p>B. Handling of Fossil Remains</p> <ol style="list-style-type: none"> <li>1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.</li> <li>2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.</li> </ol> <p>C. Curation of fossil remains: Deed of Gift and Acceptance Verification</p> <ol style="list-style-type: none"> <li>1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.</li> <li>2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.</li> <li>3. The RE or BI, as appropriate, shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.</li> <li>4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.</li> </ol> <p>D. Final Monitoring Report(s)</p> <ol style="list-style-type: none"> <li>1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.</li> <li>2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.</li> </ol>	

**Table S-2  
 COMPARISON OF PROJECT AND ALTERNATIVE IMPACTS**

<b>Environmental Topic</b>	<b>Proposed Project</b>	<b>No Project Alternative</b>	<b>Encelia Drive Construction Access Alternative</b>
Land Use	SU	N	SU-
Visual Quality/Neighborhood Character	N	N-	N-
Noise	SU	N	SU
Transportation/Circulation	N	N-	N
Biological Resources	SM	N	SM-
Cultural Resources	SM	N	SM-
Paleontological Resources	SM	N	SM+
Air Quality	N	N-	N+
Greenhouse Gas Emissions	N	N-	N+
Energy	N	N-	N+
Hydrology/Water Quality	N	N-	N-
Geology and Soils	N	N-	N
Health and Safety	N	N-	N
Utilities and Service Systems	N	N-	N

SM = significant but mitigable impacts; SU = significant and unmitigated impacts; N = no significant impacts  
 - = reduced impact level(s) relative to the Project; + = increased impact level(s) relative to Project

# **1.0 INTRODUCTION**

This chapter provides a brief description of the La Jolla View Reservoir Project (Project) background and scope, the purpose and legal authority for the Environmental Impact Report (EIR), the EIR scope and process, and an explanation of how the EIR is organized.

## **1.1 Project Background**

The City of San Diego (City) currently has two reservoirs in the La Jolla community that are at the end of their lifecycles and in need of replacement. The existing 0.99-million gallon (MG) Exchange Place Reservoir was originally constructed in 1909 and was decommissioned in 2002. The existing La Jolla View Reservoir is a 0.72-MG potable water storage facility that was constructed in 1949. Use of the existing La Jolla View Reservoir is very limited due to water system changes. Water quality in the reservoir is also poor and requires supplemental chlorine treatment when in operation. In addition, the existing 16-inch diameter cast iron Muirlands Pipeline that supplies water to the existing La Jolla View Reservoir is beyond its useful life, and is undersized for current water conveyance requirements.

## **1.2 Project Scope**

The Project would replace the existing Exchange Place Reservoir and La Jolla View Reservoir with a new 3.1-MG reservoir within the La Jolla Heights Natural Park. The existing reservoirs and the Exchange Place Pump Station would be demolished. The proposed new reservoir would be almost entirely buried, except for reservoir access hatches and supervisory control and data acquisition (SCADA) equipment. The Project also includes construction of approximately 2,790 feet of 30-inch pipeline (of which approximately 1,050 feet would replace existing 16-inch pipeline), 160 feet of 18-inch overflow pipe, 480 feet of 8-inch utility water connection, 1,780 feet of 8-inch distribution main, and appurtenant improvements.

Discretionary actions that would be undertaken by the City include a Site Development Permit (SDP) and Coastal Development Permit (CDP). The Project also would require a Clean Water Act Section 404 Nationwide Permit from the U.S. Army Corps of Engineers (USACE), as well as confirmation of National Pollutant Discharge Elimination System (NPDES) compliance from the State Water Resources Control Board (SWRCB).

## **1.3 Purpose and Legal Authority**

The purposes of an EIR are to provide government agencies and the public with detailed information about the effect a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project. The City is the Lead Agency, as defined by Section 15051(a) of the California Environmental Quality Act (CEQA) Guidelines, for the Project evaluated in this EIR. Under CEQA, the public agency with the greatest responsibility for supervising or approving a project or the first public agency to take discretionary action to proceed with a proposed project should ordinarily act as the “Lead Agency.” This EIR is an informational document for use by the City, decision makers and members of



the general public to evaluate the environmental effects of the Project. This document complies with all criteria, standards, and procedures of CEQA (California Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations [CCR] Title 14 Section 15000 et seq.); the City's EIR Guidelines (December 2005); and the City's CEQA Significance Determination Thresholds (2016a). This document has been prepared as a Project EIR pursuant to Section 15161 of the State CEQA Guidelines, and it represents the independent judgment of the City as Lead Agency (State CEQA Guidelines Section 15050).

## 1.4 Environmental Impact Report Scope

This EIR contains analysis of the Project, as described in Chapter 3.0, *Project Description*. A Project EIR should "focus primarily on the changes in the environment that would result from the development project." According to Section 15161 of the State CEQA Guidelines, the Project EIR should "examine all phases of the project including planning, construction and operation."

### 1.4.1 Notice of Preparation/Scoping Meeting

In reviewing the application for the Project, the City concluded that the Project could result in potentially significant environmental impacts. As Lead Agency, the City prepared a Scoping Letter, which was distributed with the Notice of Preparation (NOP) on April 5, 2018 to all responsible and trustee agencies, as well as various governmental agencies, including the Office of Planning and Research's State Clearinghouse (SCH), and interested individuals. The City also conducted a public scoping meeting, in accordance with Section 21083.9 of CEQA, on April 19, 2018. The EIR addresses in detail potentially significant environmental impacts associated with the following issues:

- Land Use
- Visual Effects/Neighborhood Character
- Noise
- Transportation/Circulation
- Biological Resources
- Cultural Resources
- Paleontological Resources
- Air Quality
- Greenhouse Gas (GHG) Emissions
- Energy
- Hydrology and Water Quality
- Geology and Soils
- Health and Safety
- Utilities and Service Systems

The Project would not result in potentially significant impacts with respect to Agriculture and Forestry Resources, Mineral Resources, Population and Housing, Public Services, Recreation, and Utilities (other than landfill services), as described in Section 7.1, *Effects Found Not To be Significant*, of this EIR.

A copy of the NOP, scoping letter, scoping meeting notices and flier, scoping meeting sign-in sheet, scoping meeting handouts, and comments received from the public during the scoping period are contained in Appendix A. Comments received during the scoping process have been taken into consideration during the preparation of this EIR. An outline of the issues noted during the scoping process is contained in the *Areas of Controversy/Issues to be Resolved* discussion in the Executive Summary chapter. The environmental conditions evaluated as the baseline in this EIR are those that existed at the time the NOP was circulated as described in Chapter 2.0, *Environmental Setting*.

## 1.5 Public Review Process

This EIR and the technical analyses it relies on are available for review by the public and agencies for 45 days to provide comments “on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the Project might be avoided or mitigated” (State CEQA Guidelines Section 15204). The public review period will be from December 31, 2020 to February 15, 2021. The EIR and all supporting technical studies and documents are available for review at the City of San Diego, Development Services Department (DSD), 1222 First Avenue, Fifth Floor, San Diego, 92101-4153, as well as at the La Jolla Branch Library and Downtown San Diego Library. An electronic copy of the EIR and the technical analyses is posted on the City website at <https://www.sandiego.gov/ceqa/draft>.

The City, as Lead Agency, will consider the written comments received on the Draft EIR in making its decision whether to certify the EIR as complete and in compliance with CEQA, and whether to approve or deny the Project, or take action on a project alternative. In the final review of the Project, environmental considerations, as well as economic and social factors, will be weighed to determine the most appropriate course of action. Subsequent to certification of the EIR, agencies with permitting authority over all or portions of the Project may use the EIR to evaluate environmental effects of the Project, as they pertain to the approval or denial of applicable permits.

## 1.6 Content and Organization of the EIR

As stated above, the content and format of this EIR are in accordance with the most recent guidelines and amendments to CEQA and the State CEQA Guidelines. Technical studies have been summarized within individual environmental issue sections, and the full technical studies have been included in the appendices.

This EIR has been organized in the following manner:

- Executive Summary provides a summary of the EIR analysis, discussing the project description, the alternatives that would reduce or avoid significant impacts, and the conclusions of the environmental analysis. The conclusions focus on those impacts that have been determined to be potentially significant. Impacts and mitigation measures are provided in tabular format. In addition, the Executive Summary includes a discussion of areas of controversy known to the City, including those issues identified by other agencies and the public.
- Chapter 1.0, Introduction, provides a brief description of the Project, the purpose of the EIR, and of the document format.
- Chapter 2.0, Environmental Setting, provides an overview of the regional and local setting, as well as the physical characteristics of the project site. The setting discussion also addresses the relevant planning documents and existing land use designations.
- Chapter 3.0, Project Description, provides a detailed description of the Project, including the purpose and main objectives of the Project, infrastructure improvements, access, landscape plan, and project grading and construction. In addition, the intended and required uses of

the EIR, and a discussion of discretionary actions required for Project implementation are included in this chapter.

- Chapter 4.0, History of Project Changes, chronicles the physical changes made to the Project in response to environmental concerns raised during the City's review of the Project.
- Chapter 5.0, Environmental Analysis, constitutes the main body of the EIR and includes the detailed impact analyses for each environmental issue identified in the NOP as potentially resulting in significant environmental impacts. The topics analyzed in this chapter include: land use, visual effects/neighborhood character, noise, transportation/circulation, biological resources, cultural resources, paleontological resources, air quality, GHG emissions, energy, hydrology and water quality, geology and soils, health and safety, and utilities and service systems. Under each topic, Chapter 5.0 includes a discussion of existing conditions, the thresholds identified for the determination of significant impact, and an evaluation of the impacts associated with implementation of the Project. Where the impact analysis demonstrates the potential for the Project to have a significant adverse impact on the environment, mitigation measures are provided that would minimize the significant impact. The EIR indicates whether the proposed mitigation measures would reduce impacts to below a level of significance.
- Chapter 6.0, Cumulative Impacts, addresses the cumulative impacts due to implementation of the proposed Project in combination with other projects in the area.
- Chapter 7.0, Other CEQA Sections, includes a discussion of growth inducement, significant irreversible effects, and the effects found not to be significant.
- Chapter 8.0, Project Alternatives, provides a description and evaluation of alternatives to the proposed Project. This chapter addresses the mandatory "no project" alternative, as well as development alternatives that would potentially reduce or avoid the proposed Project's significant impacts.

The Mitigation, Monitoring and Reporting Program (MMRP), References, and Individuals Consulted/Preparers are provided in Chapters 9.0, 10.0, and 11.0, respectively.

## 2.0 ENVIRONMENTAL SETTING

### 2.1 Project Location

The majority of the project site is in the 42-acre La Jolla Heights Natural Park (a part of City Parks and Recreation Open Space), which is generally bounded by Country Club Drive to the west; residences off Remley Place, Brodiaea Way, and Encelia Drive to the south; additional open space to the east; and residences off Valdes Drive, Mecca Drive, and Al Bahr Drive to the north (Figure 2-1, *Regional Location*, and Figure 2-2, *Aerial Vicinity*). The existing La Jolla View Reservoir is located in the La Jolla Heights Natural Park, approximately 500 feet east of Country Club Drive and 150 feet north of the Remley Place residences. The Exchange Place Reservoir is located east of the intersection of Country Club Drive and Pepita Way, outside of the park limits. Improvements also would occur along Country Club Drive between Soledad Avenue and Romero Drive.

### 2.2 Existing Site Conditions

The project site generally slopes downward to the northwest from Brodiaea Way, overlooking the community of La Jolla. Elevations range from approximately 650 feet above mean sea level (AMSL) in the southeastern portion of the site to approximately 220 feet AMSL in its northwestern portion, adjacent the Exchange Place Reservoir (Figure 2-3, *Topographic Map*). The southeastern portion of the site includes steep slopes and narrow canyons, while the northwestern area consists of more gently sloping terrain. Drainages within the site include a large east-northwest trending drainage in the western portion of the park, and an east-west trending drainage that flows into the primary drainage west of the site boundary. A ravine also occurs to the east of the site.

As noted above, the sites of the existing and proposed La Jolla View Reservoirs are within La Jolla Heights Natural Park. The majority of the park is undeveloped and supports native vegetation, primarily consisting of southern maritime chaparral, along with some areas of Diegan coastal sage scrub. The existing La Jolla View Reservoir is an above-ground, cylindrical steel reservoir 70 feet in diameter with a total height of 25 feet and a capacity of 0.72 MG. An approximately 30-foot high cut slope is located at the east side of the existing tank and eucalyptus trees have been planted around the reservoir. Asphalt-paved Encelia Drive extends from Brodiaea Way to provide access to the reservoir and an overhead powerline crosses through the southwestern portion of the park. Although the park is not formally open to public access, there is evidence of dispersed recreation.

The existing Exchange Place Reservoir is located outside the Park in a residential area between Country Club Drive and Al Bahr Drive, south of Soledad Avenue. The site includes only reservoir development and associated ornamental landscaping. The reservoir is below grade and concrete-lined with a capacity of 0.99 MG. It is rectangular with dimensions of 120 feet by 118 feet and a depth of 14.2 feet, and has a wood and metal roof. Slopes and retaining walls up to 25 feet in height are located to the north, east, and west sides of the reservoir.

Geologic units at the site consist of fill and topsoil/colluvium, Very Old Paralic Deposits (formerly designated the Linda Vista Formation), the Mount Soledad Formation, Ardath Shale, and the Cabrillo Formation. Two potentially active faults, the Country Club Fault and a shorter, unnamed fault, traverse portions of the site. The nearest known active fault is the Rose Canyon Fault, located

approximately 0.4 mile northeast of the site. Numerous landslides have been mapped in the vicinity. Olivenhain cobbly loam, 30 to 50 percent slopes, is the primary soil type in the project site, with other mapped soil types including Altamont clay, 30 to 50 percent slopes; Huerhuero loam, 15 to 30 percent slopes, eroded; and Huerhuero loam, 2 to 9 percent slopes.

The primary roadway in the project site is Country Club Drive, which is a two-lane undivided roadway. The majority of other roads in the vicinity, including Exchange Place, Brodiaea Way, and Romero Drive, also are two-lane undivided roadways. Larger roadways that provide access to the vicinity include four-lane La Jolla Parkway and Torrey Pines Road. The Interstate (I-) 5/State Route (SR) 52 interchange is approximately 1.4 miles to the southeast.

The conditions described above constitute the baseline environmental setting used for addressing changes in the environment resulting from the Project. More detailed discussion of the Project's environmental setting is provided in Chapter 5.0, *Environmental Analysis*, and Chapter 7.0, *Other CEQA Sections*.

## **2.3 Surrounding Land Uses**

Surrounding land uses are primarily single-family residences, which are located along Country Club Drive, Remley Place, Romero Drive, Brodiaea Way, Encelia Drive, Al Bahr Drive, Mecca Drive, Valdes Drive, Soledad Avenue, Mar Avenue, and Pepita Way, as well as other surrounding roadways to the north, south, and west. The La Jolla Country Club golf facility is located southwest of Country Club Drive. Undeveloped open space in La Jolla Heights Natural Park also occurs to the north, east, and south (see Figure 2-2). Downtown La Jolla is located approximately one-half mile to the northeast, and the Pacific Ocean is located approximately one-third mile to the north. Review of approved and pending projects in the vicinity indicates that they consist primarily of single-family home remodel and replacement projects. Therefore, conditions surrounding the project site are anticipated to remain similar to their current state.

## **2.4 Planning Context**

The following documents contain policies, goals, and objectives that are applicable to the proposed Project. A detailed discussion of the applicable planning documents is provided in Section 5.1, *Land Use*.

### **2.4.1 La Jolla View Reservoir Memorandum of Understanding**

A Memorandum of Understanding (MOU) was executed between the City's Park and Recreation Department and its Water Department, dated November 22, 2002. An amendment to the MOU was executed between the Park and Recreation Department and the Public Utilities Department (which replaced the Water Department) on October 19, 2010. The 2002 MOU described that "[t]he replacement of the existing aboveground reservoir with a new underground reservoir has a substantial benefit to the park" through demolition of the existing reservoir and reduction in the length of the access road. The agreements set forth in the MOU are summarized as follows:

- The existing La Jolla View Reservoir will be demolished and the site will be restored to a condition similar to the site condition prior to the reservoir's construction with respect to grading and vegetation. All aboveground, man-made structures and paving will be removed, except for approximately 350 feet of the access road, and the natural terrain restored with native soil fill material. The remaining 350 feet of the access road will be re-paved.
- A new reservoir will be constructed underground. The natural terrain will be restored above the reservoir with only a small access building and security fence visible. Construction of the new reservoir includes replacing the existing, cast-iron, 16-inch-diameter Muirlands Pipeline with a new 30-inch-diameter pipeline from the intersection of Exchange Place/Soledad Avenue up to the new reservoir.
- The indigenous site vegetation and grading will be restored to a condition similar to its condition prior to the reservoir relocation project. This includes revegetation with indigenous plant species to restore the old reservoir site and abandoned access road to natural habitat conditions.

The MOU also acknowledged that the planning process may result in some design or other modifications to the project, and that construction of the new reservoir was not required to begin within any particular time period. The 2010 MOU indicates that both departments are willing to explore the concept of fair market compensation by the Public Utilities Department to the Park and Recreation Department for the use of open space parkland via in-kind services.

## **2.4.2 City of San Diego General Plan**

The General Plan is a comprehensive document that sets out a long-range vision and policy framework for how the City could grow and develop, provide public services, and maintain the qualities that define San Diego. The General Plan is comprised of a Strategic Framework Element and 10 additional elements covering planning issues such as housing, transportation, and conservation. The stated purpose of the Public Facilities, Services, and Safety Element is to "provide the public facilities and services needed to serve the existing population and new growth." Water supply infrastructure that provides for the efficient and sustainable distribution of water is an identified goal.

## **2.4.3 La Jolla Community Plan**

The project site is located within the area addressed by the La Jolla Community Plan and Local Coastal Program (LCP) Land Use Plan (La Jolla Community Plan), which was adopted in 2001 and amended in 2014. The community planning area consists of approximately 5,718 acres located along the western edge of the north coastal region of the City. It is bounded on the north by the campus of the University of California, San Diego (UCSD) and a portion of the University community; on the east by Gilman Drive, the University community and I-5; on the south by the Pacific Beach community; and on the west by the Pacific Ocean.

The La Jolla Community Plan is the City's adopted statement of policy for growth and development of the La Jolla community planning area over the next decade. It proposes specific goals, policies, and strategies regarding the future preservation, use, and development and protection of

environmentally sensitive resources within the community and identifies how the use and development of land will affect current levels of public services and facilities.

La Jolla Heights Natural Park and the La Jolla Country Club are designated as “Parks, Open Space,” with the majority of the remaining land adjacent to the project site designated “Very Low Density Residential (0 to 5 DU/AC [dwelling units per acre]).” West of the northwesternmost portion of the project site, properties along Pepita Way and Mar Avenue are designated as “Low Density Residential (5 to 9 DU/AC).”

#### **2.4.4 Land Development Code**

The majority of the site, along with land to the north, east, south, and southwest within La Jolla Heights Natural Park, is zoned as OP-2-1, which allows parks for passive uses with some active uses (Figure 2-4, *Zoning Classifications*). Properties farther to the south are within the RS-1-4 zone; land to the southwest includes areas zoned as RS-1-2 and RS-1-7; and properties adjacent to the northwesternmost portion of the site are designated RS-1-5 and RS-1-7. These zones allow residential uses on lots ranging between 5,000 (RS-1-7) and 20,000 (RS-1-2) square feet. The entire vicinity is located within the Coastal Overlay Zone, which is intended to protect and enhance the quality of public access and coastal resources. The site contains steep slopes and sensitive biological resources subject to the City’s Environmentally Sensitive Lands (ESL) regulation. Procedures for processing the required CDP and SDP are specified in San Diego Municipal Code (SDMC) Chapter 12, Article 6, Division 6 (Land Development Code [LDC]).

#### **2.4.5 Multiple Species Conservation Program**

The Multiple Species Conservation Program (MSCP) is a comprehensive biological habitat conservation planning program developed by the City in coordination with state and federal resource agencies. A key goal of the MSCP is to preserve a network of habitat and open space, protecting biodiversity. Local jurisdictions, including the City, implement their portions of the MSCP through subarea plans. The City has adopted Biology Guidelines that, together with the City ESL regulations and MSCP Subarea Plan, are used to evaluate project-related biological impacts and required mitigation. The Multi-habitat Planning Area (MHPA) is the City’s planned habitat preserve system. The majority of the project site is within the MHPA.

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

The California Coastal Zone includes land and water area from the ocean to generally 1,000 yards inland beyond the mean high tide line. The California Coastal Act of 1976 requires jurisdictions within the Coastal Zone to prepare a LCP which regulates development within these areas. Local jurisdictions with an LCP are responsible for reviewing and issuing Coastal Development Permits. The LCP that applies to the Project is the La Jolla Community Plan and LCP Land Use Plan. Because the project site is within the non-appealable area of the Coastal Zone, a CDP is required, in accordance with the City’s CDP regulations.

## **2.4.7 Regional Air Quality Strategy**

The San Diego Air Pollution Control District (SDAPCD) and the 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 San Diego Air Basin (SDAB) (SDAPCD 2016). The San Diego County Regional Air Quality Strategy (RAQS) was most recently updated in 2016. The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for ozone (O<sub>3</sub>). The SDAPCD has also developed the air basin's input to the State Implementation Plan (SIP), which is required under the Federal Clean Air Act (CAA) for areas that are out of attainment of air quality standards. The SIP, approved by the U.S. Environmental Protection Agency (USEPA) in 1996, includes the SDAPCD's plans and control measures for attaining the ozone national standard. The SIP is also updated on a triennial basis.

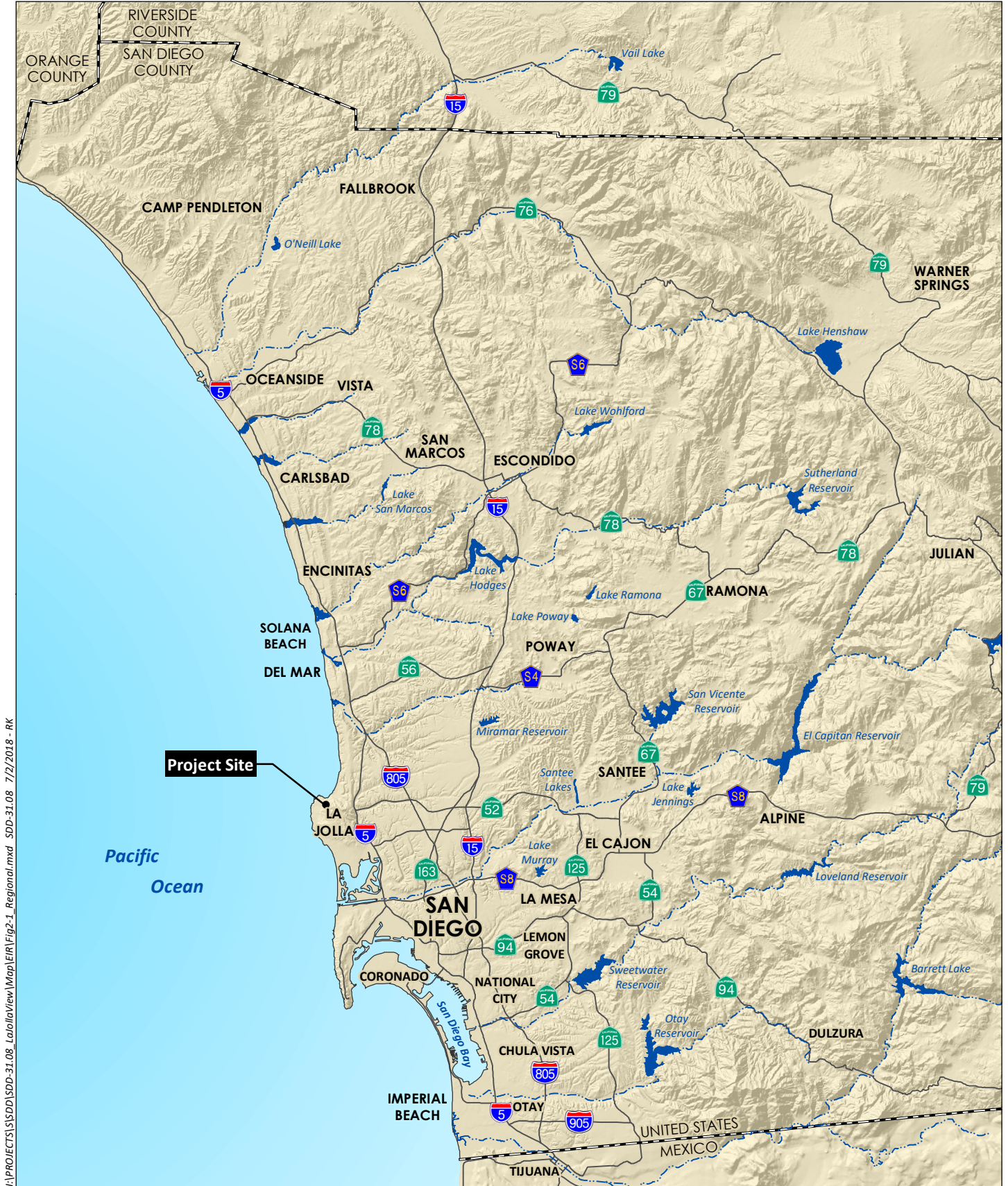
The RAQS relies on information from the California Air Resources Board (CARB) and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the county, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. 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. The SIP also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the national air quality standard for ozone.

## **2.4.8 Water Quality Control Plan for the San Diego Basin**

The RWQCB adopted a Water Quality Control Plan for the San Diego Basin (Basin Plan) that recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems (RWQCB 1994). Water quality objectives identified in the Basin Plan are based on established beneficial uses and are defined as "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses." These objectives are incorporated into related regulatory requirements, such as the NPDES permitting process.



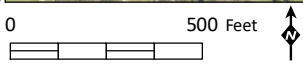
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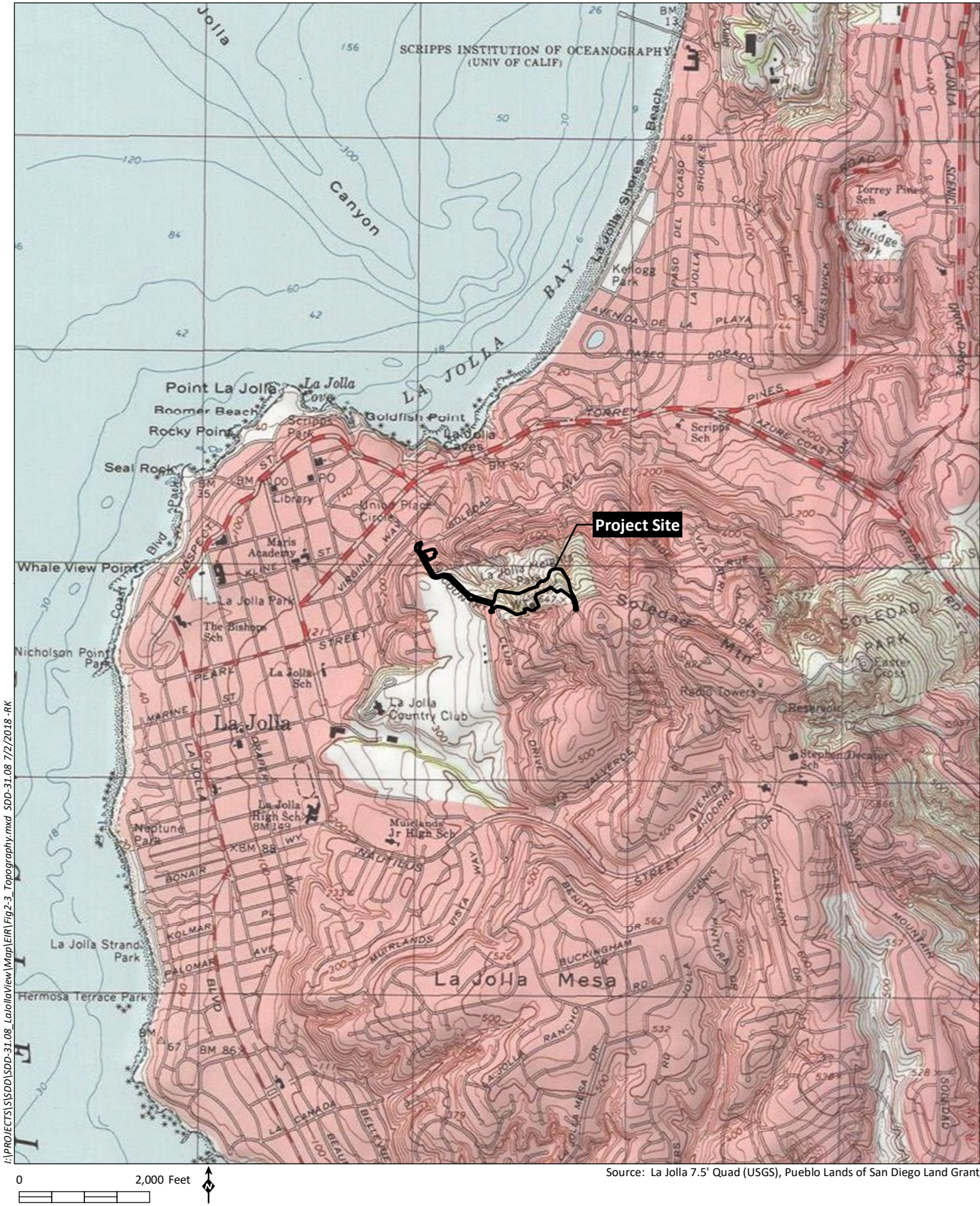


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Source: Aerial (SanGIS 2017)

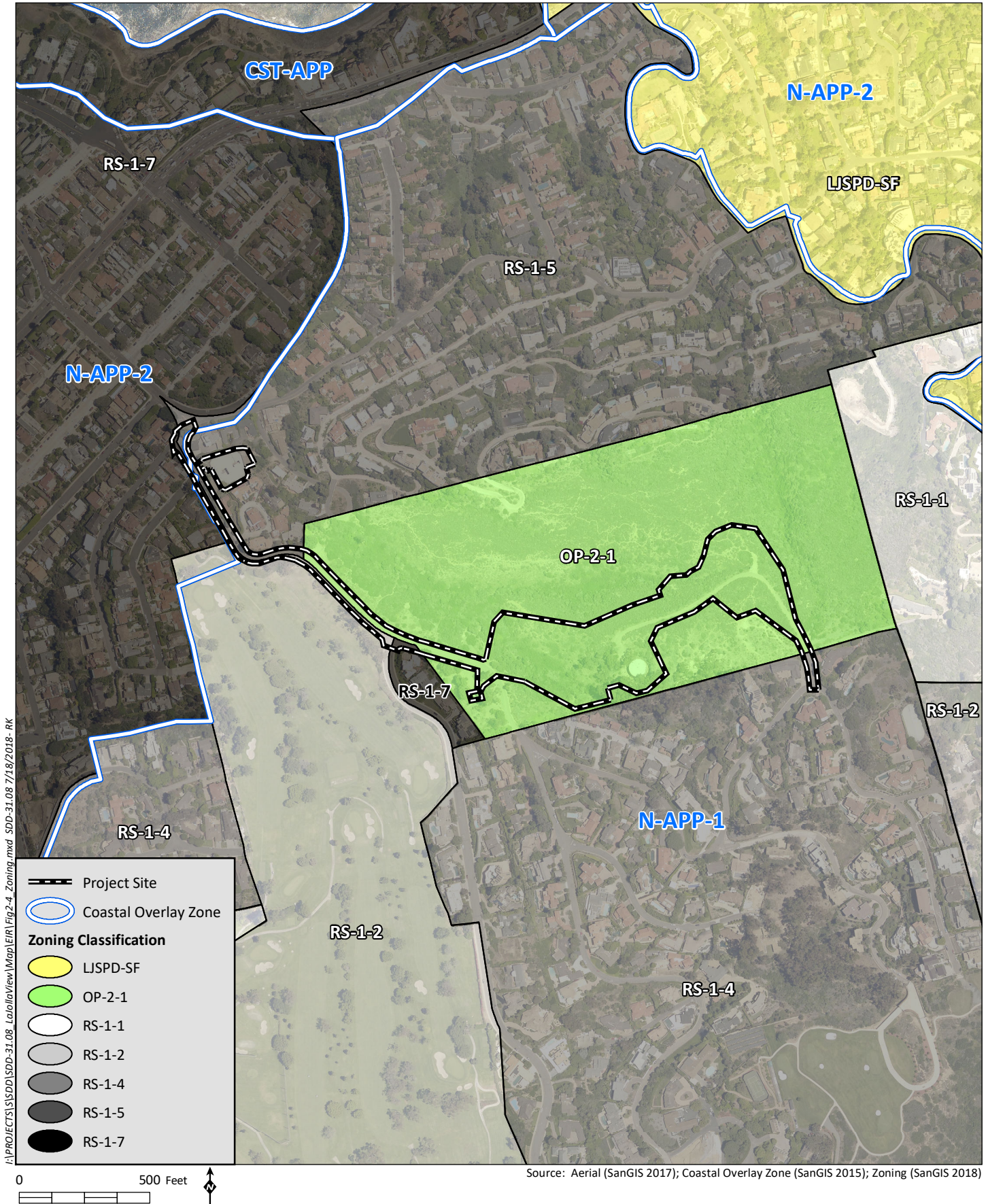




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Source: La Jolla 7.5' Quad (USGS), Pueblo Lands of San Diego Land Grant







## 3.0 PROJECT DESCRIPTION

This chapter of the EIR provides a discussion of the need for the Project, identifies the goals and objectives, describes the specific characteristics of the Project, discusses construction processes and phasing, and identifies the discretionary actions required to implement the Project. This chapter has been prepared pursuant to Section 15124 of the State CEQA Guidelines.

### 3.1 Project Need

The Project is needed to replace two existing reservoirs that are at the end of their lifecycles with one new reservoir that meets current City standards. The two reservoirs to be replaced are the decommissioned (out of use) Exchange Place Reservoir and the operational but substandard La Jolla View Reservoir.

The existing 0.99-MG Exchange Place Reservoir was originally constructed in 1909 and was decommissioned in 2002. Because there are no plans to rehabilitate the facility, it is planned for demolition.

With regard to the La Jolla View Reservoir, existing concerns to be addressed include its condition, capacity, hydraulic grade, and water quality, as well as the condition and capacity of the connecting Muirlands Pipeline. The existing La Jolla View Reservoir is a 0.72-MG potable water storage facility that was constructed in 1949. It has had no major upgrades since it was built and is considered to be in poor condition. A corrosion inspection report of the facility noted excessive deterioration, severe rust and corrosion, and disbonding of interior reservoir coatings. With its small capacity, the reservoir is not sized to provide adequate storage based on current design criteria for operating storage, fire storage, and emergency storage.

Use of the existing La Jolla View Reservoir is very limited due to higher-pressure zone and other water system changes. The original static hydraulic grade line (HGL)<sup>1</sup> for the area served by the La Jolla View Reservoir was 525 feet AMSL, based on the spill elevations of the existing reservoir and the since-demolished standpipe at Genesee Avenue and Torrey Pines Road. When the Miramar Water Treatment Plant was completed in 1962, however, the static head to the reservoir and the surrounding pressure zone was raised to 610 feet AMSL (also referred to as the North City 610 Pressure Zone; refer to Figure 3-1, *La Jolla View Reservoir Service Area*). As a result, the La Jolla View Reservoir storage no longer serves a regulatory purpose except during peak summer conditions when the Muirlands Pump Station is operated at full capacity. Specifically, the reservoir maintains Muirlands Pipeline pressures above 500 HGL in the event that the Muirlands Pipeline HGL drops from static 610 HGL to 525 HGL or below.

Because the water pressure for the area generally remains well above the reservoir spill elevation of 525 HGL, the reservoir tends to sit full. Based on SCADA data from a winter day and a summer day, the reservoir discharged only 1.2 percent of its capacity in a 24-hour period, relative to the industry standard of 20 percent. Additionally, there is currently no way to mix the water in the reservoir, resulting in stratification of water. Because there is only one inlet/outlet pipe, the oldest water is the

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<sup>1</sup> The HGL is the surface or profile of water flowing in an open channel or pipe flowing partially full. If a pipe is under pressure, the HGL is the level water would rise to in a small, vertical tube connected to the pipe.

last to leave. As it is not regularly being replaced, water quality in the reservoir is poor and requires frequent re-chlorination to maintain safe drinking water standards.

In addition, the existing 16-inch diameter cast iron Muirlands Pipeline connected to the existing La Jolla View Reservoir is beyond its useful life, and is undersized for current water conveyance requirements, including modern fire flow standards of 2,000 gallons per minute (gpm) for areas composed primarily of single-family residences.

## 3.2 Project Goals and Objectives

The following are the primary goals and objectives of the Project:

1. Replace water storage facilities that are beyond their useful lives with a modern water storage system that meets current City Facility Design Guidelines and Standards to provide reliable water supply as well as reduce maintenance and energy costs;
2. Provide water storage at an elevation appropriate to support the southern portion of the North City 610 Pressure Zone;
3. Provide water storage sufficient to meet La Jolla community water demands as well as fire storage and emergency storage requirements;
4. Provide a system that allows for appropriate water cycling to maintain water quality and avoid or minimize the need for supplemental chlorine treatment;
5. Construct an underground water storage facility that returns the ground to existing contours to the extent feasible, in accordance with the MOU between the City Public Utilities Department and Parks and Recreation Department; and
6. Replace conveyance pipelines that are beyond their useful life with new pipelines that are sized for current water conveyance needs.

## 3.3 Project Characteristics

### 3.3.1 Project Overview

The Project would replace the existing Exchange Place Reservoir and La Jolla View Reservoir with a new 3.1-MG reservoir within the La Jolla Heights Natural Park (Figure 3-2, *Site Plan*). The Project also includes associated pipelines providing connections between the reservoir and other portions of the water system, as well as access and other related improvements, as detailed in the following sections.

### 3.3.2 Reservoirs

The Project would include demolition of two existing reservoirs and construction of one new reservoir. The existing Exchange Place Reservoir and Pump Station would be demolished. The site would be backfilled with soil, recontoured, and planted with drought-tolerant native species. The

existing La Jolla View Reservoir also would be demolished. Its site would be returned to historical contours and restored with native vegetation.

The proposed new La Jolla View Reservoir would be located north of Encelia Drive, at a site with existing elevations ranging from approximately 596 to 612 feet AMSL (Figure 3-3, *Proposed Reservoir*). It would be constructed as a 3.1-MG cylindrical, concrete reservoir, with a diameter of approximately 120 feet and a height of 40 feet. The proposed new reservoir would be located below ground, with a base elevation of 548 feet AMSL, a high water elevation of 590 feet AMSL, and a top of tank elevation of 596 feet AMSL. Upon completion of construction, the reservoir would be entirely buried, except for reservoir access hatches and SCADA equipment (Figure 3-4, *Proposed Reservoir Cross-sections*).

### **3.3.3 Pipelines**

In association with the reservoir, new pipelines would be constructed for water supply, overflow, conveyance, and customer service. The new reservoir would include an approximately 200-foot long, 18-inch overflow pipe with an at-grade outlet and energy dissipation structure. The outlet would be situated near the head of the north-central on-site drainage. Approximately 480 feet of an 8-inch utility water connection to the new reservoir would be provided from the existing water main in Brodiaea Way.

The Project also includes construction of approximately 2,790 feet of 30-inch pipeline. The pipeline would run from the new La Jolla View Reservoir in a general northeast-to-southwest direction through the La Jolla Heights Natural Park to connect with the existing Muirlands Pipeline in Country Club Drive. Approximately 1,050 feet of the 2,790 feet total would be replacing the 16-inch pipeline within Country Club Drive between the existing Muirlands Pump Station and Soledad Avenue. In addition, approximately 780 feet of an 8-inch pipeline would parallel the 30-inch pipeline in the northwestern portion of Country Club Drive to serve existing customers. The existing Muirlands Pipeline segment and reservoir drain in La Jolla Heights Natural Park would be abandoned in place.

### **3.3.4 Appurtenant Features**

A new altitude valve vault would be constructed along the Muirlands Pipeline within La Jolla Heights Natural Park, across Country Club Drive from the Muirlands Pump Station. It would be located primarily below grade, with an 8-inch air exhaust extending above ground. A buried telecommunications conduit would be installed between the valve vault and the pump station.

The security and communication pole and appurtenant equipment located adjacent the proposed reservoir site would be temporarily relocated during construction, and then moved back to a permanent location adjacent to the new reservoir. A weather station with wind, temperature, and humidity sensors would be added to the current data/security tower.

### **3.3.5 Permanent Access**

An existing paved access road from Encelia Drive would be reconstructed to allow access to the new reservoir site for maintenance vehicles. This road would terminate at the reservoir access hatches, where two parking spaces and paved turnaround area would be provided (Figure 3-5, *Permanent Reservoir Access*). The remaining portion of the existing access road that extends to the existing



La Jolla View Reservoir would be demolished, and the area would be recontoured and restored with native habitat.

### **3.3.6 Vegetation**

The backfilled new La Jolla View Reservoir areas and the ground above the proposed pipelines through La Jolla Heights Natural Park would be revegetated with drought-tolerant, native species. The former La Jolla View Reservoir site and other areas temporarily disturbed during construction would be restored with southern maritime chaparral. The backfilled Exchange Place Reservoir site would be revegetated with low-maintenance, drought-tolerant planting. Restored and revegetated areas would be temporarily irrigated during the establishment period. Revegetated areas would be subject to a 25-month establishment period, while restored habitat areas would be maintained for five years or until biological success criteria are met.

## **3.4 Construction Activities**

Construction activities would occur within La Jolla Heights Natural Park, along Country Club Drive, and near the intersection of Country Club Drive and Pepita Way at the site of the existing Exchange Place Reservoir. Key construction elements that extend over multiple phases are summarized below, followed by detailed information regarding the activities anticipated in each phase. Nighttime construction activities would occur for up to 20 days during pouring of concrete for the reservoir, as described in Section 3.4.3.6, *Phase 6*.

### **3.4.1 Earthwork**

Excavation to install the new reservoir would result in approximately 78,000 cubic yards (cy) of cut. Approximately 5,000 cy of this material would be used to backfill the demolished Exchange Place Reservoir. To minimize the need for hauling all of the backfill material to and from an off-site location, approximately 56,000 cy would be temporarily stockpiled within La Jolla Heights Natural Park near Country Club Drive (Figure 3-6, *Temporary Stockpile and Access Road*). The temporary stockpile area (excluding the associated access road) would extend over approximately 0.4 acre, with a total manufactured slope height of up to 80 feet. The majority of the fill would occur in a ravine, with the elevation of the top of the stockpile similar to that of the adjacent hillside. The total area of disturbance would be approximately 7.2 acres. Once the new La Jolla View Reservoir is installed, 51,000 cy of the stockpiled soil would be used to backfill the new reservoir location and areas that were cut for the temporary access road. Thus, temporarily stockpiling the material on site would reduce the need to export and then import soil for backfill at the completion of construction. Approximately 17,000 cy would be disposed of off site during the rough grading phase, with another approximately 5,000 cy disposed of off site during the final grading phase.

A temporary access road would be constructed from the new reservoir site to (and partially on) the stockpile area. Once constructed, the temporary roadway would reduce by approximately one-half mile the distance that earthwork trucks, material delivery trucks, and other construction vehicles would need to travel on residential streets. The road would be a consistent width of 25 feet. Where the stockpile and access road would extend across the existing natural drainage in the western portion of the site, a temporary 24-inch box culvert would be installed to allow for continued flow of

water. The easterly portion of the temporary access road also would facilitate the construction of a portion the 30-inch pipeline that is located up to 40 feet below existing grade.

Approximately 22,000 cy of soil would be permanently disposed of off-site, requiring approximately 4,500 truck trips. This disposal was initially anticipated to occur over an 80-day period. The Construction Manager (CM) would be responsible for ensuring that the number of haul truck trips is limited to no more than 50 round trips per day. This would result in the hauling activities spanning a total of approximately 100 days.

### **3.4.2 Construction Impact Minimization Measures**

The Project would implement a number of standard measures during construction, which would minimize the potential for environmental impacts, as described below.

Traffic control would be provided in accordance with a Traffic Control Plan reviewed and approved by the Engineering and Capital Projects Department, Construction Management and Field Engineering Division. During pipeline installation, portions of Country Club Drive and a small portion of Brodiaea Way near its intersection with Encelia Drive would be temporarily reduced to a single lane, with flaggers directing traffic. All trenches through roadways would be covered with steel plates at the end of each workday. Upon completion of construction, the contractor would repair or replace all existing improvements within the right-of-way that are not designated for permanent removal.

The Project would incorporate best management practices (BMPs) during construction to reduce emissions of fugitive dust. SDAPCD Rule 55 - Fugitive Dust Control states that no dust and/or dirt shall leave the property line. The control measures listed below are the BMPs that the Project would incorporate for dust control:

- A minimum of two applications of water during grading between dozer/scrapper passes;
- Paving, chip sealing, or chemical stabilization of internal roadways after completion of grading;
- Termination of grading if winds exceed 25 miles per hour (mph);
- Verification that all exposed surfaces maintain a minimum soil moisture of 12 percent;
- Stabilization of dirt storage piles by chemical binders, tarps, fencing, or other erosion control; and
- Vehicle speeds would be limited on unpaved roads to 15 mph.

Additionally, the following practices would be implemented to reduce waste and energy consumption:

- Follow maintenance schedules to maintain equipment in optimal working order and rated energy efficiency, which would include, but not be limited to, regular replacement of filters,

cleaning of compressor coils, burner tune-ups, lubrication of pumps and motors, proper vehicle maintenance, etc.; and

- Reduce on-site vehicle idling.

The Project would implement an approved Storm Water Pollution Prevention Plan (SWPPP) and related plans to address potential erosion, sedimentation, and water pollution during construction, in conformance with the City Storm Water Manual and the related NPDES Construction General Permit. The specific BMPs would be determined prior to the initiation of construction, with examples of potentially applicable measures described in Section 5.11, *Hydrology/Water Quality*, and Section 5.12, *Geology and Soils*.

The Project would be subject to Abatement Specifications for asbestos and lead (Pb)-containing materials, which establish compliance plans for the safe removal and disposal of these materials during demolition. Among other items, these specifications require implementation of an approved Abatement Work Plan. Project construction also would be subject to specifications to minimize the risk of wildfire resulting from construction activities.

During short-term nighttime construction activities, the contractor would be required to use an illumination level commensurate with the nature of the work (e.g., use high illumination levels only in areas where detailed work is taking place), use shielded light fixtures, direct light fixtures to shine downward, and use a lighting system that avoids overspill to adjacent areas.

### 3.4.3 Construction Phasing

The Project is anticipated to be constructed over 12 phases spanning approximately two and one-half years, as listed in Table 3-1, *Anticipated Construction Schedule*, and described below.

**Table 3-1**  
**ANTICIPATED CONSTRUCTION SCHEDULE**

Phase	Construction Activity	Number of Working Days
1	Mobilization and Setup	34
	Stake Limits of Work	
2	Lead and Asbestos Abatement	34
3	Demolition of La Jolla View Reservoir	25
	Demolition of Exchange Place Reservoir	
	Pipeline Construction (30-inch only) STA 17+67 to STA 21+50 (west portion of park)	
4	Mass Grading; Backfill of Exchange Place Reservoir (includes hauling excess soil off site)	116
5	Pipeline Construction - Inlet/Outlet in Park STA 16+94 to STA 17+67 & STA 21+50 to reservoir (across Country Club Drive and east portion of Park); Pipeline Construction - Reservoir Drain/Overflow and Discharge Structures (in park)	20

**Table 3-1 (cont.)  
ANTICIPATED CONSTRUCTION SCHEDULE**

<b>Phase</b>	<b>Construction Activity</b>	<b>Number of Working Days</b>
6	Reservoir Construction (including yard piping)	180
7	Reservoir Backfill	70
8	Pipeline Construction – 8-inch Supply Line & Electrical Service	15
9	Reservoir Final Grading and Site Improvements	60
10	Pipeline Construction – 8-inch Distribution - Country Club Drive; Relocate Security Pole/Test Electrical Systems; Install Temporary Irrigation & Vegetation inside Park; Pipeline Construction – 30-inch Distribution - Country Club Drive STA 1+00 to STA 16+94	89
11	Curb Ramp Improvements & Paving/Temp Irrigation/Planting at Exchange Place Reservoir; Demobilization	15
12	Demobilization and Cleanup/Testing/Acceptance	10

Source: City of San Diego Engineering and Capital Projects Department and Infrastructure Engineering Corporation

### **3.4.3.1 Phase 1**

At the initiation of construction, the contractor would mobilize equipment and provide initial set-up of the work area, including staking the limits of work. This phase of work would not require the use of heavy equipment.

### **3.4.3.2 Phase 2**

The existing Exchange Place and La Jolla View reservoirs may contain lead-based paint and/or asbestos that would be removed prior to demolition of the reservoirs. Per the City's hazardous materials abatement specification, the contractor will be directed to use a strategy of abatement which entails removing lead-based paint using chemicals, heat guns, and certain contained abrasive methods but not open flame burning, open abrasive blasting, sandblasting, water blasting, extensive dry scraping, or methylene chloride removers. Lead and asbestos containing materials would be adequately wetted with water or a removal encapsulant before and during the removal process to reduce dust emission.

### **3.4.3.3 Phase 3**

#### **Demolition of La Jolla View Reservoir**

The existing steel tank, with a footprint of 3,850 square feet and associated concrete wall, would be completely demolished. A cutting torch would be used to break up the steel plating of the tank and a concrete saw would be used to break up the concrete slab. A backhoe would further break up the slab and load the materials into a dump truck, which would transport the materials off site. In addition, approximately 50 feet of the 16-inch cast iron pipe would be demolished, with the remaining pipe cut and plugged.

## **Demolition of Exchange Place Reservoir**

The upper three feet of the existing concrete Exchange Place Reservoir, which has a footprint of 11,700 square feet, would be demolished, along with the associated metal and wood roof, concrete pump house, stairs, and valve vault. A concrete saw or breaker would be used to break up the concrete and a backhoe would break up the metal and wood and load the materials into a dump truck, which would transport the materials off site. In addition, approximately 40 feet of 8-inch cast iron pipe associated with the reservoir would be demolished.

## **Pipeline Construction**

Approximately 380 feet of 30-inch pipeline would be installed in the western portion of La Jolla Heights Natural Park. A backhoe would be used to dig a trench 4.5 feet wide and 8 feet deep for installation of the pipeline. In addition, the backhoe would replace and recompact the soil once the pipeline is installed below ground. Approximately 40 feet of pipeline would be installed per day.

### **3.4.3.4 Phase 4**

The mass grading phase would involve excavation at the site of the proposed below-ground reservoir, construction of a temporary access road for hauling activities, and backfill at the existing Exchange Place Reservoir site. A soil nail retaining wall would be constructed around a portion of the new reservoir area to support the excavated slopes and reduce the extent of excavation. This wall would be buried when the reservoir is later backfilled. An excavator would be used to excavate the site of the proposed reservoir. The excavator would work simultaneously with a loader and a dump truck to load the cut material and haul it either off site or to the temporary stockpile area. Soil nail drilling equipment would be used for the wall construction.

Construction of the temporary access road would involve a dozer moving earth to clear the path for the road. The dozer would work simultaneously with a loader and dump truck to create the path, load the material, and haul it either off site or to the temporary stockpile area. Once the path for the road has been made, a dozer, grader, scraper, and roller would create a flat and usable road surface.

To backfill the Exchange Place Reservoir site, a dump truck would haul the material in, a loader would distribute the material across the site, and a dozer and grader would level out the site.

### **3.4.3.5 Phase 5**

Phase 5 would involve the installation of 73 feet of 30-inch pipeline across Country Club Drive and 640 feet in the eastern portion of La Jolla Heights Natural Park from the new reservoir site to the location of the 30-inch pipeline that would be installed in Phase 3. A concrete saw would be used to break up the pavement within Country Club Drive, with traffic flow temporarily reduced to a single lane. A backhoe would dig a 4.5-foot wide trench in Country Club Drive and in the eastern portion of La Jolla Heights Natural Park. Following installation of the below-ground pipelines, a dozer would backfill the soil and a roller would re-flatten areas within the park. The trench in Country Club Drive would be backfilled and re-paved.

### **3.4.3.6 Phase 6**

The proposed reservoir, with a footprint of 12,470 square feet, would be constructed in the eastern portion of La Jolla Heights Natural Park. Construction work would occur for up to approximately 18 hours per day for concrete pouring of the concrete slab roof and floor/footing and would, therefore, require evening and nighttime work. In addition, concrete pouring of the walls may involve extended hours. It is conservatively estimated there would be 20 days with extended hours. Construction equipment used for concrete pouring would include a concrete truck, concrete pump, concrete vibrator, generator set, trowel, man-lift, forklift, and crane. Following the concrete work, a generator and wrapping machine would be used during the daytime to reinforce the reservoir concrete.

### **3.4.3.7 Phase 7**

Upon completion of construction of the new reservoir, the site would be backfilled, and the reservoir buried. As part of this process, the excavated portion of the temporary access road would be backfilled and the temporary stockpile material removed. A dozer and backhoe would distribute the backfill material on site, and a grader, scraper, and roller would compact and flatten the soil.

### **3.4.3.8 Phase 8**

Approximately 480 feet of 8-inch supply pipeline and electrical service would be installed within the existing access road extending from Encelia Drive to the new reservoir. A backhoe would be used to dig the 2-foot-wide and 4-foot-deep trench and backfill the trench once the pipeline is installed.

### **3.4.3.9 Phase 9**

Phase 9 would involve final grading and site improvement activities at the new reservoir site and surrounding areas. A backhoe, loader, and two dozers would distribute backfill material to and around the site and perform other required earth-moving activities. A roller and a paver would then compact and flatten the site. The above-ground tank appurtenances and pavement along the reservoir access road would be installed.

### **3.4.3.10 Phase 10**

Approximately 780 feet of 8-inch distribution pipeline and approximately 700 feet of 30-inch distribution pipeline would be installed within Country Club Drive at a rate of approximately 80 and 25 feet per day, respectively. A concrete/industrial saw would be used to break up the pavement within the road. A backhoe would then create a 2-foot-wide and 4-foot-deep trench for the 8-inch pipeline and a 4.5-foot-wide and 9-foot-deep trench for the 30-inch pipeline. Once the pipeline is installed below ground, a backhoe would backfill the trench, and the trench would be re-paved.

Phase 10 would also involve relocating a security pole, testing electrical systems, and installing temporary irrigation and vegetation in La Jolla Heights Natural Park. These activities would not require the use of heavy equipment except for a crane and truck to relocate the security pole to its permanent location adjacent to the new reservoir.

#### **3.4.3.11 Phase 11**

Following pipeline installation in Country Club Drive, curb ramp improvements and repaving would be required. This would involve the use of a roller and paver. Temporary irrigation and planting proposed for the Exchange Place Reservoir during this phase would not require the use of heavy equipment.

#### **3.4.3.12 Phase 12**

Following completion of all work, the contractor would demobilize equipment and conduct a final clean-up of the site. Facilities would also be tested and, if applicable, accepted by the City during this phase. This work would not require the use of heavy equipment.

### **3.5 Discretionary Actions**

This EIR is intended to provide documentation pursuant to CEQA to cover all local, regional, state, and federal permits and/or approvals which may be needed to implement the Project. The anticipated discretionary approvals are summarized below.

#### **3.5.1 Site Development Permit**

An SDP in accordance with SDMC Section 126.0501 et seq. is required because the Project would result in development within ESL areas. Specifically, the Project would include impacts to steep hillsides containing sensitive biological resources, within the coastal zone. Per SDMC Section 112.0602, a City staff member designated by the City Manager would be responsible for making the decision, which is appealable to the City Council.

#### **3.5.2 Coastal Development Permit**

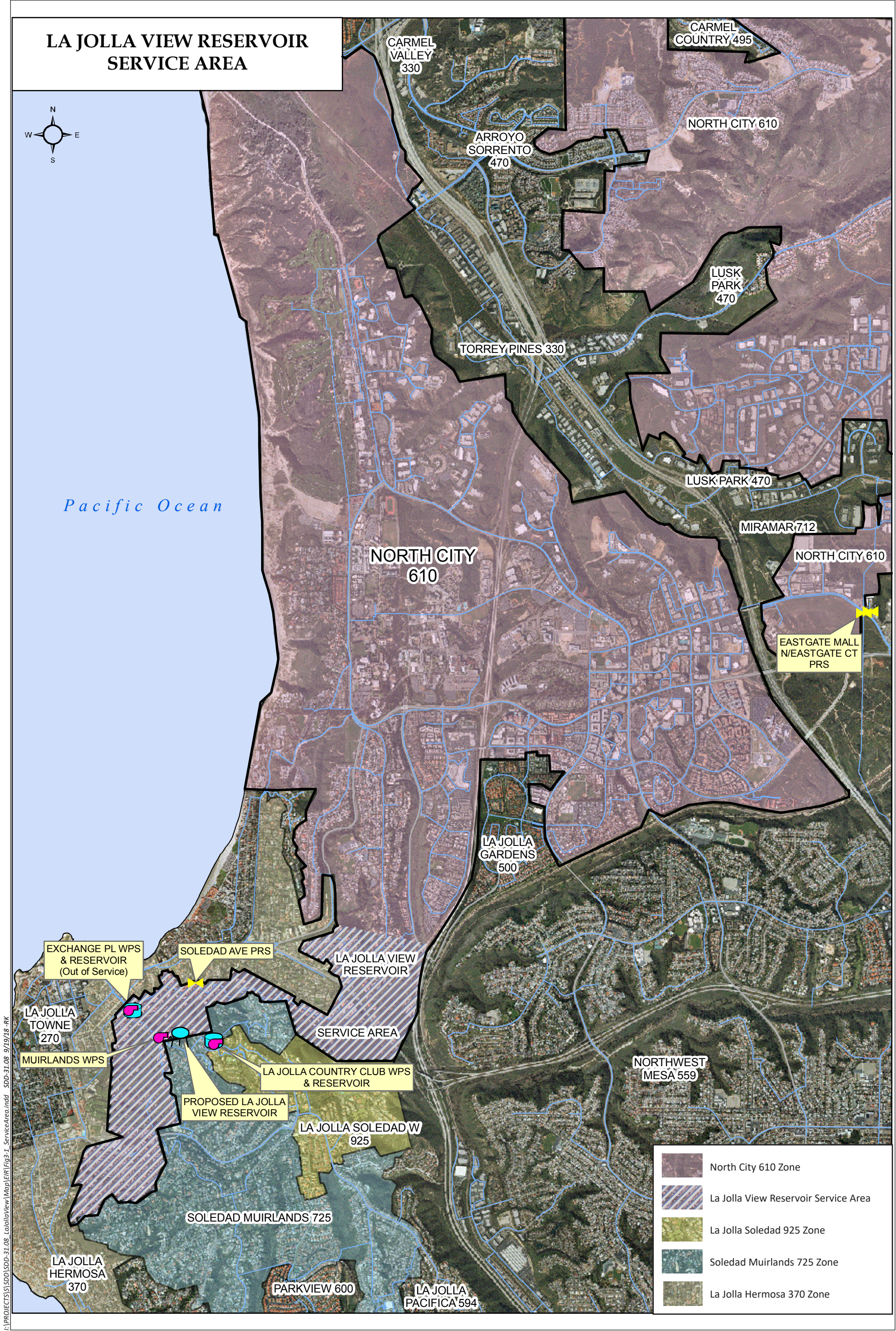
A City CDP in accordance with SDMC Section 126.0701 et seq. is required because the Project proposes development within the coastal zone of the La Jolla Community Plan and LCP Land Use Plan (see also Section 2.4.5). As noted above with regard to the SDP, the decision will be made by a designated City staff member and appealable to the City Council; the project site is not in an area where the decision is appealable to the Coastal Commission.

#### **3.5.3 Discretionary Actions by Other Agencies**

Due to proposed impacts to jurisdictional waters, the Project would require a Clean Water Act Section 404 Nationwide Permit from the USACE.

Confirmation of NPDES compliance from the SWRCB would be necessary to address water quality issues during and following construction.





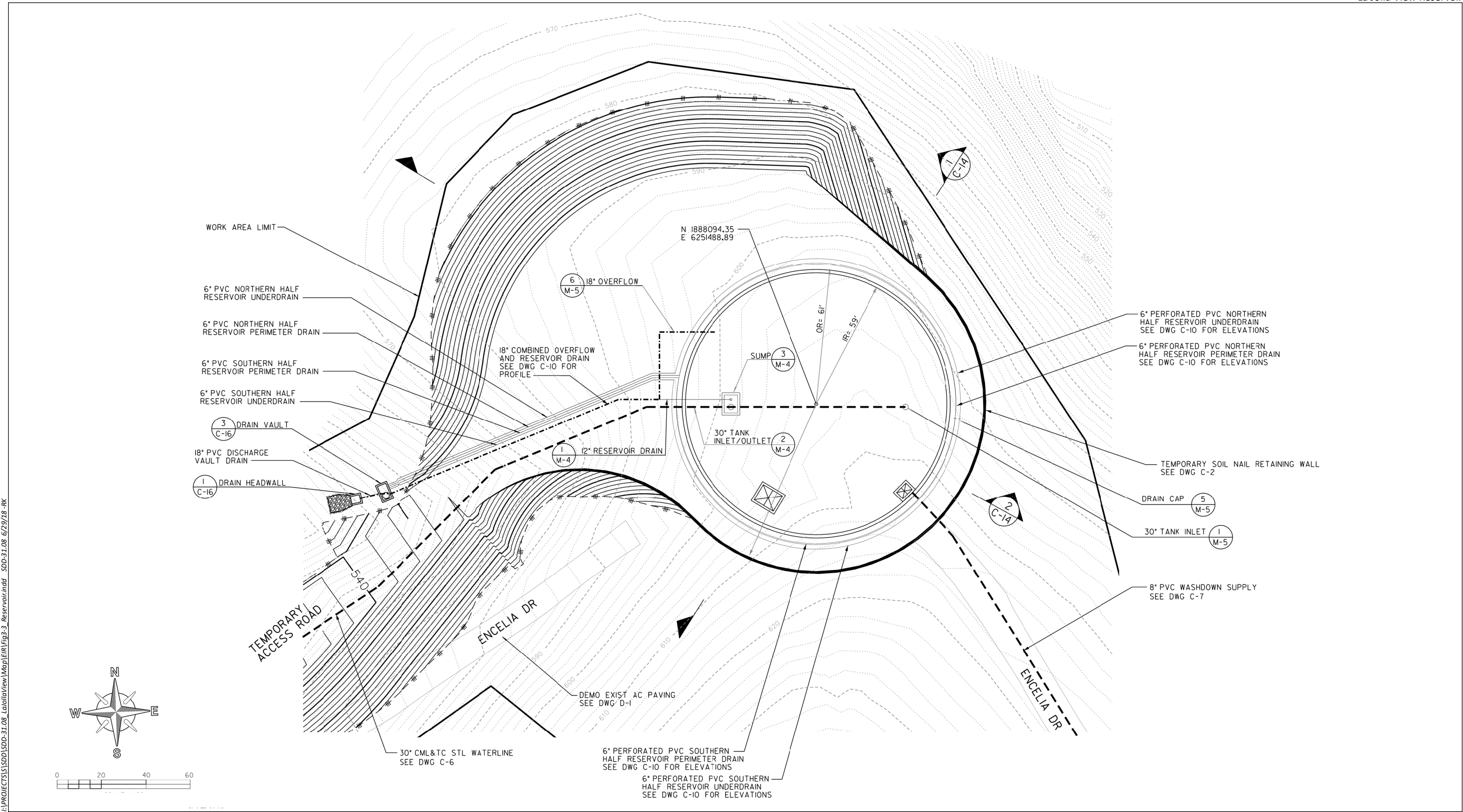




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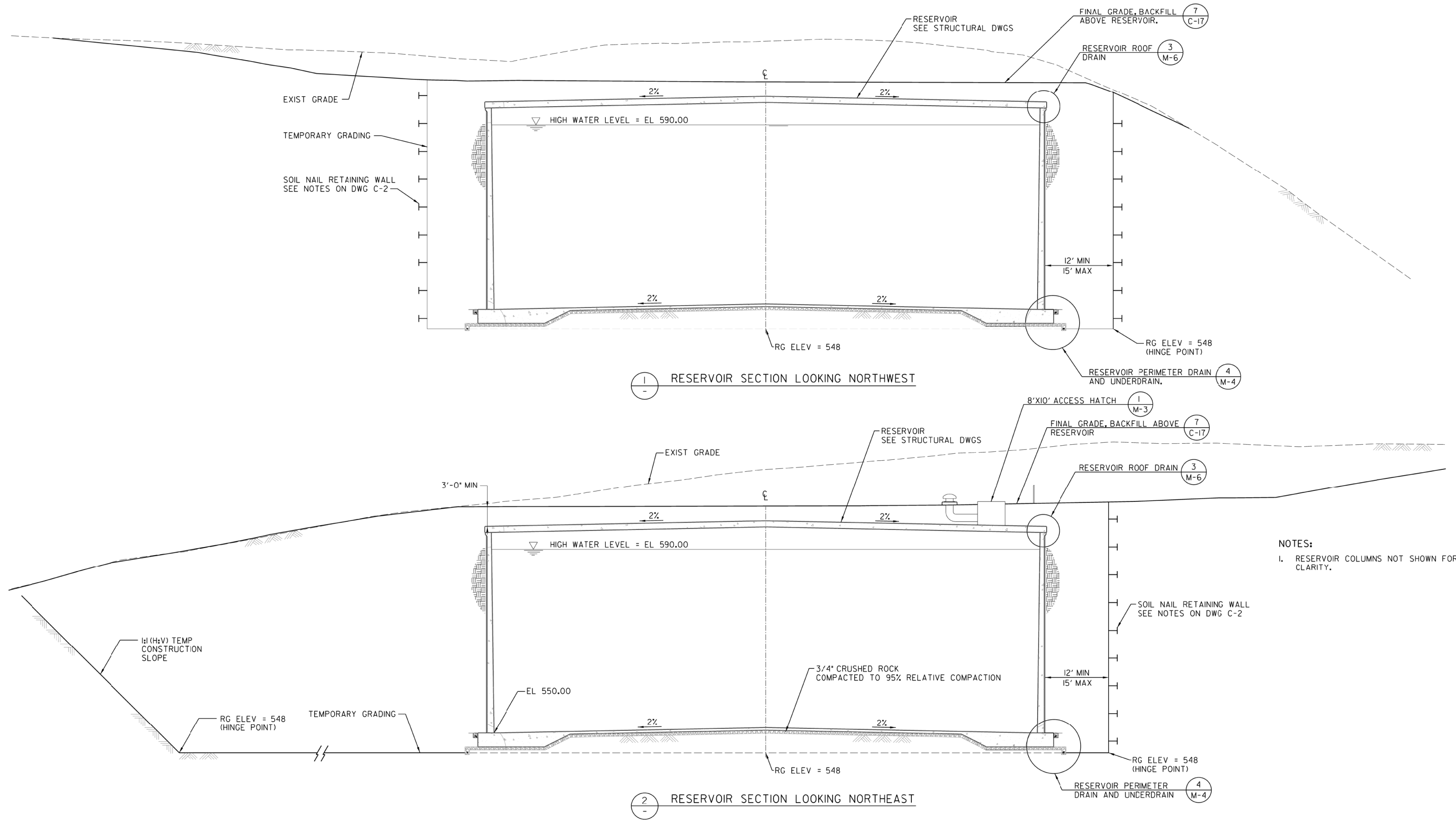
Source: IEC 2017





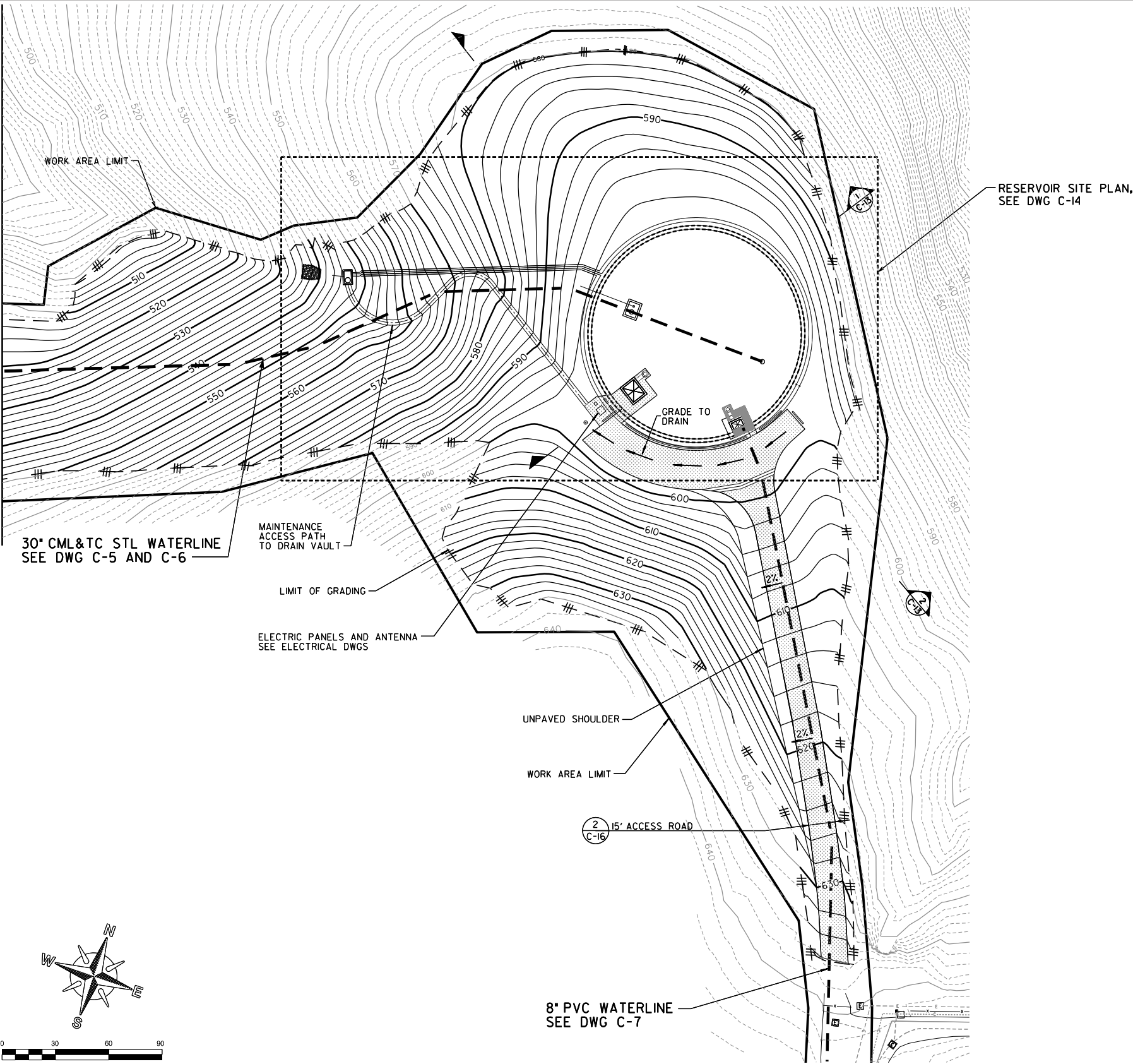
Source: IEC 2016

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NOTES:  
1. RESERVOIR COLUMNS NOT SHOWN FOR CLARITY.

Source: IEC 2016

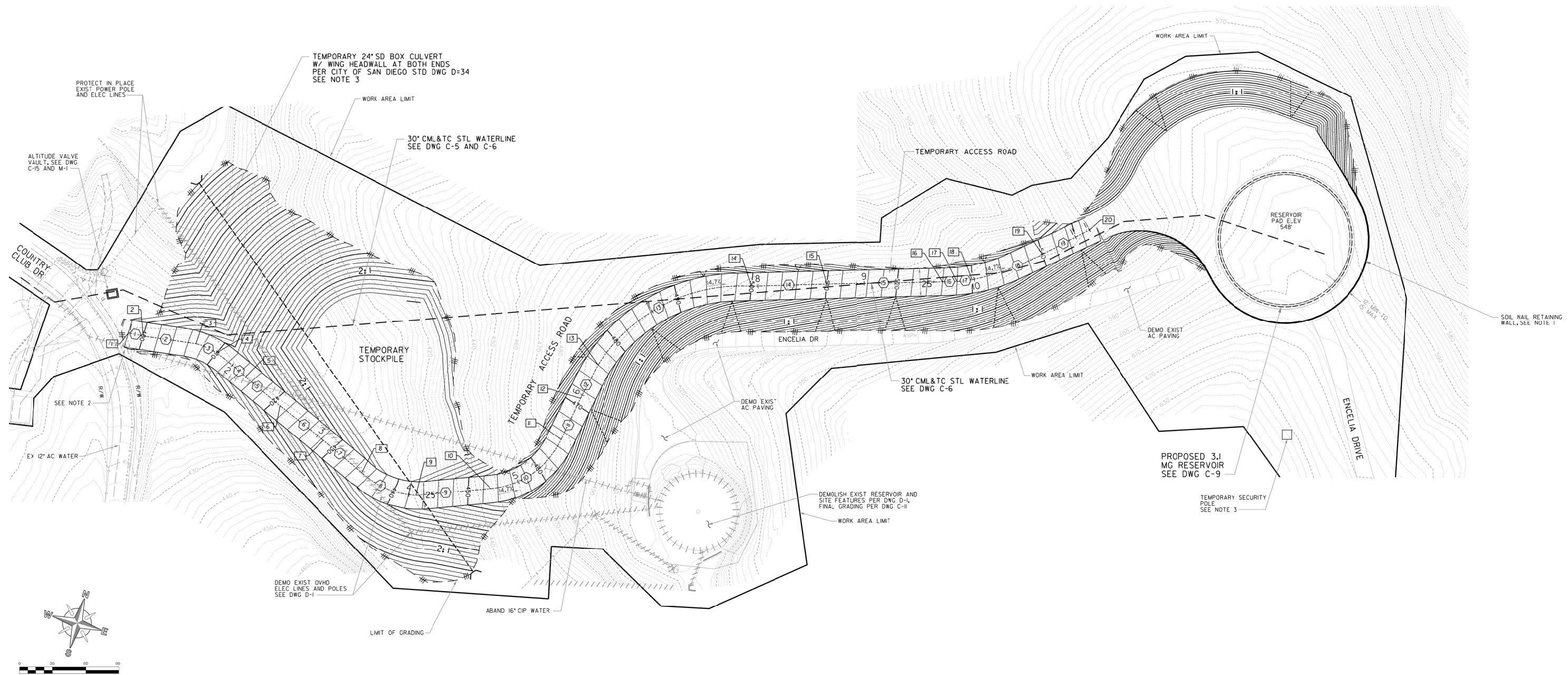


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Source: IEC 2019



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Source: IEC 2016

## 4.0 HISTORY OF PROJECT CHANGES

Planning for the Project has been underway intermittently since at least 2000, including preparation of planning studies in 2001 and 2010, as well as a Basis of Design Report in 2014. Due to the location of the existing and proposed La Jolla View Reservoirs within La Jolla Heights Natural Park, a MOU was executed between the City's Parks and Recreation Department and its Water Department, dated November 22, 2002. An amendment to the MOU was executed between the Parks and Recreation Department and the Public Utilities Department (which replaced the Water Department) on October 19, 2010. The MOU identifies the responsibilities and expectations of both departments during and after the project construction and demolition (C&D) activities. Key provisions of the MOU, as further detailed in Section 2.4.1, include that the existing reservoir and associated paving would be removed and the natural terrain restored with native soil fill material; the natural terrain would be restored above the proposed reservoir; and areas disturbed by C&D activities would be restored to native habitat.

The 2001 Planning Study, which was the basis of the initial MOU, called for the new reservoir to have a storage capacity of 5.7 MG; the 2010 Planning Study resulted in the size of the reservoir being decreased to the currently proposed 3.1 MG. An access building and security fence that were originally contemplated are no longer included in the Project.

The 2001 Planning Study included a Report of Geologic Reconnaissance and Limited Geotechnical Evaluation (Law-Crandall 2001), which included evaluation of reconstructing a new reservoir at the existing reservoir site, as well as three new alternative site locations within La Jolla Heights Natural Park. Concerns regarding faults and landslides contributed to selection of the currently proposed site (as further discussed in Chapter 8.0, *Project Alternatives*). The 2010 Planning Study evaluated replacement of the existing reservoir at a new location, or abandonment of the reservoir without replacement. Based on hydraulic modeling of the water system, replacement of the reservoir at a new location was determined to be necessary. This would address the current concerns that the reservoir's current elevation does not allow it to serve its intended regulatory purpose, thus resulting in minimal water usage and associated water quality problems (refer to Section 3.1, *Project Need*, and Section 8.3.1, *Replacement or Refurbishment at Current Reservoir Site*, for additional discussion).

The Planning Studies did not address the details of how the new reservoir would be constructed. When a design engineer consultant was hired in 2013, they began to refine the project design as well as address constructability through preparation of the Basis of Design Report (Infrastructure Engineering Corporation [IEC] 2014). The approach to be utilized for construction considered several issues:

- The reservoir and a major portion of the inlet/outlet pipeline would be located in the La Jolla Heights Natural Park, an area with sensitive habitat;
- The new reservoir must be fully buried in accordance with the MOU, and would involve excavating and temporarily storing a large quantity of soil material away from the reservoir site and later returning a large portion of it to the site for backfill around the new reservoir;

- The inlet/outlet pipeline extending through the Park must be buried at significant depth in order to connect to the bottom of the new reservoir;
- Existing access route to the new reservoir site is limited to a single path along steep and narrow two-lane roadways through residential areas; and
- Construction haul routes to and from the project area would extend through the La Jolla community where existing traffic conditions are highly congested.

With these considerations, various construction approaches were considered at a conceptual level with the goal of minimizing habitat impacts in the Park, minimizing disturbance to the local residents, limiting truck traffic and noise impacts, and facilitating construction efficiency.

This effort lead to the concept of allowing the contractor to temporarily stockpile material on site, and at the same time use this material to provide a temporary access road across the park. By constructing a temporary access road across the canyon, construction traffic would be able to access the site directly from Country Club Drive and reduce the use of the upper residential streets, including Romero Drive, Brodiaea Way, and Encelia Drive. The stockpiling of material and temporary access road would increase the temporary disturbance within the Park, but greatly reduce the number of trucks that would otherwise be required to access the site via the upper residential streets and to haul excavated materials away from and back to the site along busy La Jolla roadway corridors.

The Basis of Design Report also evaluated potential options relative to directing emergency overflow from the reservoir. This overflow would only be used in the unplanned, emergency event that the reservoir is full and the water system (including altitude valve, tank level indicators, system controls, and other operational mechanisms) fails to stop water from entering the reservoir. While the occurrence of an overflow discharge is highly unlikely given the redundant control mechanisms, the overflow system is a standard component of any water reservoir and is an important safety feature to avoid damage to the tank in the event of an overflow. Connection to the storm drain system for conveyance of these unplanned, rare occurrences was initially evaluated. This option, however, would have required construction of a new storm drain to a point adjacent to the La Jolla Country Club Golf Course, approximately 1,600 feet to the west of the reservoir site. Additionally, the existing storm drain is undersized to accommodate discharges for the overflow, potentially requiring additional improvements. Due to the extent of disturbance that would be necessary to construct a new storm drain to accommodate overflows, it was instead decided to discharge the overflow, reservoir drain, and perimeter and underdrains to the natural drainage course within the park, with a riprap energy dissipater to reduce the potential for erosion and disperse the discharge.

As a result of input received in response to the NOP, additional alternatives related to reservoir location and size, pipeline alignments, and construction access routes have been considered, as detailed in Chapter 8.0.

## **5.0 ENVIRONMENTAL ANALYSIS**

### **5.1 Land Use**

The following section discusses land uses and policies that are applicable to the Project. It references planning and environmental information contained in other sections of this EIR, as applicable.

#### **5.1.1 Existing Conditions**

##### **5.1.1.1 On-site Land Uses**

As described in Section 2.1, the project site lies almost entirely within the La Jolla Heights Natural Park. The 42-acre park is undeveloped with the exception of the existing reservoir, which is proposed for demolition, and its associated access road. Project site elevations range from 650 feet AMSL to 220 feet AMSL; the site overlooks the community of La Jolla and generally slopes downward toward the northwest. The site currently supports native vegetation, steep slopes, and narrow canyons, along with several drainages and ravines that flow into the primary drainage west of the project site. There is a cut slope located to the east of the existing water tank that originated from the installation of the existing tank. The cut slope is approximately 30 feet in height and is substantively screened by mature eucalyptus trees.

##### **5.1.1.2 Surrounding Land Uses**

Within close proximity to the project site, the primary land use is single-family residential; occurring along Country Club Drive, Remley Place, Romero Drive, Brodiaea Way, Encelia Drive, Al Bahr Drive, Soledad Avenue, Mar Avenue, and Pepita Way. The La Jolla Country Club lies to the southwest of the project site, and the remainder of the La Jolla Heights Natural Park lies to the north, east, and west. Farther from the project site, downtown La Jolla is located approximately one-half mile to the northeast, and the Pacific Ocean is located approximately one-third mile to the north. There are no other public or institutional uses within close proximity. La Jolla Elementary lies approximately one-half mile to the west, and Kellogg Park is approximately one mile to the north.

##### **5.1.1.3 Regulatory Framework**

The state and regional planning context for the Project is provided in the California Coastal Act, RAQS, Basin Plan, and MSCP. Applicable local land use plans are contained in elements and policies of the General Plan (including the City's Climate Action Plan [CAP]), La Jolla Community Plan, MSCP Subarea Plan, and City LDC regulations. The applicable elements of these plans, ordinances, and regulations are described below.



## **State Regulations**

### California Coastal Act

The California Coastal Act of 1976 authorizes local jurisdictions to regulate development within the Coastal Zone through administration of a certified LCP. Local jurisdictions with an LCP are responsible for reviewing and issuing Coastal Development Permits for proposed development within the Coastal Zone boundary. The La Jolla Community Plan is the applicable LCP for the project area. The project site is located in an area where the City's determinations are not appealable to the California Coastal Commission.

## **Regional Plans**

### Regional Air Quality Strategy

As described in more detail in Section 5.8, *Air Quality*, the SDAPCD and 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 San Diego County RAQS was updated most recently in 2016. The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for ozone. The SDAPCD has also developed the air basin's input to the SIP, which is required under the federal CAA for areas that are out of attainment of air quality standards. The SIP, approved by the USEPA in 1996, includes the SDAPCD's plans and control measures for attaining the ozone national standard.

The RAQS 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. 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 SDAB. The SIP also includes rules and regulations that have been adopted by the SDAPCD to control emissions from stationary sources. These SIP-approved rules may be used as a guideline to determine whether a project's emissions would have the potential to conflict with the SIP and thereby hinder attainment of the national air quality standard for ozone.

### Water Quality Control Plan for the San Diego Basin

The Basin Plan adopted by RWQCB in 1994 (updated in 2016) recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface waters, and local water quality conditions and problems (RWQCB 1994). The Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters, as further detailed in Section 5.11, *Hydrology/Water Quality*.

### Multiple Species Conservation Program

The MSCP is a comprehensive habitat-conservation planning program for southwestern San Diego County. A primary goal of the MSCP is to preserve a network of habitat and open space to protect biodiversity. Local jurisdictions, including the City, implement their portions of the MSCP through

subarea plans, which describe specific implementing mechanisms. The City's Subarea Plan is described below.

## **Local Plans and Regulations**

### City of San Diego General Plan

The City approved its General Plan on March 10, 2008, after a comprehensive update. The General Plan is a comprehensive, long-term document that sets out a long-range vision and policy framework for how the City could grow and develop, provide public services, and maintain the qualities that define San Diego. Accordingly, the General Plan "provides policy guidance to balance the needs of a growing city while enhancing quality of life for current and future San Diegans" (City 2008a). The General Plan comprises a Strategic Framework section and the following 10 elements, each with its own Citywide policies: Land Use and Community Planning; Mobility; Urban Design; Economic Prosperity; Public Facilities, Services and Safety; Recreation; Conservation; Historic Preservation; Noise; and Housing. The plan's elements each contain a variety of goals and policies that address numerous environmental issues. The Economic Prosperity and Housing elements are not relevant to the Project as there is no commercial activity or housing proposed or otherwise affected by the Project; therefore, these elements are not addressed further. The following discussion summarizes each of the remaining elements. In addition, applicable goals within each element pertaining to the Project are evaluated in detail as presented in Table 5.1-1, *City of San Diego Land Use Goals, Objectives, and Policies Consistency Evaluation*. Because of its length, Table 5.1-1 is placed at the end of this section.

### *Strategic Framework*

The Strategic Framework section of the General Plan provides the overarching strategy for how the City will grow while maintaining the qualities that best define San Diego. Over the last two centuries, San Diego has grown by expanding outward onto land still in its natural state. The General Plan is the first in the City's history that addresses most future growth with limited expansion onto the City's remaining open spaces by directing new development away from undeveloped lands and toward existing urbanized areas and/or areas with conditions that allow the integration of housing, employment, civic uses, and transit uses. Since there is little remaining developable vacant land in the City, General Plan policies represent a shift in focus from how to develop vacant land to how to reinvest in existing communities through infill development and redevelopment. The strategy's smart growth principles promote mixed-use development areas and focus development in areas that already contain the necessary infrastructure to support such development. Therefore, General Plan policies support changes in development patterns to emphasize combining housing, shopping, employment uses, schools, and civic uses, at different scales, in village centers. By directing growth primarily toward village centers, the strategy is intended to preserve established residential neighborhoods and manage the City's continued growth over time.

### *Land Use and Community Planning Element*

The purpose of the Land Use and Community Planning Element (Land Use Element) is "to guide future growth and development into a sustainable Citywide development pattern, while maintaining or enhancing quality of life in our communities" (City 2008a). The Land Use Element addresses land use issues that apply to the City as a whole and identifies the community planning program as the

mechanism to designate land uses, identify site-specific recommendations, and refine Citywide policies, as needed. The Land Use Element establishes a structure that respects the diversity of each community and includes policies that govern the preparation of community plans. The Land Use Element addresses zoning and policy consistency, the plan amendment process, airport-land use planning, annexation policies, balanced communities, equitable development, and environmental justice. The Land Use Map for the General Plan designates most of the project site as “Park, Open Space, and Recreation.”

#### *Mobility Element*

The purpose of the Mobility Element is “to improve mobility through development of a balanced, multi-modal transportation network” (City 2008a). This Element identifies the proposed transportation network and strategies needed to support the anticipated General Plan land uses. This Element’s policies promote a balanced, multi-modal transportation network, while minimizing environmental and neighborhood impacts. This Element contains policies that address walking, streets, transit, regional collaboration, bicycling, parking, the movement of goods and other components of a transportation system. Together, these policies advance a strategy for relieving congestion and increasing transportation choices.

#### *Urban Design Element*

The purpose of the Urban Design Element is “to guide physical development toward a desired image that is consistent with the social, economic and aesthetic values of the City” (City 2008a). The Urban Design Element policies capitalize on San Diego’s natural beauty and unique neighborhoods by calling for development that respects the natural setting, enhances the distinctiveness of its neighborhoods, strengthens the natural and built linkages, and creates mixed-use, walkable villages throughout the City. Urban Design Element policies help support and implement land use and transportation decisions, encourage economic revitalization, and improve the quality of life in San Diego. Ultimately, the Urban Design Element influences the implementation of all of the General Plan’s elements and community plans. It sets goals and policies for the pattern and scale of development as well as the character of the built environment.

#### *Public Facilities, Services, and Safety Element*

The purpose of the Public Facilities, Services, and Safety Element (Public Facilities Element) is “to provide the public facilities and services needed to serve the existing population and new growth” (City 2008a). This element contains policies that address public financing strategies, public and developer financing responsibilities, prioritization, and the provision of specific facilities and services that must accompany growth. The policies within the Public Facilities Element also apply to transportation, as well as park and recreation facilities and services. The element provides policies to guide the provision of a wide range of public facilities and services, including fire-rescue, police, wastewater, storm water infrastructure, water infrastructure, waste management, libraries, schools, information infrastructure, public utilities, regional facilities, healthcare services and facilities, disaster preparedness, and seismic safety. Specifically, goals related to water infrastructure include a safe, reliable, and cost-effective water supply for San Diego, as well as water supply infrastructure that provides for the efficient and sustainable distribution of water.

### *Recreation Element*

The Recreation Element contains policies which “preserve, protect, acquire, develop, operate, maintain, and enhance public recreation opportunities and facilities throughout the City for all users” (City 2008a). The Recreation Element provides policies to guide the City’s vision and goals for park and recreation facilities Citywide and within individual communities. It provides guidelines for the provision of population-based, resource-based, and open space parks and calls for the preparation of a comprehensive Parks Master Plan. Recreation Element policies also support joint use and cooperative agreements, protection and enjoyment of the City’s canyon lands, creative methods of providing “equivalent” recreation facilities and infrastructure in constrained areas, and implementation of a financing strategy to better fund park facility development and maintenance.

### *Conservation Element*

The purpose of the Conservation Element is for the City “to become an international model of sustainable development and conservation and to provide for the long-term conservation and sustainable management of the rich and natural resources that help define the City’s identity, contribute to its economy, and improve its quality of life” (City 2008a). The Conservation Element contains policies to guide the conservation of resources that are fundamental components of San Diego’s environment, that help define the City’s identity, and that are relied upon for continued economic prosperity. San Diego’s resources include, but are not limited to, water, land, air, biodiversity, minerals, natural materials, recyclables, topography, viewsheds, and energy. The Conservation Element contains policies for sustainable development; preservation of open space and wildlife; management of resources; and other initiatives to protect the public health, safety, and welfare.

### *Historic Preservation Element*

The purpose of the Historic Preservation Element is “to guide the preservation, restoration, and rehabilitation of historical and cultural resources and maintain a sense of the City” (City 2008a). The Element is also intended “to improve the quality of the built environment, encourage appreciation for the City’s history and culture, maintain the character and identity of communities, and contribute to the City’s economic vitality through historic preservation.”

### *Noise Element*

The Noise Element provides goals and policies to guide compatible land uses and the incorporation of noise attenuation measures for new uses to protect people living and working in the City from an excessive noise environment. It also establishes noise land use compatibility guidelines for various noise-sensitive land uses (NSLUs).

### City of San Diego Climate Action Plan

The City adopted its CAP in December 2015 to outline the actions to be taken by the City to achieve its proportional share of state GHG emission reductions (City 2015a). The CAP serves as mitigation for the City’s 2008 General Plan (City 2015a). The General Plan calls for the City to reduce its carbon footprint through actions including adopting new or amended regulations, programs, and incentives. General Plan Policy CE-A.13 specifically identifies the need for an update of the City’s

2005 Climate Protection Action Plan that identifies actions and programs to reduce GHG emissions of the community-at-large, and City operations. Additionally, the CAP serves as a “Qualified GHG Reduction Plan” for purposes of tiering under CEQA. The CAP quantifies baseline GHG emissions for 2010; provides emissions forecasts for 2020 and 2035; establishes reduction targets for 2020 and 2035; identifies strategies and measures to reduce GHG levels; and provides guidance for monitoring progress on an annual basis. The CAP specifically includes strategies and actions that encourage water and energy efficiency buildings; clean and renewable energy; bicycling, walking, transit, and land use; zero waste; and climate resiliency. Implementation of the CAP relies on compliance with various policies within the General Plan and consistency with the underlying land use assumptions in the CAP. In 2016, the City adopted a CAP Consistency Checklist to be contained within, and used in conjunction with, the CAP (City 2016b). The purpose of the checklist is “to provide a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to the CEQA” (City 2016b).

As further described in Section 5.9, *Greenhouse Gas Emissions*, the CAP Consistency Checklist contains measures to be implemented on a project-by-project basis to ensure that the CAP-specified emissions targets are achieved, thus simplifying project-level analysis within a CEQA document. Implementation of the identified measures would ensure that new development is consistent with the relevant CAP strategies meant to achieve identified GHG reduction targets. Projects that are consistent with the CAP as determined through the use of the CAP Consistency Checklist may rely on the CAP to analyze the cumulative impacts associated with the project’s GHG emissions.

#### La Jolla Community Plan

The La Jolla Community Plan was adopted in 2001 and amended in 2014. The project site is located in the north-central portion of the Community Plan (Figure 5.1-1, *La Jolla Community Plan Land Use Map*). La Jolla Heights Natural Park and the La Jolla Country Club are designated as “Parks, Open Space,” with the majority of the remaining land adjacent to the project site designated “Very Low Density Residential (0-5 DU/AC).” West of the northwesternmost portion of the Project site, properties along Pepita Way and Mar Avenue are designated as “Low Density Residential (5-9 DU/AC).”

The La Jolla Community Plan is the City’s adopted statement of policy for growth and development of the La Jolla community planning area over the next decade. It proposes specific goals, policies, and strategies regarding the future preservation, use, and development and protection of environmentally sensitive resources within the community and identifies how the use and development of land will affect current levels of public services and facilities.

#### City of San Diego MSCP Subarea Plan

The City’s MSCP Subarea Plan (City 1997) contains a plan and process for the issuance of permits under the Federal Endangered Species Act, California Endangered Species Act, and the California Natural Communities Conservation Planning Act of 1991. The Implementing Agreement associated with the MSCP allows the City to issue Incidental Take Authorizations under the provisions of the MSCP. Applicable state and federal permits are still required for placement of fill in wetlands or other Waters of the US, as well as for impacts to state or federally protected species that are not covered by the MSCP. Waters of the US require permitting as well. The City has adopted Biology Guidelines that, together with the ESL Regulations (described below) and MSCP Subarea Plan, are

used to evaluate project impacts and required mitigation. The Biology Guidelines provide for variable mitigation ratios for project impacts for different habitats and the location of the impacted area and proposed mitigation lands relative the MHPA, as detailed in Section 5.5, *Biological Resources*.

The MSCP identifies a 56,831-acre MHPA in the City for preservation of core biological resource areas and corridors targeted for preservation. The MHPA is defined in many areas by mapped boundaries, and is defined by quantitative targets for conservation of vegetation communities, as well as goals and criteria for preserve design. The MSCP also identifies a series of guidelines which affect development in areas adjacent areas designated as MHPA. Approximately 90 percent of the MHPA lands (52,012 acres) within the City's subarea will be preserved for biological purposes as the ultimate MSCP Preserve. The majority of the project site is within the MHPA (Figure 5.1-2, *MHPA and Steep Slopes*). MSCP regulations restrict development to 25 percent or less of a parcel that is entirely designated as MHPA. Limited water facilities and other essential public facilities are considered "conditionally compatible with the biological objectives of the MSCP."

#### City Municipal Code

##### *Zoning*

The zoning for La Jolla Heights Natural Park is OP-2-1 (Open Space), which is applied to public parks and facilities. Portions of the pipeline installation would take place outside of the park, within areas zoned RS-1-2, RS-1-4, RS-1-5, and RS-1-7 (refer to Figure 2-5, *Zoning Map*). The purpose of the RS zoning categories is to provide regulations for development of single-family dwelling units on lots ranging from 20,000 square feet for RS-1-2 to 5,000 square feet for RS-1-7.

##### *Coastal Overlay Zone*

The project site is located within the Coastal Overlay Zone, which is intended to protect and enhance the quality of public access and coastal resources. Findings required for Coastal Development Permits include that the development would not encroach upon coastal accessways, would protect public views to and along the ocean and other specified scenic coastal areas, and is in conformity with the land use plan. Supplemental findings are required for impacts to ESL within the Coastal Overlay Zone, as described below.

##### *Environmentally Sensitive Lands Regulations*

Chapter 14, Article 3, Division 1 of the SDMC contains ESL Regulations. The purpose of the regulations is to "protect, preserve and, where damaged, restore the environmentally sensitive lands of San Diego and the viability of the species supported by those lands."

ESL are defined to include sensitive biological resources, steep hillsides, coastal beaches, sensitive coastal bluffs, and 100-year floodplains. Of these categories, the majority of the project site comprises steep slopes (see Figure 5.1-2) and sensitive biological resources, in the form of southern maritime chaparral and Diegan coastal sage scrub (see Figure 5.5-1, *Vegetation*).

Section 143.0142(a)(4) of the City's ESL states:

Within the Coastal Overlay Zone, steep hillsides shall be preserved in their natural state and coastal development on steep hillsides containing sensitive biological resources or mapped as Viewshed or Geologic Hazard on Map C-720 shall avoid encroachment into such steep hillsides to the maximum extent possible.

Additionally, Land Development Manual Section III(B)(1)(b)(3) 'Upland Impacts Within the Coastal Overlay Zone,' states:

Within the Coastal Overlay Zone, encroachment into steep hillsides containing sensitive biological resources shall be avoided to the maximum extent possible, and permitted only when in conformance with the encroachment limitations set forth in Section 143.0142(a)(4). Mitigation for permitted impacts shall be required pursuant to Section III.B.1.b(1) and (2) above.

Any development that requires encroachment into ESL types identified in the ESL Regulations is required to obtain either a Neighborhood Development Permit (NDP) or SDP. The purpose of the SDP procedures is to establish a review process for proposed development that may have significant impacts on resources or on the surrounding area. As stated in Section 126.0501 of the SDMC, "The intent of these procedures is to apply site-specific conditions as necessary to assure that the development does not adversely affect the applicable land use plan and to help ensure that all regulations are met."

In general, an SDP can be approved only if the following findings can be made (SDMC Section 126.0505(a)):

- The proposed development will not adversely affect the applicable land use plan;
- The proposed development will not be detrimental to the public health, safety and welfare; and
- The proposed development will comply with the applicable regulations of the LDC.

In addition, where ESL are affected, the following supplemental findings (SDMC Section 126.0505(b)) must be made along with those listed above:

- The site is physically suitable for the design and siting of the proposed development, and the development will result in minimum disturbance to the ESL;
- The proposed development will minimize the alteration of natural landforms, and will not result in undue risk from geologic and erosional forces, flood hazards or fire hazards;
- The proposed development will be sited, and designed to prevent adverse impacts on any adjacent ESL;
- The proposed development will be consistent with the City's MSCP Subarea Plan;

- The proposed development will not contribute to the erosion of public beaches or adversely impact local shoreline sand supply; and
- The nature and extent of mitigation required as a condition of the permit is reasonably related to, and calculated to, alleviate negative impact created by the proposed development.

Additional findings required for impacts to ESL within the Coastal Overlay Zone include that the use is consistent with the applicable zoning, the project is the least environmentally damaging alternative, and the project is consistent with all other provisions of the LCP.

Lastly, when a project cannot meet the conditions set forth in the ESL Regulations, and the project requires a deviation, the proposed project must also present these additional findings (SDMC Section 126.0505(c)):

- There are no feasible measures that can further minimize the potential adverse effects on ESL resources; and
- The proposed deviation is the minimum necessary to afford relief from special circumstances or conditions of the land, not of the applicant's making.

#### *Steep Hillside Guidelines*

The City's Steep Hillside Guidelines are intended to assist in the interpretation and implementation of the development regulations for steep hillsides contained in the ESL Regulations. The steep hillside regulations are applicable when development is proposed on a site containing any portions with a natural gradient of at least 25 percent (25 feet of vertical distance for every 100 feet of horizontal distance) and a vertical elevation of at least 50 feet. They also are applicable if a portion of the site contains a natural gradient of at least 200 percent with a vertical elevation of at least 20 feet. Any areas of a site that are not steep hillsides may be developed. If the existing development area is less than 25 percent of the total site area, then encroachment into steep hillsides is allowed as necessary to achieve a total development area equal to 25 percent of the site. Within the Coastal Overlay Zone, however, projects are evaluated on a case-by-case basis to determine if encroachment can be permitted. The City's intent is that development be located on the least sensitive portions of a site and that encroachment into areas containing steep hillsides, sensitive biological resources, geologic hazards, and mapped view corridors or viewsheds be avoided, or minimized where unavoidable. Projects proposing encroachment must demonstrate conformance with the ESL Regulations and Steep Hillside Guidelines Design Guidelines and result in the most sensitive design possible.

#### *Historical Resource Regulations*

The purpose of the Historical Resources Regulations (HRR; SDMC Chapter 14, Article 3, Division 2) is to protect, preserve, and, where damaged, restore the historical resources within the City, which include historical buildings, historical structures or historical objects, important archaeological sites, historical districts, historical landscapes, and traditional cultural properties.



The goal of the regulations is to preserve important archaeological sites in their natural state, although limited encroachment may be allowed. The Historical Resources Guidelines (HRG), located in the City's Land Development Manual, provide property owners, the development community, consultants, and the general public explicit guidelines for the management of historic resources located within the City's jurisdiction. The guidelines are designed to implement the HRR and guide the development review process.

## **5.1.2 Impact 1: Potential Conflict with Environmental Goals and Policies**

*Issue 1: Would the Project result in an inconsistency/conflict with the environmental goals, objectives, or guidelines of the General/Community Plan in which it is located?*

### **5.1.2.1 Impact Thresholds**

According to the City's Significance Determination Thresholds (2016a), land use policy impacts may be significant if a project would:

- Be substantially incompatible with an adopted plan;
- Cause the development or conversion of general plan or community plan designated open space or prime farmland to a more intensive use;
- Be inconsistent or conflict with an adopted land use designation or intensity, and that inconsistency or conflict would result in indirect or secondary environmental impacts; or
- Be inconsistent or conflict with the environmental goals and/or objectives of a community or general plan.

### **5.1.2.2 Impact Analysis**

#### **Consistency with Existing and Planned Land Uses**

The Project would primarily occur within lands designated for park, open space, and recreational use based on the General Plan, La Jolla Community Plan, and zoning designations. The Exchange Place Reservoir site is designated in the General Plan and Zoning Ordinance for residential use, and pipelines would be replaced within public street rights-of-way.

The City allows areas designated for open space to be used for critical public infrastructure. In the case of the Project, the existing La Jolla View Reservoir and the majority of the associated access road that currently exist within La Jolla Heights Natural Park would be removed. The current reservoir would be replaced by a new facility that, upon completion, would be almost entirely below grade. Ultimately, this would minimize the extent of facilities that are visible within the park, with the majority of the surface returned to natural grade and native vegetation. Therefore, replacement of the existing La Jolla View Reservoir within La Jolla Heights Natural Park would not be incompatible with the existing or planned land use.

The Exchange Place Reservoir would be demolished, with the site regraded and planted with native, drought-tolerant vegetation. This use would be consistent with the residential plan designations and zoning. Similarly, the placement of subsurface infrastructure such as pipelines within road rights-of-way is commonplace, and does not result in a conflict with existing or proposed land uses. Moreover, the Project involves replacement of existing pipelines within the same roadways.

As such, the proposed infrastructure upgrades would be consistent with existing and planned surrounding land uses, and would not be incompatible with an adopted plan. Furthermore, it should be noted that when a local agency is directly and immediately engaged in “the production, generation, storage, treatment, or transmission of water,” the agency has an absolute exemption from complying with local building and zoning ordinances for the location or construction of facilities (Government Code, Section 53091, subds. (d), (e)). The Project involves facilities directly and immediately engaged in the production, generation, treatment, and transmission of water.

### **Consistency with Regional Plans**

#### Regional Air Quality Strategy

Although the SDAB is in non-attainment with the federal standard for ozone and the state standards for ozone and particulate matter, emissions associated with both project construction and operation would be below the SDAPCD significance criteria, as demonstrated in calculations completed for the project contained in the Air Quality Impact Analysis (HELIX 2019a), provided in Appendix F. The Project would also not affect the SDAB's ability to attain and maintain ambient air quality standards. Additional discussion is provided in Section 5.8, *Air Quality*.

#### Basin Plan

The Project would comply with all applicable City and related water quality standards and hydromodification management requirements, as detailed in Section 5.11, *Hydrology/Water Quality*.

#### Multiple Species Conservation Program

The Project would be consistent with the MSCP through conformance to the City's MSCP Subarea Plan, as described below.

### **Consistency with General Plan Environmental Goals and Objectives**

The Project would be consistent with all of the applicable environmental goals and objectives contained in the General Plan except one goal and one policy related to noise, as summarized below and detailed in Table 5.1-1.

The Project would meet the goals of the Public Facilities, Services, and Safety Element by providing safe, reliable, and efficient water infrastructure that is available at the time of need. Specifically, it would replace aging, substandard water infrastructure with facilities that are designed and constructed in accordance with current standards. The proposed facilities would be sized to meet anticipated community demand through 2030, as well as fire flow and emergency storage needs. Water quality in the new La Jolla View Reservoir would be improved as it would cycle more frequently, minimizing the need for supplemental chlorine treatment. Placement of the reservoir at

an elevation that allows it to provide water to its service area via gravity feed would also provide for water system reliability and cost-effectiveness.

The majority of the proposed facilities would be located within natural open space in La Jolla Heights Natural Park. As a result, construction activities would result in impacts to sensitive landforms, biological resources, visual resources, and potentially cultural and paleontological resources. These impacts would, however, be minimized to the extent practicable, and would primarily be temporary. The existing above-ground reservoir within the park would be replaced by a new reservoir that would be almost entirely sub-surface. The existing La Jolla View Reservoir site and the majority of the area impacted by construction of the new site would be returned to natural contours and restored with native vegetation communities, subject to habitat establishment success criteria and a five-year maintenance and monitoring program. Portions of the site that would be above water facilities would be revegetated with native, drought-tolerant vegetation, subject to a 25-month maintenance and monitoring period. The recontouring and restoration/revegetation would substantially minimize the long-term impacts that would result from the Project.

In accordance with applicable General Plan goals and objectives, measures would be employed to minimize other potential adverse impacts during project construction. These measures would include, but not be limited to, restriction on the number of haul trucks that would be allowed per day; appropriate abatement of hazardous materials at the existing reservoir sites; mitigation of impacts to biological resources; minimization of waste disposal, air pollutant generation, and energy demand; adherence to appropriate geotechnical design standards; and protection of water quality.

The sole exception with regard to the Project's consistency with the General Plan's goals and objectives is with regard to construction noise. The Noise Element includes the following goal and related policy:

- Minimal exposure of residential and other NSLUs to excessive construction, refuse vehicles, parking lot sweeper-related, and public noise; and
- Implement limits on the hours of operation for non-emergency construction and refuse vehicle and parking lot sweeper activity in residential areas and areas abutting residential areas.

For the majority of project construction activities, noise would be in compliance with the City's Noise Ordinance, or would be reduced to compliance levels through use of appropriate noise barriers. Pouring of concrete for portions of the reservoir, however, would need to occur continuously (up to approximately 18 hours per day) in order to avoid joints that would compromise the integrity of the structure. These extended construction hours would occur over a maximum of 20 days and would result in significant and unmitigable noise impacts.

The Project would conform to the majority of the General Plan's environmental goals and objectives. Impacts related to short-term, extended construction hours would, however, be significant and unmitigable, with associated land use policy consistency impacts also considered significant.

### **Consistency with the Climate Action Plan**

As detailed in Section 5.9, *Greenhouse Gas Emissions*, the Project would be consistent with Step 1. While Step 2 of the CAP Consistency Checklist would not be applicable to the Project since a Certificate of Occupancy is not required, the Project also would not conflict with the measures identified in Step 2. Therefore, the Project would be consistent with the City's CAP.

### **Consistency with La Jolla Community Plan Environmental Goals and Objectives**

Similar to the General Plan, the La Jolla Community Plan contains a number of goals related to the preservation of open space and associated sensitive resources. As described above, the Project would result in impacts to such resources, primarily on a temporary basis during construction. The Community Plan expresses a preference for mitigation of biological impacts that occur within La Jolla's coastal zone to occur within the community if feasible. Portions of the site that would be temporarily disturbed by project construction activities, but that would not overlie water facilities, would be returned to their natural contours and restored with native vegetation, which would provide a portion of the required mitigation. Areas that overlie water facilities would be revegetated with native plants but would not count toward biological mitigation requirements due to anticipated future maintenance needs. Because the community is almost entirely built out, with remaining open space intact and not in need of restoration, there are no feasible locations within the La Jolla community to accomplish the remaining required habitat mitigation. Mitigation that cannot occur on site would, therefore, occur outside of the community.

In addition to the goals and objectives that are similar to those identified in the General Plan, the Community Plan's Community Facilities, Parks and Services Element includes the following goal: "Ensure that all new and existing public facilities such as fire stations, water reservoirs and neighborhood parks are designed and developed in a manner that will not contribute to any adverse impacts to the environmentally sensitive areas of La Jolla." The location of both the existing and proposed reservoirs in an environmentally sensitive area would result in some adverse impacts to these areas. Impacts would, however, be minimized to the extent feasible, with the majority of the site returned to its natural contours and restored/revegetated upon completion of construction activities. Where impacts cannot be avoided, they would be fully mitigated in accordance with CEQA and City regulations. Impacts related to conflicts with this policy would not be substantial and, therefore, would be considered less than significant.

### **Consistency with the MSCP Subarea Plan**

As noted in Section 5.1.1, the MSCP restricts development to 25 percent or less of a parcel that is entirely designated as MHPA; for essential public facility projects, "up to an additional 5% development area inside the MHPA is permitted in order to accommodate essential public facilities as identified in an adopted Land Use Plan (e.g., Community Plan, Specific Plan)." Replacement of the La Jolla View Reservoir is on the City's facilities improvement list and is a public potable water reservoir. As such, the Project likely qualifies as an essential public facility; however, the additional five percent development area is not necessary for the Project. The La Jolla View Reservoir and associated pipeline work area would be almost entirely contained within a 42.6-acre parcel owned by the City (Assessor's Parcel Number [APN] 350-680-05). Of the parcel's 42.6 acres, nearly all (37 acres, or 87 percent) are MHPA lands. The Project would impact 7.57 acres of land within the parcel, 96 percent of which are MHPA lands. As such, Project development constitutes

approximately 18 percent of the total parcel, and less than the MHPA development limit. The Exchange Place Reservoir and Pump Station that are to be demolished are located entirely on a separate 0.94-acre parcel owned by the City (APN 350-512-06). None of this parcel is designated MHPA. As such, the Project would be compliant with the MHPA encroachment standards. The Project also would comply with other applicable provisions of the MSCP Subarea Plan with regard to biological resource impacts and mitigation, as detailed in Section 5.5.

### **Consistency with the Land Development Code**

The Project would impact ESL, including sensitive biological resources and steep hillsides within the coastal zone. As a result, an SDP is required and associated findings must be made in order for the Project to be approved.

The La Jolla View Reservoir and associated pipeline work occurs almost entirely within the 42.6-acre parcel owned by the City. Within the parcel, approximately 66 percent (28 acres) are steep slopes. The Project would impact 5.4 acres of steep slopes, out of the total parcel area of 42.6 acres. Impacts would occur to a total of 17 percent of the project site. As this would be less than 25 percent of the total site area, construction of the La Jolla View Reservoir would be consistent with the impact limits related to steep slopes. Demolition activities at the Exchange Place Reservoir also would impact approximately 0.16 acre of slopes that exceed 25 percent slope; however, this site has been previously entirely developed and is therefore not subject to the ESL Regulations or Steep Hillside Guidelines.

The Project would minimize impacts to ESL to the extent feasible, with the majority of the site to be returned to natural contours and restored/revegetated upon completion of construction activities. It would, therefore, be consistent with the ESL regulations.

The Project also would comply with the City's Historical Resource Regulations through implementation of a monitoring program to help ensure that currently unknown archaeological resources (if any) that would be disturbed by the Project would be appropriately protected, based on their level of sensitivity, as detailed in Section 5.6, *Historical and Tribal Cultural Resources*.

### **5.1.2.3 Significance of Impacts**

The Project would not conflict with existing or planned land uses, and would be consistent with the majority of the environmental goals and objectives of the General Plan, La Jolla Community Plan, and other applicable plans and regulations. The Project would, however, conflict with the General Plan Noise Element related to extended construction hours necessary for continuous concrete pours (up to approximately 18 hours over a maximum of 20 days), which would result in significant and unmitigable noise impacts. Impacts related to consistency with environmental goals and objectives are, therefore, considered significant.

### **5.1.2.4 Mitigation, Monitoring and Reporting**

Due to the nature of the Project, no mitigation is available to reduce conflicts with the identified goals and policies. Specifically, as described in Section 8.3.5, *Limited Construction Hours*, the City evaluated whether it would be feasible to construct the reservoir in a way that would not require extended construction hours. Because these options would reduce the structural integrity of the

proposed reservoir, however, they were rejected from further consideration. Similarly, as discussed in Section 5.3.2.5, no feasible mitigation measures are available to reduce noise impacts during nighttime construction to below a level of significance. Therefore, the associated land use policy inconsistency also is considered significant and unmitigable.

**Table 5.1-1**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>CITY OF SAN DIEGO GENERAL PLAN</b>		
<b>Mobility Element</b>		
<p><i>Street and Freeway System Goals:</i></p> <ul style="list-style-type: none"> <li>• A street and freeway system that balances the needs of multiple users of the public right-of-way.</li> <li>• An interconnected street system that provides multiple linkages within and between communities.</li> <li>• Vehicle congestion relief.</li> <li>• Safe and efficient street design that minimizes environmental and neighborhood impacts.</li> <li>• Well maintained streets.</li> </ul>	The Project would not alter existing roadways or impact the limited pedestrian facilities that are present along the subject roadway segments. The number of haul truck trips would be limited to no more than 50 round trips per day to minimize potential congestion. The contractor would be required to return road surfaces to existing or better conditions at the completion of the construction process.	Yes
<i>Policy ME-C.4.b:</i> Adequately maintain the transportation system through regular preventative maintenance and repair, and life cycle replacement.	As noted above, the contractor would be required to return road surfaces to existing or better conditions at the completion of the construction process.	Yes
<i>Policy ME-C.7:</i> Preserve and protect scenic vistas along public roadways.	As detailed in Section 5.2, <i>Visual Effects/Neighborhood Character</i> , the Project would result in temporary impacts to scenic vistas from area roadways during the construction process, due to the extent of proposed grading within La Jolla Heights Natural Park. Upon completion of construction, however, the majority of the site would be returned to its natural contours and restored/revegetated with native plant species.	Yes
<b>Urban Design Element</b>		
<p><i>Policy UD-A.1:</i> Preserve and protect natural landforms and features.</p> <p>a. Protect the integrity of community plan designated open spaces (see also Conservation Element, Policy CE-B.1).</p>	The Project would replace existing, aging water infrastructure in La Jolla Heights Natural Park, a designated open space area within the MHPA. Temporary impacts would occur to sensitive habitats and natural steep slopes. No wetlands or riparian zones would be	Yes

**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>CITY OF SAN DIEGO GENERAL PLAN (cont.)</b>		
<b>Urban Design Element (cont.)</b>		
<p>b. Continue to implement the Multiple Species Conservation Program (MSCP) to conserve San Diego's natural environment and create a linked open space system. Preserve and enhance remaining naturally occurring features such as wetlands, riparian zones, canyons, and ridge lines.</p>	<p>impacted. The existing La Jolla View Reservoir and the majority of the associated access road would be removed. The reservoir would be replaced by a facility that, upon completion, would be almost entirely below grade. Ultimately, this would minimize the extent of facilities that are visible within the park, with the majority of the surface returned to natural grade. The majority of the site would be restored with native vegetation communities, with the portions above new water facilities revegetated with native, drought-tolerant species. The Project would be consistent with the provisions of the MSCP as detailed in Section 5.5, <i>Biological Resources</i>.</p>	
<b>Public Facilities, Services, and Safety Element</b>		
<p><i>Evaluation of Growth, Facilities, and Services Goal:</i> Adequate public facilities that are available at the time of need.</p>	<p>The Project is intended to serve projected potable water service demands of the La Jolla community through 2030, as well as fire flow and emergency storage needs.</p>	Yes
<p><i>Water Infrastructure Goal:</i> A safe, reliable, and cost-effective water supply for San Diego.</p>	<p>The Project would improve water supply reliability by locating the reservoir at an appropriate elevation to effectively serve its service area and sizing it to accommodate anticipated community demand, as well as fire flow and emergency storage. Water quality in the reservoir would also be improved as it would cycle more frequently, minimizing the need for supplemental chlorine treatment. Placement of the reservoir at an elevation that allows it to provide water to its service area via gravity feed would also provide for water system reliability and cost-effectiveness.</p>	Yes
<p><i>Water Infrastructure Goal:</i> Water supply infrastructure that provides for the efficient and sustainable distribution of water.</p>	<p>The Project would provide for efficient and sustainable distribution of water by locating the proposed reservoir at an appropriate location and elevation to provide water to its service area via gravity feed.</p>	Yes



**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>CITY OF SAN DIEGO GENERAL PLAN (cont.)</b>		
<b>Public Facilities, Services, and Safety Element (cont.)</b>		
<i>Policy PF-H.2:</i> Provide and maintain essential water storage, treatment, supply facilities, and infrastructure to serve existing and future development.	The Project would provide essential water storage and conveyance facilities, sized to serve anticipated community demands through 2030 as well as fire flow and emergency storage needs.	Yes
<p><i>Waste Management Goal:</i> Maximum diversion of materials from disposal through the reduction, reuse, and recycling of wastes to the highest and best use.</p> <p><i>Policy PF-I.2:</i> Maximize waste reduction and diversion (see also Conservation Element, Policy CE.A.9).</p> <ul style="list-style-type: none"> <li>d. Maximize the separation of recyclable and compostable materials.</li> <li>f. Reduce and recycle construction and demolition (C&amp;D) debris. Strive for recycling of 100 percent of inert C&amp;D materials and a minimum of 50 percent by weight of all other material.</li> <li>g. Use recycled, composted, and post-consumer materials in manufacturing, construction, public facilities and in other identified uses whenever appropriate.</li> </ul>	The project would implement the project Waste Management Plan (WMP; Appendix J) to reduce waste deposited in landfills. Section 5.14, <i>Public Utilities</i> , contains additional waste management details.	Yes
<i>Public Utilities Goal:</i> Public utility services provided in the most cost-effective and environmentally sensitive way.	The Project would involve demolition of two existing above-ground reservoirs, and construction of one new reservoir that would be almost entirely sub-surface. This would enable the majority of the affected area to be returned to natural contours and restored/ revegetated with native species. The Project also includes other applicable measures to minimize environmental impacts, such as air pollutant and GHG emissions, hazardous materials, and cultural resources.	Yes

**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>CITY OF SAN DIEGO GENERAL PLAN (cont.)</b>		
<b>Public Facilities, Services, and Safety Element (cont.)</b>		
<i>Public Utilities Goal:</i> Public utilities that sufficiently meet existing and future demand with facilities and maintenance practices that are sensible, efficient, and well-integrated into the natural and urban landscape.	The proposed facilities would be sized to accommodate anticipated community demands through 2030 as well as fire flow and emergency storage needs. Associated maintenance activities would be minimal, requiring approximately weekly visits (similar to the existing facilities). The proposed reservoir would be almost entirely buried underground, with native vegetation planted over it.	Yes
<i>Policy PF-M.1:</i> Ensure that public utilities are provided, maintained, and operated in a cost-effective manner that protects residents and enhances the environment.	The Project would protect residents through removal of an aging reservoir located on a potential landslide deposit and replacing it with a new facility designed to current construction standards. Abatement of existing asbestos and lead-based paint would occur in accordance with an approved Abatement Work Plan. The natural environment would be enhanced through removal of existing facilities, returning the majority of the site to natural contours, and restoring/revegetating the affected areas with native plants.	Yes
<i>Seismic Safety Goal:</i> Protection of public health and safety through abated structural hazards and mitigated risks posed by seismic conditions.  <i>Policy PF-Q.1:</i> Protect public health and safety through the application of effective seismic, geologic and structural considerations.	A Geotechnical Evaluation has been prepared for the Project and is provided in Appendix I. As discussed in Section 5.12, <i>Geology and Soils</i> , seismic and other geotechnical risks would be less than significant with project compliance with the geotechnical evaluation recommendations, the conformance with applicable regulatory requirements.	Yes
<b>Recreation Element</b>		
<i>Policy RE-C.2:</i> Protect, manage and enhance population- and resource-based parks and open space lands through appropriate means which include sensitive planning, park and open space dedications, and physical protective devices.	Planning for the Project proceeded in accordance with the terms of a MOU between the City's Parks and Recreation Department and Public Utilities Department, as described in Chapter 4.0, <i>History of Project Changes</i> . In accordance with the MOU, the proposed reservoir would be located almost entirely underground and the majority of the site would be returned to natural contours and restored/revegetated with native plants.	Yes

**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>CITY OF SAN DIEGO GENERAL PLAN (cont.)</b>		
<b>Recreation Element (cont.)</b>		
<p><i>Open Space Lands and Resource-Based Parks Goals:</i></p> <ul style="list-style-type: none"> <li>• An open space and resource-based park system that provides for the preservation and management of natural resources, enhancement of outdoor recreation opportunities, and protection of the public health and safety.</li> <li>• Preservation of the natural terrain and drainage systems of San Diego's open space lands and resource-based parks.</li> </ul>	<p>The Project would involve demolition of two existing above-ground reservoirs, and construction of one new reservoir that would be almost entirely sub-surface. While impacts would occur, this would enable the majority of the affected area to be returned to natural contours and restored/revegetated with native species. A temporary culvert in the primary drainage would maintain flows during project construction activities, with the drainage contours restored upon the completion of construction.</p>	<p>Yes</p>
<b>Conservation Element</b>		
<p><i>Climate Change and Sustainable Development Goal:</i> To reduce the City's overall carbon dioxide footprint by promoting energy efficiency, alternative modes of transportation, employing sustainable planning and design techniques, and providing environmentally sound waste management.</p>	<p>Project energy consumption would primarily be limited to the construction period, associated with diesel fuel and gasoline consumption. As detailed in Section 5.10, <i>Energy</i>, the Project's use of energy would not be wasteful or inefficient. The reservoir's location at an elevation where it can provide water via gravity feed would avoid the need for additional pumping and associated energy demands. The Project would also recontour and restore or revegetate the majority of the site. In addition, the Project would implement a WMP (see Appendix J) to reduce solid waste disposal needs in association with the Project.</p>	<p>Yes</p>
<p><i>Policy CE-A.8:</i> Reduce construction and demolition waste in accordance with Public Facilities Element, Policy PF-I.2, or by renovating or adding on to existing buildings, rather than constructing new buildings.</p>	<p>As specified in Section 5.14, <i>Public Utilities</i>, the Project would implement a WMP (Appendix J) which would effectively reduce C&amp;D waste.</p>	<p>Yes</p>
<p><i>Open Space and Landform Preservation Goal:</i> Preservation and long-term management of the natural landforms and open spaces that help make San Diego unique.</p>	<p>The new La Jolla View Reservoir would be almost entirely sub-surface. While impacts to natural landforms and open spaces would occur during project construction, the majority of the affected area to be returned to natural contours and restored/revegetated with native species.</p>	<p>Yes</p>

**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>CITY OF SAN DIEGO GENERAL PLAN (cont.)</b>		
<b>Conservation Element (cont.)</b>		
<i>Policy CE-B.1:</i> Protect and conserve the landforms, canyon lands, and open spaces that: define the City's urban form; provide public views/vistas; serve as core biological areas and wildlife linkages; are wetlands habitats; provide buffers within and between communities; or provide outdoor recreational opportunities.	The Project would result in temporary impacts to public views/vistas and sensitive biological areas within La Jolla Heights Natural Park. The majority of the affected area would, however, be returned to natural contours and restored/revegetated with native species. Impacts to biological resources would be appropriately mitigated. The Project would not adversely affect wildlife linkages, wetlands habitats, or authorized recreational opportunities.	Yes
<i>Policy CE-B.2:</i> Apply the appropriate zoning and Environmentally Sensitive Lands (ESL) regulations to limit development of floodplains, sensitive biological areas including wetlands, steep hillsides, canyons, and coastal lands.	The Project is subject to the ESL regulations. It would be within the allowable encroachment into steep slopes and MHPA lands, and would minimize impacts to ESL to the extent feasible.	Yes
<i>Policy CE-B.4:</i> Limit and control runoff, sedimentation, and erosion both during and after construction activity.	As detailed in Section 5.12, <i>Geology and Soils</i> , the Project would incorporate applicable measures to minimize the potential for uncontrolled runoff, sedimentation, and erosion during construction activities. At the completion of construction, the majority of the site would be returned to its natural contours and restored/revegetated, resulting in negligible long-term impacts related to these topics.	Yes
<i>Air Quality Goal:</i> Regional air quality which meets state and federal standards.	As detailed in Section 5.8, <i>Air Quality</i> , the Project would result in short-term, construction period emissions that are below the established significance thresholds and would not conflict with the applicable air quality management plans.	Yes
<i>Air Quality Goal:</i> Reduction in greenhouse gas emissions effecting climate change.	As detailed in Section 5.9, <i>Greenhouse Gases</i> , the Project would not conflict with the CAP or other applicable plans and policies adopted with the intent of reducing GHG emissions.	Yes
<i>Policy CE-F.4:</i> Preserve and plant trees, and vegetation that are consistent with habitat and water conservation policies and that absorb carbon dioxide and pollutants.	The Project would restore/revegetate the majority of the site with drought-tolerant, native vegetation.	Yes

**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>CITY OF SAN DIEGO GENERAL PLAN (cont.)</b>		
<b>Conservation Element (cont.)</b>		
<i>Policy CE-F.9:</i> Prohibit the idling of motive equipment (vehicles and equipment using fossil fuels) that is owned or leased by the City, and operated by City employees unless mission necessary.	As identified in Section 3.4.2, <i>Construction Impact Minimization Measures</i> , on-site vehicle idling would be reduced to the extent feasible during project construction activities.	Yes
<i>Policy CE-G.1:</i> Preserve natural habitats pursuant to the MSCP, preserve rare plants and animals to the maximum extent practicable, and manage all City-owned native habitats to ensure their long-term biological viability.	The Project would involve encroachment into City-owned open space, with associated impacts to sensitive biological communities, as detailed in Section 5.5, <i>Biological Resources</i> . Disturbance would be within the allowable amount of encroachment into the MHPA. The existing La Jolla View Reservoir site and the majority of the area impacted by construction of the new site would be returned to natural contours and restored with native vegetation communities, subject to success criteria and a five-year maintenance and monitoring program. Portions of the site that would be above water facilities would be revegetated with native, drought-tolerant vegetation, subject to a 25-month maintenance and monitoring period.	Yes
<i>Policy CE-G.5:</i> Promote aquatic biodiversity and habitat recovery by reducing hydrological alterations, such as grading a stream channel.	The Project would include temporary impacts to natural drainage channels, particularly in association with the temporary access road and stockpile. This area would, however, be returned to its natural contours and restored/revegetated with native plant species.	Yes
<b>Noise Element</b>		
<i>Construction, Refuse Vehicles, Parking Lot Sweepers, and Public Activity Noise Goal:</i> Minimal exposure of residential and other noise-sensitive land uses to excessive construction, refuse vehicles, parking lot sweeper-related, and public noise.	As detailed in Section 5.3, <i>Noise</i> , the Project would result in generation of noise during construction. For the majority of activities, noise would be in compliance with the City's Noise Ordinance, or would be reduced to compliance levels through use of appropriate noise barriers. Noise impacts associated with continuous concrete pours (up to approximately 18 hours per day) for the reservoir would, however, be significant and unmitigable. These extended construction hours would occur over a maximum of 20 days.	No

**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>CITY OF SAN DIEGO GENERAL PLAN (cont.)</b>		
<b>Noise Element (cont.)</b>		
<i>Policy NE-G.1:</i> Implement limits on the hours of operation for non-emergency construction and refuse vehicle and parking lot sweeper activity in residential areas and areas abutting residential areas.	The majority of construction activities would occur within the hours established by the City's Noise Ordinance. Pouring of concrete for portions of the reservoir, however, would need to occur continuously (up to 16 hours per day) in order to avoid joints that would compromise the integrity of the structure.	No
<b>LA JOLLA COMMUNITY PLAN</b>		
<b>Overall Community Goals</b>		
Conserve and enhance the natural amenities of the community such as its views from identified public vantage points (as identified in Figure 9), open space, hillsides, canyons, ocean, beaches, water quality, bluffs, wildlife and natural vegetation, and achieve a desirable relationship between the natural and developed components of the community.	As detailed in Section 5.2.2.2, no impacts to scenic views designated in the Community Plan would occur. The Project would, however, result in temporary impacts to open space, hillsides, ravines, and native vegetation during the construction period. Upon completion of construction, the majority of the site would be returned to its natural contours and restored/revegetated with native plant species.	Yes
Provide adequate public facilities necessary to support the educational, recreational, safety and health related needs of La Jolla residents including children, families and the elderly as well as providing for the needs of visitors.	The Project would provide water facilities necessary to serve anticipated community demand through 2030, as well as fire flow and emergency storage needs.	Yes
<b>Natural Resources and Open Space System</b>		
Goals: <ul style="list-style-type: none"> <li>Preserve the natural amenities of La Jolla such as its open space, hillsides, canyons, bluffs, parks, beaches, tidepools and coastal waters.</li> <li>Maintain the identified public views to and from these amenities in order to achieve a beneficial relationship between the natural or unimproved and developed areas of the community.</li> <li>Preserve all designated open space and habitat linkages within La Jolla such as the slopes of Mount Soledad and the sensitive ravines of Pottery Canyon.</li> </ul>	The Project would impact City-owned open space designated as MHPA, with associated impacts to natural landforms, sensitive biological communities, and visual resources. Disturbance would be within the allowable amount of encroachment into the MHPA and steep slopes (17 percent, relative to the 25 percent allowable). The existing La Jolla View Reservoir site and the majority of the area impacted for construction of the new site would be returned to natural contours and restored with native vegetation communities, subject to success criteria and a five-year maintenance and monitoring program. Portions of the site that would be above water facilities would be revegetated with native,	Yes

**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>LA JOLLA COMMUNITY PLAN</b>		
<b>Natural Resources and Open Space System (cont.)</b>		
<ul style="list-style-type: none"> <li>Protect the environmentally sensitive resources of La Jolla's open areas including its coastal bluffs, sensitive steep hillside slopes, canyons, native plant life and wildlife habitat linkages.</li> <li>Conserve the City of San Diego's Multi-habitat Planning Area.</li> </ul>	drought-tolerant vegetation, subject to a 25-month maintenance and monitoring period.	
<i>Policy 1.a:</i> The City should ensure, to the fullest extent possible, that sensitive resources such as coastal sage scrub and mixed chaparral that are located in designated, as well as dedicated, open space areas and open space easements will not be removed or disturbed.	The Project would result in impacts to Diegan coastal sage scrub and southern maritime chaparral within a designated open space area. These impacts would primarily be temporary, with the majority of the site returned to natural contours and restored/revegetated with native vegetation. Impacts would be fully mitigated in accordance with CEQA and City regulations.	Yes
<i>Policy 1.c:</i> The City should undertake an environmental assessment analysis of individual developments proposed for lands containing coastal sage or chaparral vegetation, or on steep slopes in accordance with the requirements of the California Environmental Quality Act and the City of San Diego's Multiple Species Conservation Program Subarea Plan to determine the degree to which the proposed use will affect these sensitive resources.	The City has required preparation of a Biological Technical Report (Appendix D) and this EIR to address impacts to, among other topics, biological resources and steep slopes.	Yes
<p><i>Policy 1.d:</i> If biological impacts occur within the coastal zone of La Jolla, the mitigation should occur within the coastal zone of La Jolla, and if not, elsewhere within the La Jolla community. Mitigation for biological impacts within La Jolla should only be considered outside of the community if the applicant can demonstrate that there is no feasible way to mitigate within the community.</p> <p><i>Policy 1.e:</i> Mitigation for biological impacts should, if possible, occur within the boundaries of the La Jolla community.</p>	Portions of the site that would be temporarily disturbed by project construction activities, but that would not overlie water facilities, would be returned to their natural contours and restored with native vegetation, which would provide a portion of the required mitigation. Areas that overlie water facilities would be revegetated with native plants, but would not count toward biological mitigation requirements. Because the community is almost entirely built out, with remaining open space intact and not in need of restoration, there are no feasible locations within the La Jolla community to accomplish the remaining required habitat mitigation.	Yes

**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>LA JOLLA COMMUNITY PLAN</b>		
<b>Natural Resources and Open Space System (cont.)</b>		
<p><i>Policy 1.f:</i> The City shall ensure the preservation of public and private property that [is] partially or wholly designated as open space to the maximum extent feasible. Development potential on open space lands shown on Figure 7 shall be limited to preserve the park, recreation, scenic, habitat and/or open space values of these lands, and to protect public health and safety. Maximum developable area and encroachment limitations are established to concentrate development in existing developed areas and outside designated open space. Prior to the adoption of rezonings for the open space shown on Figure 7, and in addition [to] the Environmentally Sensitive Lands regulations, when applicable, the encroachment limitation standards taken from the OR-1-1 and OR-1-2 zone and included in Appendix L, shall be implemented for development on those portions of the property designated as open space on Figure 7.</p>	<p>The Project would impact City-owned open space that is shown on Figure 7 of the Community Plan. In accordance with the standards contained in Community Plan Appendix L, encroachment would be less than 25 percent of the site. Additionally, the majority of the site would be returned to its natural contours and restored/revegetated with native vegetation.</p>	<p>Yes</p>
<p><i>Policy 1.j:</i> The City should analyze for visual impact and ensure public review and comment for any structures proposed to be located in City parkland and open space.</p>	<p>Section 5.2, <i>Visual Quality/Neighborhood Character</i>, of this EIR analyzes the visual impacts of the Project in detail. The EIR will be available for a 45-day public comment period prior to a decision regarding project approval.</p>	<p>Yes</p>
<p><i>Policy 2.a:</i> Public views from identified public vantage points, to and from La Jolla's community landmarks and scenic vistas from the ocean, beach and bluff areas, hillsides and canyons shall be retained and enhanced for public use (see Figure 9 and Appendix G).</p>	<p>As detailed in Section 5.2.2.2, no impacts to scenic views designated in the Community Plan would occur.</p>	<p>Yes</p>
<p><i>Policy 2.c:</i> The scenic value and visual quality of Mount Soledad Park, La Jolla Heights Natural Park and habitat linkages through steep slopes and canyons shall be protected from developments or improvements that would detract from the scenic quality and value of these resources.</p>	<p>The Project would result in impacts to open space within La Jolla Heights Natural Park during the construction period. Upon completion of construction, the majority of the site would be returned to its natural contours and restored/revegetated with native plant species. Specifically, permanent above-ground features would be limited to the reservoir access hatches, SCADA equipment, two-space parking area, and shortened access road.</p>	<p>Yes</p>



**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>LA JOLLA COMMUNITY PLAN</b>		
<b>Natural Resources and Open Space System (cont.)</b>		
<p><i>Policy 4.a:</i> The City shall apply the Environmentally Sensitive Lands regulations to all new development on property in La Jolla having slopes with a natural gradient of 25 percent or greater and a minimum differential of 50 feet. The Environmentally Sensitive Lands regulations provide supplementary development regulations to underlying zones such as development encroachment limits for natural steep slopes, erosion control measures and compliance with design standards identified in the Steep Hillside Guidelines. Development on steep hillsides shall avoid encroachment into such hillsides to the maximum extent possible. When encroachment is unavoidable, it shall be minimized and in accordance with the encroachment limitation standards contained in the plan. These regulations ensure that development occurs in a manner that protects the natural and topographic character of the hillsides as well as [e]nsure that development does not create soil erosion or contribute to slide damage and the silting of lower slopes. Disturbed portions of steep hillsides shall be revegetated or restored to the extent possible.</p>	<p>The Project would result in impacts to natural steep slopes and has been reviewed for compliance with the ESL Regulations. In accordance with those regulations, encroachment would be limited to less than 25 percent of the site. Appropriate measures to control erosion during construction would be employed. Upon completion of construction, the majority of the site would be returned to its natural contours and restored/revegetated with native plant species.</p>	<p>Yes</p>
<p><i>Policy 4.b:</i> The City should not issue a development permit for a project located on steep hillsides in La Jolla, unless all the policies, recommendations and conditions identified in this plan element are met.</p>	<p>The Project would require an SDP for impacts to steep hillsides. As documented in this table, the policies, recommendations, and conditions of the La Jolla Community Plan's Natural Resources and Open Space Systems Element would be met.</p>	<p>Yes</p>
<p><i>Policy 4.d:</i> The City should protect natural vegetation, and habitat areas on steep slopes and natural drainage areas from impacts of new development on buildable portions of the lot.</p>	<p>The limits of construction would be identified and appropriate BMPs would be employed to protect portions of the site from indirect impacts resulting from project construction activities. Recontouring and restoration/revegetation of the majority of the site would minimize the potential for long-term indirect effects.</p>	<p>Yes</p>

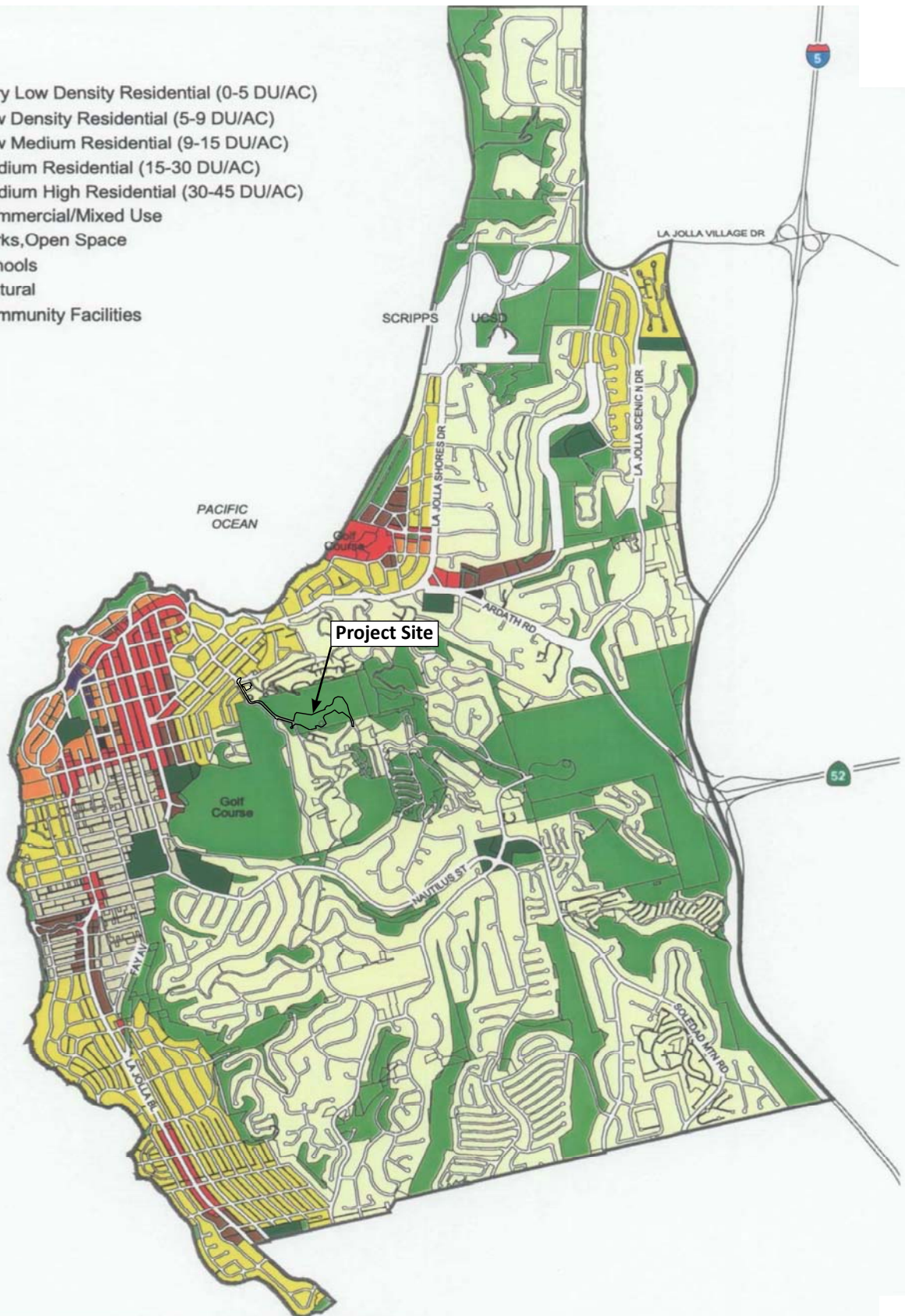
**Table 5.1-1 (cont.)**  
**CITY OF SAN DIEGO LAND USE GOALS, OBJECTIVES, AND POLICIES CONSISTENCY EVALUATION**

Applicable Elements, Goals, and Policies	Consistency Evaluation	Consistent (Yes/No)
<b>LA JOLLA COMMUNITY PLAN</b>		
<b>Community Facilities, Parks and Services Element</b>		
<p><i>Goal:</i> Ensure that all new and existing public facilities such as fire stations, water reservoirs and neighborhood parks are designed and developed in a manner that will not contribute to any adverse impacts to the environmentally sensitive areas of La Jolla.</p>	<p>The Project would contribute to adverse impacts to environmentally sensitive areas of La Jolla, including sensitive vegetation communities and steep slopes within the coastal zone. Such impacts would be within the allowable encroachment allowances and upon completion of construction, the majority of the site would be returned to its natural contours and restored/revegetated with native plant species. Accordingly, the policy inconsistency would not be substantial and associated land use impacts would be considered less than significant.</p>	No
<b>Heritage Resources</b>		
<p><i>Policy 4:</i> The City should ensure that sensitive paleontological resources in La Jolla are preserved through the recovery of significant fossils identified during the environmental review process. This work should be performed in accordance with the Secretary of Interior's Standards and Historical Resources Board policies and procedures.</p>	<p>As detailed in Section 5.7, <i>Paleontological Resources</i>, the Project would be subject to a paleontological monitoring program to help ensure that significant fossils (if any) disturbed by construction activities would be recovered and curated.</p>	Yes

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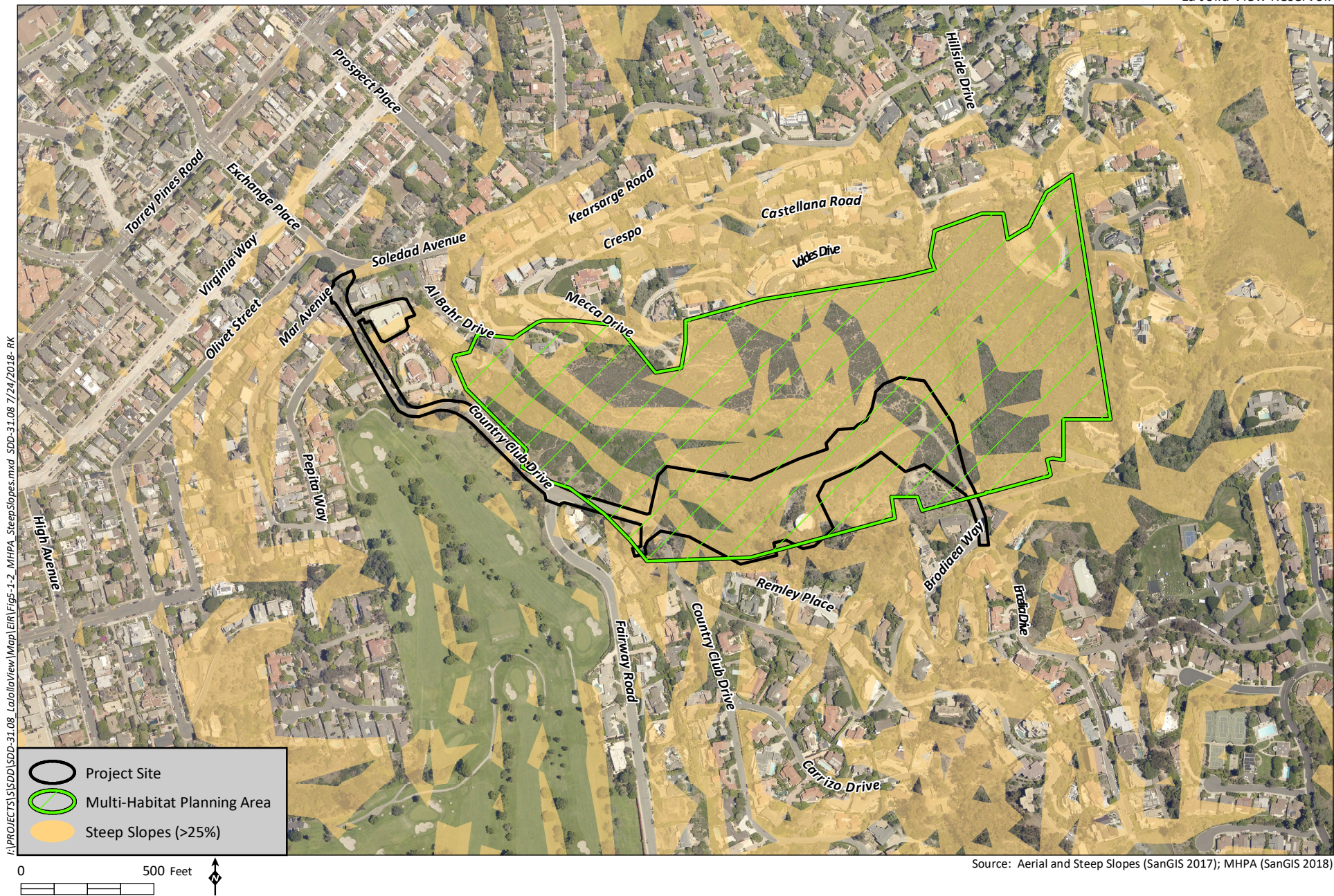
**Legend**

- Very Low Density Residential (0-5 DU/AC)
- Low Density Residential (5-9 DU/AC)
- Low Medium Residential (9-15 DU/AC)
- Medium Residential (15-30 DU/AC)
- Medium High Residential (30-45 DU/AC)
- Commercial/Mixed Use
- Parks, Open Space
- Schools
- Cultural
- Community Facilities



Source: City of San Diego







## 5.2 Visual Quality/Neighborhood Character

This section describes the existing visual setting of the project site and vicinity within the context of the surrounding community, identifies applicable guidelines and regulations related to visual resources, and evaluates potential visual impacts related to implementation of the Project.

### 5.2.1 Existing Conditions

#### 5.2.1.1 Environmental Setting

##### Existing Landforms

The project site is located within the La Jolla Heights Natural Park and an adjacent residential area to the northwest and along Country Club Drive. The project site includes steep slopes, ridges, and canyons on the west and northwest flanks of Mount Soledad. The majority of the study area occurs within a primarily undeveloped natural open space park, but the area surrounding the project site also includes roads and residential development. The project site sits above and northeast of the La Jolla Country Club's golf course, which is characterized by rolling greens and mature trees.

Elevations range from approximately 650 feet AMSL in the southeastern portion of the site to approximately 220 feet AMSL in its northwestern portion, adjacent the Exchange Place Reservoir (see Figure 2-3, *Topographic Map*). The southeastern portion of the site is characterized by steep slopes and narrow canyons, while the northwestern area has more gently sloping terrain. Prominent canyons within the site and vicinity include an east-northwest trending canyon in the western portion of the park, an east-west trending canyon north of the existing La Jolla View Reservoir site, and a north-south trending canyon located to the east of the project site.

The La Jolla View Reservoir site generally slopes downward to the west from the adjacent peak, overlooking the community of La Jolla. The existing reservoir is separated from nearby residential development by the large, east-northwest trending canyon that extends along the north side of Country Club Drive. The Exchange Place Reservoir site is located atop a steep hill, surrounded by residential development and roadways.

##### Visual Setting and Site Characteristics

Existing on-site structures include the La Jolla View Reservoir, Exchange Place Reservoir, and an existing communication and security pole; photos of these structures are depicted in Figures 5.2-1a and 5.2-1b, *Existing Site Characteristics*. The visual setting of the existing reservoirs is described in further detail below.

The La Jolla Heights Natural Park is a 42-acre open space reserve. Although the park is not formally open to public access, there is evidence of dispersed recreation and trails extending through the park from adjacent roadways, including from Al Bahr Drive and Mecca Drive near the northwestern boundary of the park, up to the peak at Encelia Drive. The project area is located within one of the more widely visible undeveloped areas of La Jolla, and is a prominent feature within the visual backdrop of views to the east from the La Jolla community.

As described in Chapter 2.0, *Environmental Setting*, the majority of the La Jolla Heights Natural Park within which the project site is located is undeveloped and supports native vegetation, primarily consisting of southern maritime chaparral and Diegan coastal sage scrub. The proposed reservoir site is located near the top of a ridge with north-, east-, and west-facing slopes covered with low-lying chaparral and succulents. The existing communication and security pole and associated equipment are mounted on a small concrete foundation off Encelia Drive near the high point of the park where the proposed reservoir site is located.

The existing La Jolla View Reservoir is located at the southern edge of the La Jolla Heights Natural Park between the two on-site canyons. The reservoir is an above-ground, enclosed cylindrical steel water storage tank approximately 25 feet in height with a diameter of approximately 70 feet. The reservoir walls are made of welded steel panels with faded black paint. The shallow-pitched domed roof is made of curved sheet-steel panels welded together. The reservoir sits on a level pad that was cut into a west-facing natural slope, and is nestled below the directly adjacent grade, with an approximately 30-foot high cut slope located along the east side of the reservoir. The reservoir site is fenced with an approximately six-foot-high chain link fence. Mature eucalyptus trees occur around the existing reservoir and partially shield the reservoir from views to the south and west in addition to partially screening the cut slope to the east of the reservoir. Asphalt-paved Encelia Drive extends from Brodiaea Way to provide access to the reservoir and an overhead powerline crosses through the southwestern portion of the park, north of the reservoir. Developed residential properties are directly down slope to the southwest of the reservoir.

The decommissioned Exchange Place Reservoir is located outside the La Jolla Heights Natural Park in a residential area between Country Club Drive and Al Bahr Drive, south of Soledad Avenue. The irregularly shaped reservoir is 120 feet by 118 feet and sits below grade at a depth of 14.2 feet. The reservoir is concrete with a roof consisting of corrugated aluminum panels with epoxy coating nailed to a wooden frame roof covering structure. The reservoir is surrounded by an approximately six-foot-tall chain link fence with barbed wire and green privacy mesh. In addition to the reservoir, the site contains other interrelated structures, including a long concrete stair system originating from Country Club Drive and a rectangular concrete pump station situated below grade adjacent to the northwest corner of the reservoir. Vegetated slopes and retaining walls up to 25 feet in height are located to the north, east, and west sides of the reservoir. Vehicle access to the site is provided via a driveway off Crespo Avenue, and stairs leading to the reservoir are located near the intersection of Country Club Drive with Pepita Way. The reservoir is generally only visible from the immediately adjacent residences and at the access point at Country Club Drive and Pepita Way; it is not prominently visible from other surrounding roadways.

### **Community and Neighborhood Character**

Many elements define the visual character of an area, including, but not limited to, the visible or underlying landform and existing natural elements and their location relative to identified scenic resources, as well as land use patterns. Land uses vary in development intensities, bulk or scale of built structures, massing of those structures and presence of retained open space, associated circulation elements, and architectural style, colors, and distinct identity, all of which contribute to a sense of place. The community and neighborhood character of the project site and surrounding community are described below.

### La Jolla Community

La Jolla is a primarily residential community that is almost completely built-out. Approximately 99 percent of the land designated for development in La Jolla has been developed; the vast majority of the developable land is designated for residential use (97 percent), while the remaining areas are designated for commercial use. The majority of the higher-density multi-family residential development is concentrated along major streets, such as North Torrey Pines Road and Prospect Street, or along transit corridors, such as La Jolla Boulevard. As noted in the La Jolla Community Plan, single dwelling unit residential development in La Jolla covers a spectrum of densities, architectural styles, bulk, and scale. Infill construction of single-family homes has tended to be larger in size than the traditional development in some neighborhoods. In many areas, the diversity of residential design is emphasized more than a uniform theme or development pattern, while in others, features such as common development patterns or streetscape themes that contribute to community character are evident. Elements of character blend from one area of the community to another, and it is this association of varying elements which creates the overall character of the La Jolla community.

Much of the undeveloped portions of the La Jolla community planning area is characterized by densely vegetated and environmentally sensitive slopes and hillsides. As the most prominent topographical landmark within La Jolla, Mount Soledad provides a unique visual backdrop of scenic value and a natural relief from the development that characterizes La Jolla's village area. Other dedicated open space areas are located primarily within the hillsides that form the core of La Jolla's open space system. These hillside areas include the slopes of Mount Soledad, La Jolla Heights Natural Park, Pottery Canyon, and Soledad Natural Park. Many of the open space areas are characterized by coastal sage scrub and coastal mixed chaparral habitats. Coastal sage scrub is low-growing vegetation that can be found on the slopes of Mount Soledad and on some hillsides in La Jolla Shores. Coastal mixed chaparral is a highly sensitive, thick vegetation that can be found along the slopes of Pottery Canyon and elsewhere on Mount Soledad including La Jolla Heights Natural Park. La Jolla's natural resources and open space system provide natural beauty and visual interest within the community.

### Surrounding Land Uses

Land uses surrounding the project site primarily consist of open space associated with the La Jolla Heights Natural Park, recreational uses associated with the La Jolla Country Club, and single-family residences located along Country Club Drive, Remley Place, Romero Drive, Brodiaea Way, Encelia Drive, Al Bahr Drive, Soledad Avenue, Mar Avenue, and Pepita Way, as well as other surrounding roadways to the north, south, and west. Undeveloped open space in La Jolla Heights Natural Park also occurs to the north, east, and south (see Figure 2-2, *Aerial Vicinity*). The La Jolla Country Club is located southwest of the project site off Country Club Drive and features an 18-hole golf course and clubhouse. Downtown La Jolla is located approximately one-half mile to the northeast, and the Pacific Ocean is located approximately one-third mile to the north. Residential development consists of a mixture of original single-family residences and infill of larger, more modern-styled ranch and contemporary homes.



## Public Views

### Designated Views

Figure 9 of the La Jolla Community Plan provides a list and map of identified public vantage points, focusing on scenic vistas of the ocean, bluff and beach areas, hillsides, and canyons. These include view corridors with unobstructed framed views down a public right-of-way, viewsheds from high elevations overlooking large areas, intermittent or partial vistas, roads from which a coastal body of water can be seen, and scenic overlooks. The designated Country Club Drive scenic overlook, located south of the project site between its intersection with Romero Drive and its southern terminus (as shown on Figure 5.2-2, *Key View Map*), is the only designated public vantage point with potential views to the Project based on topography and proximity to the site. Country Club Drive, within which the proposed pipeline alignment is located, offers a clear view of the project site immediately adjacent to the Project, but views from south of Romero Drive are generally blocked by adjacent single-family homes and associated landscaping.

Other designated vistas within the vicinity of the project site are primarily focused on the coastline and Pacific Ocean. Views toward the project site from these locations are obstructed by intervening topography, vegetation, and development. It should be noted that views toward the project site from Mount Soledad, which is identified in the La Jolla Community Plan as a regional landmark and an important visual resource for the community to preserve, are obstructed by intervening topography.

### Views of the Project Site

Existing public views of the project site are available from portions of public roadways in the immediate vicinity, including Country Club Drive, Encelia Drive, Brodiaea Way, Romero Drive, Remley Place, Al Bahr Drive, Mecca Drive, Valdes Drive, Pepita Way, Mar Avenue, and Soledad Avenue (refer to Figure 2-2). Views from public rights-of-way further from the Project are generally obstructed by intervening topography, vegetation and development, although one east-west trending roadway, Pearl Street located west of the project site, has unobstructed easterly views of the project site. Key viewpoints selected for analysis in this EIR are shown on Figure 5.2-2. As shown, key locations include (1) the view looking southeast from Country Club Drive just north of its intersection with Fairway Drive; (2) the view looking south from the bridge at Al Bahr Drive going toward Crespo Drive; and (3) the view looking east from Pearl Street at its intersection with Fay Avenue. Existing and proposed views are analyzed and described in further detail in Section 5.2.2.2, below.

The existing and proposed La Jolla View Reservoir sites are visible from informal, dispersed recreational trails located within the La Jolla Heights Natural Park. Although public access is not authorized, residents and visitors to La Jolla visit the La Jolla Heights Natural Park for views of the La Jolla community and coastline, and the Pacific Ocean. No views of the project site are available from other public recreational areas or public open spaces.

### Views from the Project Site

As described above, the existing and proposed La Jolla View reservoirs are located within the La Jolla Heights Natural Park, which is accessed by the public via informal, dispersed recreation. Views are available of the La Jolla community and beyond, including Torrey Pines, the University community,

the UCSD campus and the Pacific Ocean. The most expansive view is from the hill where the proposed reservoir site is located.

### 5.2.1.2 Regulatory Framework

Section 5.1, *Land Use*, provides a complete analysis of the consistency of the Project with the General Plan, La Jolla Community Plan, and City LDC regulations. Summarized below are some of the more notable policies and goals related to visual quality and neighborhood character, as well as relevant SDMC regulations pertaining to light and glare.

#### City of San Diego General Plan

The Urban Design Element of the General Plan contains the goals, recommendations, and urban design objectives that relate to community and neighborhood character. The stated purpose of the Urban Design Element is to guide physical development toward a desired scale and character that is consistent with the social, economic, and aesthetic values of the City (City 2008a). The Urban Design Element defines community and neighborhood character as the visual and sensory relationship between people and the built and natural environment. Several goals and policies are identified to help guide compact, efficient, and environmentally sensitive patterns of development. Goals and policies related to visual effects and neighborhood character that are applicable to the Project are identified below.

#### Urban Design Element

##### A. General Urban Design

###### *Goals*

- A pattern and scale of development that provides visual diversity, choice of lifestyle, opportunities for social interaction, and that respects desirable community character and context.
- Utilization of landscape as an important aesthetic and unifying element throughout the City.

###### *Policies*

##### Natural Features

UD-A.1 Preserve and protect natural landforms and features.

##### Development Adjacent to Natural Features and Park Lands

UD-A.3 Design development adjacent to natural features in a sensitive manner to highlight and complement the natural environment in areas designated for development.

- a. Integrate development on hillside parcels with the natural environment to preserve and enhance views, and protect areas of unique topography.

- b. Minimize grading to maintain the natural topography, while contouring any landform alterations to blend into the natural terrain.
- g. Screen development adjacent to natural features as appropriate so that development does not appear visually intrusive, or interfere with the experience within the open space system. The provision of enhanced landscaping adjacent to natural features could be used to soften the appearance of or buffer development from the natural features.
- i. Ensure that the visibility of new development from natural features and open space areas is minimized to preserve the landforms and ridgelines that provide a natural backdrop to the open space systems. For example, development should not be visible from canyon trails at the point the trail is located nearest to proposed development. Lines-of-sight from trails or the open space system could be used to determine compliance with this policy.
- l. Protect views from public roadways and parklands to natural canyons, resource areas, and scenic vistas.

#### Landscape

- UD-A.8 Landscape materials and design should enhance structures, create and define public and private spaces, and provide shade, aesthetic appeal, and environmental benefits.

### La Jolla Community Plan

The La Jolla Community Plan is the City's adopted statement of policy for growth and development of the La Jolla community planning area (City 2014, as amended). The plan identifies specific goals, policies, and recommendations regarding the future preservation, use, and development of land within La Jolla. It also identifies how the use and development of that land will affect current levels of public services and facilities such as local schools, parks, roads, water, and public safety needs. The plan designates appropriate areas of residential, commercial, community facilities, and recreational uses. The plan also recommends areas that should remain free from development in order to preserve the remaining sensitive slopes, coastal access, and public park lands that are located in the community. Elements of the community plan serve as the framework for generating land use goals for future development and protection of environmentally sensitive resources within the community.

The general community goal related to visual resources is to "Conserve and enhance the natural amenities of the community such as its views from identified public vantage points (as identified in Figure 9 of the plan), open space, hillsides, canyons, ocean, beaches, water quality, bluffs, wildlife, and natural vegetation, and achieve a desirable relationship between the natural and developed components of the community." The Natural Resources and Open Space System Element recommends the preservation of public views from public vantage points as identified in Figure 9 of the plan. Specific goals identified in the Natural Resources and Open Space System Element include the following:

- Preserve the natural amenities of La Jolla such as its open space, hillsides, canyons, bluffs, parks, beaches, tidepools, and coastal waters.
- Maintain the identified public views to and from these amenities in order to achieve a beneficial relationship between the natural or unimproved and developed areas of the community.
- Protect the environmentally sensitive resources of La Jolla's open areas including its coastal bluffs, sensitive steep hillside slopes, canyons, native plant life and wildlife habitat linkages.

Relevant policies identified in the Natural Resources and Open Space System Element pertaining to visual resources are as follows:

- a. Public views from identified vantage points, to and from La Jolla's community landmarks and scenic vistas of the ocean, beach and bluff areas, hillsides and canyons shall be retained and enhanced for public use.
- c. The scenic value and visual quality of Mount Soledad Park, La Jolla [Heights Natural] Park and habitat linkages through steep slopes and canyons shall be protected from developments or improvements that would detract from the scenic quality and value of these resources.

The plan notes that hillsides of 25 percent or greater slope are protected from excessive development by the City's ESL regulations, which provide supplemental development regulations to the underlying zones to assure that development occurs in a manner that protects the natural and topographical character of these areas and limits potential impacts on the community's natural resources and environment. Areas that are protected by the ESL regulations include the publicly owned slopes of Mount Soledad, portions of the eastern slopes of the Fay Avenue right-of-way, and La Jolla Heights Natural Park, within which the Project is located.

### **San Diego Municipal Code – Lighting and Glare Regulations**

Lighting within the City is regulated by the City's Outdoor Lighting Regulations contained in SDMC Section 142.0740 (Outdoor Light Regulations). The City's Outdoor Lighting Regulations are intended to protect surrounding land uses from light pollution; including light trespass, glare, and urban sky glow in order to preserve enjoyment of the night sky and minimize conflict caused by unnecessary illumination. General regulations limit illumination intensities and times of operation, require shielding and directional controls, and mandate compliance with applicable regulatory standards (i.e., California Building Code [CBC] and Electric Code, FAA).

Glare within the City is controlled by SDMC Section 142.0730 (Glare Regulations), which include the following proscriptions:

- A maximum of 50 percent of the exterior of a building may be comprised of reflective material that has a light-reflectivity factor greater than 30 percent (Section 142.0730 [a]).

- Reflective building materials shall not be permitted where the City Manager determines that their use would contribute to potential traffic hazards, diminished quality of riparian habitat, or reduced enjoyment of public open space (Section 142.0730 [b]).

## 5.2.2 Impact 1: Scenic Vistas

*Issue 1: Would implementation of the Project result in substantial obstruction of any vista or scenic view from a public viewing area as identified in the community plan?*

### 5.2.2.1 Impact Thresholds

The City's Significance Determination Thresholds (2016a) establish thresholds for potential impacts to public views from designated open space areas, roads, or parks, and for project impacts to visual landmarks or scenic vistas (e.g., Pacific Ocean, downtown skyline, mountains, canyons, waterways). In order for a project to result in a significant impact, one or more of the following conditions must apply:

- The project would substantially block a view through a designated public view corridor as shown in an adopted community plan, the General Plan, or the LCP. Minor view blockages would not be considered to meet this condition. In order to determine whether this condition has been met, consider the level of effort required by the viewer to retain the view.
- The project would cause substantial view blockage from a public viewing area of a public resource (such as the ocean) that is considered significant by the applicable community plan.
- The project exceeds the allowed height or bulk regulations, and this excess results in a substantial view blockage from a public viewing area.

### 5.2.2.2 Impact Analysis

#### Designated Views

As described in Section 5.2.1.1, there is one designated public vantage point identified in the La Jolla Community Plan with potential views to the project site. The segment of Country Club Drive that is designated as a scenic overlook generally extends south from the intersection of Country Club Drive and Romero Drive for approximately 0.5 mile, just south of the project site (refer to Figure 5.2-2). The coastline and Pacific Ocean are the prominent scenic features of views from this segment of the roadway. The project site is visible from Country Club Drive to the north of the designated scenic viewpoint, immediately adjacent to the site. Viewers from Country Club Drive south of the project site would be primarily focused on northwesterly views of the adjacent homes and landscaping and the Pacific Ocean in the distance; northbound views toward the project site from the designated portion of the roadway are generally obstructed by intervening topography and residential development. Views from the designated portion of Country Club Drive are not anticipated to change during construction or operation of the project. Implementation of the Project would not block significant or designated scenic public views. No impacts to scenic designated scenic views would occur.

## Views of the Project Site

Public views are available from numerous roadways within the vicinity of the project site. These primarily include intermittent views between residences and associated landscaping of the portions of the project site that are located at a higher elevation, as well as to areas where the proposed pipeline would be installed. Much of the project site would not be visible from nearby roadways or other public locations due to variable topography and intervening structures and vegetation. As described above, three key views were selected for impact analysis based on their proximity to the project site and potential for impacts resulting from Project implementation. Impacts associated with changes in views experienced by sensitive viewers that would potentially be affected by implementation of the Project, including motorists, bicyclists, pedestrians, residents, and recreationalists, are described below.

### Country Club Drive

Views to the project site from Country Club Drive are depicted in Figure 5.2-3, *Estimated Extent of Grading During Construction as Viewed from Country Club Drive*, and Figure 5.2-4, *Proposed Project View from Country Club Drive*. The portion of Country Club Drive that has views to the project site is approximately 200 feet north of the portion of Country Club Drive that is designated as a public vantage point in the La Jolla Community Plan. Within the context of the surrounding area and nearby views from other portions of the roadway, Country Club Drive represents one of the most prominent locations from which to view both the La Jolla Heights Natural Park and the La Jolla Country Club golf course. Views from this location would include the existing and proposed reservoir sites, as well as a portion of the proposed pipeline alignment and the temporary stockpile location. As shown in Figure 5.2-3, construction activities would disrupt the existing visual character of the project site and contrast with existing conditions due to the removal of existing vegetation and introduction of new, visually dominant elements, including raw soil and newly cut or filled slopes. Other elements that would be present during construction include temporary construction fencing and sound barriers, construction equipment, and construction materials stockpiling and storage. Some or all of these elements would be visible to motorists and bicyclists traveling on Country Club Drive and would be most apparent in southbound views. The view from Country Club Drive also is representative of views from the adjacent La Jolla Country Club golf course, where the Project changes would be visible to recreationalists using the private facility, and adjacent residences.

Noticeable changes to on-site landforms and the overall visual setting of the site would occur during construction, and would continue to be noticeable as vegetation is being established post-construction. These changes would be considered temporary and would not result in significant blockages or alterations of scenic views. Motorists and bicyclists would experience the visual changes for a short period of time while immediately adjacent to the project site, then would focus their views toward the adjacent residential development and the Pacific Ocean once north or south of the project site, respectively. Recreationalists using the La Jolla Country Club are expected to be focused more on recreational activities, the lush landscaping of the course and views to the west of the Pacific Ocean.

As shown in Figure 5.2-4, once construction is complete and vegetation is established, the project site would blend with the existing topography and vegetative cover of the surrounding undisturbed areas and changes resulting from Project implementation would not be noticeable to viewers from Country Club Drive or surrounding areas.

### Al Bahr Drive

Views to the project site from the bridge at Al Bahr Drive are depicted in Figure 5.2-5, *Proposed Project View from Al Bahr Drive*. This location represents a typical view from roadways and residences to the north of the project site, specifically to the proposed reservoir location and pipeline alignment. Just north of this location on Al Bahr Drive past the bridge is an access point for the informal, dispersed recreational activities that traverse the La Jolla Heights Natural Park, which culminate at the proposed reservoir location. While the depicted view also represents a similar view that would be experienced by recreationalists at the edge of the park, views from below the bridge where the informal trail starts and along the initial portion of the informal trail would be less expansive and restricted by adjacent vegetation.

As described above, removal of existing vegetation and grading and equipment associated with installation of the new reservoir and pipeline would disrupt the existing visual character of the project site during construction. The resulting changes would be visible by motorists and bicyclists along Al Bahr Drive, Crespo Drive and other adjacent roadways, as well as by recreationalists using the La Jolla Heights Natural Park and adjacent residences. Although construction of the project would temporarily disrupt these views and affect the overall cohesiveness of the site, no scenic views would be blocked, and the site would be returned to its existing condition aesthetically once construction has completed and vegetation has been established.

### Pearl Street

The eastbound view from Pearl Street at its intersection with Fay Avenue is shown in Figure 5.2-6, *Proposed Project View from Pearl Street*. As noted in Section 5.2.1.1, Pearl Street is the only east-west trending major roadway located west of the project site that has unrestricted easterly views of the project site. As shown in Figure 5.2-6, the project site represents a small feature within a larger view experienced by motorists, bicyclists, and pedestrians that encompasses existing commercial development along the roadway with hillside residences and the undeveloped La Jolla Heights Natural Park visible in the background. While the temporary construction changes to the project site could be viewed from this location and by viewers further east along Pearl Street, their visibility and prominence would be reduced due to the distance from the project site and the variety of elements comprising the overall view. Similar to the discussion above for Country Club Drive and Al Bahr Drive, no noticeable change would be evident once the Project is in operation and vegetation has been established.

### **Views from the Project Site**

The existing and proposed La Jolla View reservoirs are located within the La Jolla Heights Natural Park, which is subject to dispersed recreational activities. The informal trails offer views of La Jolla and beyond, including Torrey Pines, the University Community, the UCSD campus, and the Pacific Ocean. The most expansive view is from the top of the hill near the bend in Encelia Drive near the proposed reservoir site. This location is not identified as a designated viewpoint in the La Jolla Community Plan, nor are the trails formally recognized as publicly accessible.

Construction of the proposed reservoir would impede views from the peak of the informal trail, as this area would be temporarily closed off for grading and installation of the reservoir, backfilling, and revegetation during construction. While views to the north and east from informal trail locations

to the north of the project site would be maintained during construction, views to the south and southwest would be disrupted by various construction elements including raw soil, newly cut or filled slopes, temporary construction fencing and sound barriers, construction equipment and construction materials stockpiling and storage. As noted above, the natural setting of the site would be restored once construction has completed.

### **5.2.2.3 Significance of Impacts**

The Project would not substantially block a designated view, or result in substantial view blockage from a public viewing area or to a public resource identified as significant in the La Jolla Community Plan. Although construction of the Project would temporarily alter existing views toward the site experienced by motorists, bicyclists, pedestrians, residents, and recreationalists, implementation of the Project would not represent a substantial permanent departure from the key views described above or other existing public views. Overall, given intervening topography, vegetation and development that restricts views to the site, in addition to the minimizing effect of the proposed revegetation and backfilling of the existing and proposed reservoir locations and pipeline alignment, changes to views from local area roadways would be less than significant.

Construction of the proposed Project would result in temporary access impacts to the uppermost portion of the informal recreational trails within the La Jolla Nature Park. Expansive views would still be offered from lower elevations within the informal, dispersed trails, and the natural setting of the project site would be restored to blend with the surrounding areas once construction of the Project is completed and vegetation is established. Therefore, impacts to scenic vistas would be less than significant.

### **5.2.2.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures are required.

## **5.2.3 Impact 2: Project Aesthetics**

*Issue 2: Would the Project create a negative aesthetic site or project?*

### **5.2.3.1 Impact Thresholds**

According to the City's Significance Determination Thresholds (2016a), a project may have a negative visual appearance if one or more of the following conditions occur:

- The project would create a disorganized appearance and would substantially conflict with City codes (i.e., a sign plan which proposes extensive signage beyond the City's sign ordinance allowance).
- The project significantly conflicts with the height, bulk, or coverage regulations of the zone and does not provide architectural interest (e.g., a tilt-up concrete building with no offsets or varying window treatment).



- The project includes crib, retaining, or noise walls greater than 6 feet in height and 50 feet in length with minimal landscape screening or berming where the walls would be visible to the public.
- The project is large and would result in an exceeding monotonous visual environment (e.g., a large subdivision in which all of the units are virtually identical).

These conditions are described to become more significant for projects that are highly visible from designated open spaces, roads, parks, or significant visual landmarks.

### **5.2.3.2 Impact Analysis**

The proposed Project involves demolition, backfilling, and revegetation of the existing reservoir sites; grading, excavation, and construction for the new reservoir and pipelines; and reconstruction/demolition of an existing paved access road. Construction activities would occur within La Jolla Heights Natural Park, along Country Club Drive, and near the intersection of Country Club Drive and Pepita Way at the site of the existing Exchange Place Reservoir. During construction of the Project, the project site would appear disorganized compared to existing conditions due to the presence of construction elements such as raw soil, newly cut or filled slopes, temporary construction fencing and sound barriers, construction equipment, and construction materials stockpiling and storage (refer to Figure 5.2-3). Construction staging areas are currently not formalized, but all staging areas would be located within the identified Project site and would be restored to the original condition once construction is completed.

The site of the existing La Jolla View Reservoir would be restored to a condition similar to the site condition prior to the reservoir's construction in terms of grading and vegetation. The existing reservoir site and a portion of the existing Encelia Drive access road would be backfilled and landscaped to blend in with the surrounding landscape. The grade for the hillside would generally be restored per the 1949 as-built drawings for the original tank construction. Overall, the appearance of the existing La Jolla View Reservoir site would be improved upon Project completion.

The Exchange Place Reservoir, which would have the roof and upper three feet of concrete lining removed, would then be backfilled and landscaped to blend in with the naturally vegetated La Jolla Heights Natural Park to the southeast of the reservoir site. Demolition and backfilling of the Exchange Place Reservoir would improve the overall appearance of the site by replacing a built element with a landscaped knoll.

The proposed reservoir would be buried within a knoll off Encelia Drive to reduce the visual impacts of the structure. The backfill above the reservoir would generally mimic the natural contours, but would result in a finished elevation slightly below the natural elevation, in order to reduce the earth load on the reservoir structure. The only above-ground, visible structures would be the access hatches and SCADA equipment located at the end of the access road, and the at-grade overflow outlet and energy dissipation structure situated near the head of the north-central on-site drainage, west of the reservoir. The site would be revegetated to blend with the surrounding area and would not create a disorganized appearance. The existing Encelia Drive access road would be reconstructed to connect to the new reservoir and allow access for maintenance vehicles. This road would terminate at the reservoir access hatches where two parking spaces and paved turnaround

area would be provided. As noted above, the remaining length of existing access road that currently extends west from the new reservoir site would be demolished and the area would be revegetated.

Approximately 2,790 feet of 30-inch pipeline would be installed within a 4.5-foot-wide by 8-foot-deep trench through the La Jolla Heights Natural Park and along Country Club Drive. Approximately 480 feet of 8-inch pipeline proposed along Encelia Drive would be constructed within a 2-foot-wide by 4-foot-deep trench. The soil would be replaced and recompact once the pipelines are installed and each alignment would be revegetated and repaved, respectively. The only above-ground feature associated with the 30-inch pipeline would be an altitude valve vault, proposed to be located where the pipeline alignment enters Country Club Drive from the park.

The Project would not conflict with the City's height, bulk, or coverage regulations within the RS-1-4, RS-1-4, or OP-2-1 zones. No crib, retaining, or noise walls greater than 6 feet in height and 50 feet in length that would be visible to the public are proposed. Specifically, below-grade soil nail walls around much of the perimeter of the proposed reservoir would be used as part of the temporary construction grading and would be buried when the area is back-filled.

### **5.2.3.3 Significance of Impacts**

As described above, all areas of disturbance associated with reservoir construction would be backfilled and revegetated with the exception of the reconstructed Encelia Drive access road and the few above-ground features associated with the proposed reservoir and pipeline (e.g., reservoir access hatches and SCADA equipment, outlet and energy dissipation structure, altitude valve vault across Country Club Drive from the Muirlands Pump Station). The Project proposes no permanent visual elements that would create a negative aesthetic. Therefore, the Project would not have a negative visual appearance and no significant visual impacts would occur.

### **5.2.3.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures are required.

## **5.2.4 Impact 3: Neighborhood Character**

*Issue 3: Would the Project's bulk, scale, materials, or style be incompatible with surrounding development?*

*Issue 4: Would the Project result in substantial alteration to the existing or planned character of the area?*

*Issue 5: Would the Project result in the loss of any distinctive or landmark tree(s), or a stand of mature trees as identified in the community plan?*

### **5.2.4.1 Impact Thresholds**

According to the City's Significance Determination Thresholds (2016a), a project would severely contrast with the surrounding neighborhood character if one or more of the following conditions occur:

- The project would exceed the allowable height or bulk regulations and the height and bulk of the existing patterns of development in the vicinity of the project area by a substantial margin.
- The project would have an architectural style or use building materials in stark contrast to adjacent development where the adjacent development follows a single or common architectural theme.
- The project would result in the physical loss, isolation, or degradation of a community identification symbol, or landmark (i.e., a stand of trees, coastal bluff, historic landmark), which is identified in the General Plan, applicable community plan, or LCP.
- The project would be located in a highly visible area (e.g., on a canyon edge, hilltop, or adjacent to an interstate highway) and would strongly contrast with the surrounding development or natural topography through excessive bulk, signage, or architectural projections.

### 5.2.4.2 Impact Analysis

#### Bulk and Scale

The Project would include demolition of two existing reservoirs and construction of a new reservoir, in addition to extensions of pipelines from the proposed reservoir to existing infrastructure. The existing La Jolla View and Exchange Place reservoirs would be demolished, and each site would be backfilled with soil, recontoured, and planted with drought-tolerant native species. The La Jolla View Reservoir would be completely removed and the site would be restored to pre-construction conditions, reducing the bulky appearance of the existing reservoir. The partial demolition and removal of the top three feet of the Exchange Place Reservoir would reduce the overall height of the structure; backfilling and revegetation would create a more natural-appearing feature that would be more aesthetically pleasing and reduced in scale compared to the existing fencing, reservoir, and associated structures.

The proposed new La Jolla View Reservoir would be cut into the hillside north of Encelia Drive. Excavation to install the new reservoir would result in approximately 78,000 cy of cut. Excavated material not used to backfill the existing reservoir sites would be temporarily stockpiled within La Jolla Heights Natural Park near Country Club Drive (see Figure 3-6, *Temporary Stockpile and Access Road*). The temporary stockpile area (excluding the associated access road) would extend over approximately 0.4 acre, with a manufactured slope height of 80 feet. While the temporary stockpile would be large, the majority of the fill would occur in a ravine, with the elevation of the top of the stockpile similar to that of the adjacent hillside. The location within a lower elevation of the site and proximity to the adjacent hillside would visually diminish the size of the stockpile (see Figure 5.2-3). As a result, it would appear similar in scale to the adjacent hillside. Once the new La Jolla View Reservoir is installed, the stockpiled soil would be backfilled into the new reservoir location and areas cut for the temporary access road.

The new reservoir would be almost entirely buried, except for reservoir access hatches and SCADA equipment (Figure 3-4, *Proposed Reservoir Cross-sections*). No features associated with the proposed reservoir or pipeline would be out of scale or incompatible with the surrounding environment. The

site would be backfilled to just below the existing elevation and restored with southern maritime chaparral vegetation so that the site would appear similar to existing conditions. The existing security and communication pole and appurtenant equipment located immediately adjacent the proposed reservoir site would be temporarily relocated during construction, and then moved back to a permanent location adjacent to the new reservoir. A weather station with wind, temperature, and humidity sensors would be added to the current data/security tower.

### **Visual Character and Quality**

As shown in Figure 5.2-2 and described in detail in Section 5.2.2.2 regarding key views from public roadways, construction activities would temporarily disrupt the existing visual character of the project site. In particular, grading, excavation and stockpiling of soil materials, as well as the presence of construction equipment, fencing, noise barriers, and other associated construction materials would reduce the overall intactness and vividness of the site. Contrasting construction elements would disrupt the existing on-site visual environment and would be visible from surrounding viewpoints. While visual effects during Project construction would be considerable until all areas are backfilled and vegetation is established, once construction has completed, the proposed Project would be compatible with the existing visual character and quality of the surrounding area. As described above, demolition and backfilling of the two existing reservoirs would improve the overall appearance of those locations. The proposed reservoir and pipeline alignment would be restored to near existing conditions through backfilling and revegetation. Only minimal features of the project would be above ground, and these would be unobtrusive, small in scale, and similar to other nearby infrastructure appurtenances.

### **Community Landmarks**

No landmarks, community identification symbols, or unique visual features such as prominent stands of trees are located on the project site or within the surrounding area. Furthermore, the project site is not located such that Project features would block views toward, isolate, or cause the loss or degradation of any community identification symbols or landmarks. No impact would result.

#### **5.2.4.3 Significance of Impacts**

As described above, no features associated with the proposed reservoir or pipeline would be out of scale or incompatible with the surrounding environment. Construction activities would temporarily reduce the existing visual character and quality of the project site due to introduction of contrasting construction elements, but overall the Project would be compatible with the existing visual character and quality of the surrounding area and impacts would be less than significant.

#### **5.2.4.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures are required.

## 5.2.5 Impact 4: Landform

*Issue 6: Would the Project result in a substantial change in the existing landform?*

### 5.2.5.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), a project would significantly alter the natural landform if one or more of the following conditions occur:

- The project would alter more than 2,000 cy of earth per graded acre by either excavation or fill. Grading of a smaller amount may still be considered significant in highly scenic or environmentally sensitive areas. In addition, one or more of the following conditions must apply to meet this significance threshold:
  - The project would disturb steep hillsides in excess of the encroachment allowances of the ESL regulations (LDC Chapter 14, Article 3, Division 1).
  - The project would create manufactured slopes higher than 10 feet or steeper than 2:1 (horizontal:vertical, 50 percent).
  - The project would result in a change in elevation of steep hillsides as defined by the SDMC Section 113.0103 from existing grade to proposed grade of more than five feet by either excavation or fill, unless the area over which excavation or fill would exceed five feet is only at isolated points on the site. (A continuous elevation change of five feet may be noticeable in relation to surrounding areas.)
  - The project design includes mass terracing of natural slopes with cut or fill slopes in order to construct flat-pad structures.
- The above conditions may not be considered significant if one or more of the following apply:
  - The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed landforms will very closely imitate the existing on-site landform and/or the undisturbed, pre-existing surrounding neighborhood landforms. This may be achieved through "naturalized" variable slopes.
  - The grading plans clearly demonstrate, with both spot elevations and contours, that the proposed slopes follow the natural existing landform and at no point vary substantially from the natural landform elevations.
  - The proposed excavation or fill is necessary to permit installation of alternative design features such as step-down or detached buildings, non-typical roadway or parking lot designs, and alternative retaining wall designs which reduce the project's overall grading requirements.

### 5.2.5.2 Impact Analysis

Excavation to install the new reservoir would result in approximately 78,000 cy of cut over approximately 7.2 acres, exceeding the 2,000-cy per acre threshold identified in the City's Significance Determination Thresholds for impacts resulting from landform alteration. The Project would not, however, disturb steep hillsides in excess of the encroachment allowances of the ESL regulations (less than 25 percent of the total on-site steep slope areas would be impacted, as depicted on Figure 5.1-2, *MHPA and Steep Slopes*), create permanent manufactured slopes higher than 10 feet or steeper than 2:1, or substantially change the elevation of existing steep slopes. Manufactured slopes higher than 10 feet and steeper than 2:1 would be created during excavation of the proposed reservoir site and creation of the temporary stockpile. Once the reservoir is constructed, the site would be backfilled using the temporarily stockpiled soil materials to reestablish elevations and slopes that closely imitate the existing on-site landforms (with a slightly lower finish elevation at the reservoir). The Project would return the existing La Jolla View Reservoir site to its pre-development conditions and topography once the existing tank is demolished. While the Project would temporarily excavate a substantial amount of earth material to install the new reservoir and pipeline, these features would be constructed below grade such that the final condition would mimic the natural topography currently existing on site.

### 5.2.5.3 Significance of Impacts

Impacts related to landform alteration resulting from the Project would be less than significant.

### 5.2.5.4 Mitigation, Monitoring and Reporting

As no significant impacts would occur, no mitigation measures would be required.

## 5.2.6 Impact 5: Light and Glare

*Issue 7: Would the Project result in substantial light or glare which would adversely affect daytime or nighttime views in the area?*

### 5.2.6.1 Impact Thresholds

According to the City's Significance Determination Thresholds (2016a), light and glare impacts would be significant if a project would:

- Be moderate to large in scale, more than 50 percent of any single elevation of a building's exterior is built with a material with a light reflectivity greater than 30 percent, and the project is adjacent to a major public roadway or public area.
- Shed substantial light onto adjacent, light-sensitive property or land use, or emit a substantial amount of ambient light into the nighttime sky.

### **5.2.6.2 Impact Analysis**

No new sources of light are proposed in the design of the Project, and most construction activities would occur during daytime hours, thus not requiring the use of night lighting. It is, however, conservatively estimated that there would be up to 20 days of construction with extended hours where nighttime lighting would be required during concrete pouring for the proposed reservoir. The contractor would be required to use an illumination level commensurate with the nature of the work (i.e., high illumination levels would only be used where detailed work is taking place). Light fixtures would be shielded, directed to shine downward mainly on the area of work, and be designed to illuminate the work area without spilling over to adjoining property. The majority of nighttime construction activities would be associated with pouring the floor of the new tank, 60 feet below the existing ground surface. This also would help to shield temporary lighting. Therefore, temporary construction lighting would not emit a substantial amount of ambient light into the nighttime sky or impact nighttime views in the area. Moreover, all lighting would be required to comply with the City's Outdoor Lighting Regulations contained in SDMC Section 142.0740 (Outdoor Light Regulations), described above in Section 5.2.1.2.

As discussed above, the majority of the Project features would be below ground with no the potential to result in glare impacts to daytime views. No reflective materials would be used in the construction of the above-ground features of the Project. The existing Encelia Drive access road would be shortened to extend only to the proposed reservoir and would be reconstructed using standard paving materials. No impacts to daytime or nighttime views from lighting or glare would occur.

### **5.2.6.3 Significance of Impacts**

No significant light or glare impacts would result from the Project.

### **5.2.6.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures would be required.





Photo 1 – Existing La Jolla View Reservoir



Photo 2 – Existing communication and security pole and associated equipment located north of Encelia Drive

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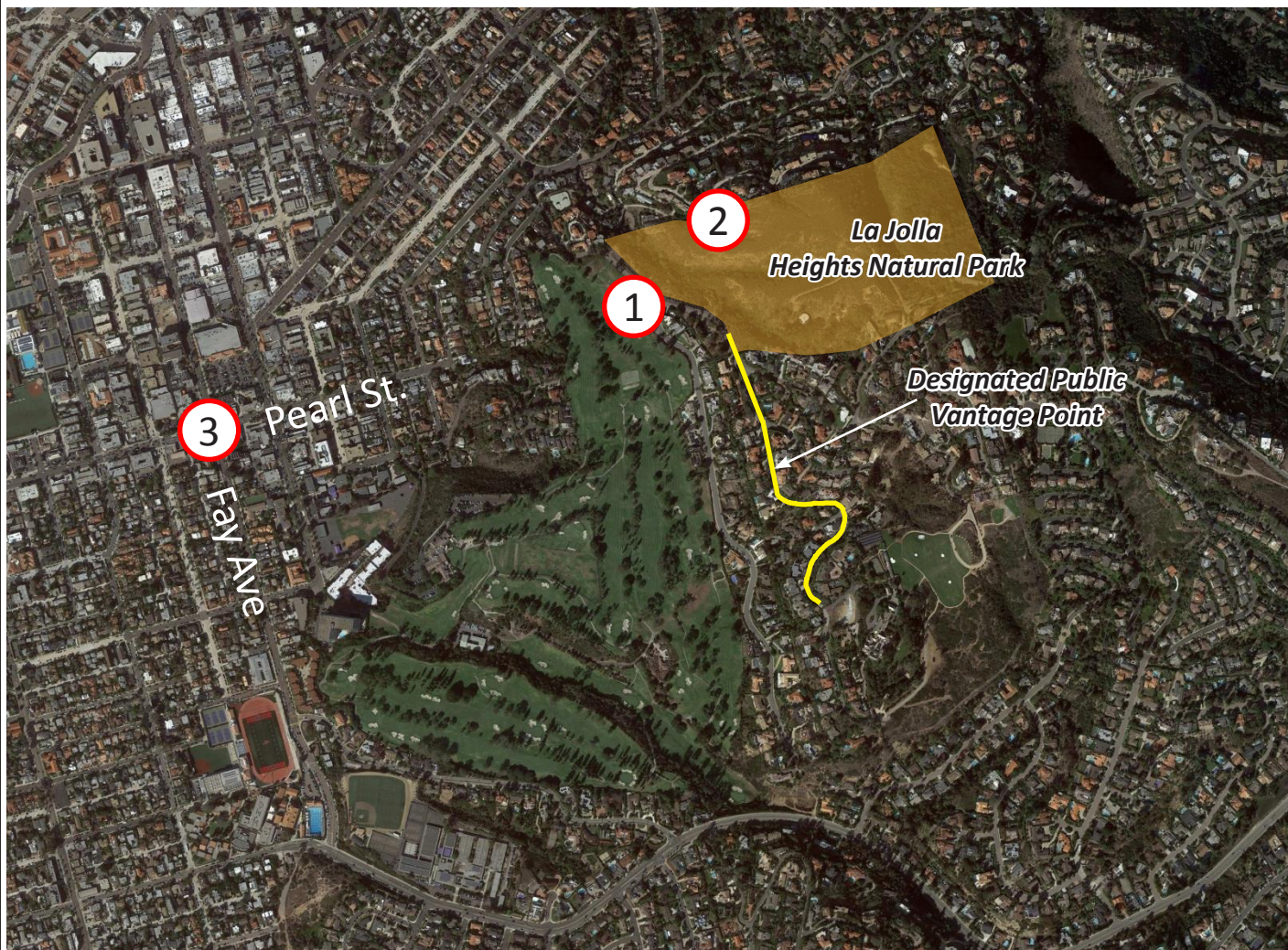
Photo 1 – Existing Exchange Place Reservoir



Photo 2 – Existing Exchange Place Reservoir access at intersection of Country Club Drive and Pepita Way

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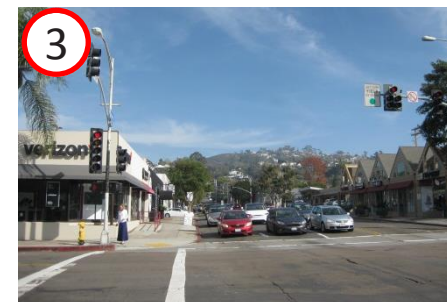




View from Country Club Drive facing northeast where Country Club Drive intersects with Fairway Road.



View from over the bridge at Al Bahr Drive going to Crespo Drive.



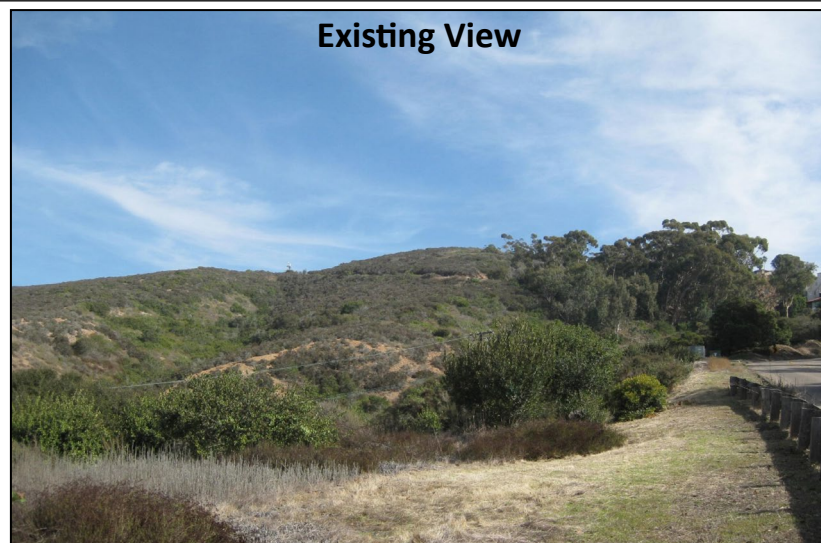
View at the intersection of Fay Ave and Pearl St, looking East.

Source: Estrada Land Planning 2018

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Proposed View

Source: Estrada Land Planning 2018

## Estimated Extent of Grading During Construction as Viewed from Country Club Drive

Figure 5.2-3



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Proposed View

Source: Estrada Land Planning 2018



**Existing View**



**Proposed View**

Source: Estrada Land Planning 2018

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Existing View



Proposed View

Source: Estrada Land Planning 2018

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## 5.3 Noise

The following discussion summarizes the Acoustical Analysis Report for the Project, which was prepared by HELIX (2018a). The report is contained in its entirety in Appendix B. Noise impacts to sensitive biological species are addressed in Section 5.5, *Biological Resources*.

### 5.3.1 Existing Conditions

#### 5.3.1.1 Environmental Setting

##### Noise and Sound Level Descriptors

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound, which interferes with normal activities, causes physical harm, or has adverse health effects.

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol  $L_{EQ}$ , with a specified duration. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver contribute to the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or Hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of Hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. A logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA units. The threshold of hearing for the human ear is about 0 dBA.

Because decibels are logarithmic units, SPL cannot be added or subtracted through simple addition. Under the decibel scale, a doubling of sound energy corresponds to a 3-dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions.

## Existing Noise

The primary existing noise sources in the vicinity of the Project consist of occasional and/or distant traffic noise, noise from nearby landscape maintenance equipment, and sounds of nature. Five short-term measurements were conducted on January 25, 2018 at the following locations (see Figure 5.3-1, *Noise Measurement Locations*): (1) adjacent to the existing Exchange Place Reservoir; (2) along the stretch of Country Club Drive adjacent to the La Jolla Country Club golf course; (3) at the intersection of Romero Court and Remley Place; (4) within La Jolla Heights Natural Park; and (5) adjacent to the existing La Jolla View Reservoir. Existing ambient noise level measurements ranged from highs of 62.0 dBA at location #1 and 61.5 dBA at location #2 to lows of 45.0 dBA at location #3 and 48.3 dBA at location #4.

## Noise and Vibration Sensitive Land Uses

NSLUs are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, hotels, hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. The Project's surrounding uses include single-family residential neighborhoods to the south, east, north and west; open space (La Jolla Heights Natural Park) to the north; and park/recreation space (La Jolla Country Club) to the southwest; only the single-family residences shown on Figure 5.3-1 are considered NSLUs.

Land uses in which ground-borne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations, are considered "vibration-sensitive" (Federal Transit Administration [FTA] 2006). The degree of sensitivity depends on the specific equipment that would be affected by the ground-borne vibration. In addition, excessive levels of ground-borne vibration of either a regular or an intermittent nature can result in annoyance to residential uses or schools. The land uses in the project area that are subject to annoyance from vibration are the single-family residences shown on Figure 5.3-1.

### 5.3.1.2 Regulatory Framework

#### Noise Ordinance

The City's Noise Ordinance (SDMC, Chapter 5, Article 9.5, Noise Abatement and Control) regulates noise produced by construction activities. Construction activities are prohibited between the hours of 7:00 p.m. and 7:00 a.m. and on Sundays and legal holidays, except in the case of emergency. Section 59.5.0404 of the Noise Ordinance limits construction noise to an average sound level of 75 dBA at the affected property line during the 12-hour period from 7:00 a.m. to 7:00 p.m.

The City's Noise Ordinance also regulates noise generated by on-site sources associated with project operation, such as heating, ventilation, and air conditioning (HVAC) units. The noise limits of the City's Noise Ordinance for various land uses by time of day are shown in Table 5.3-1, *Property Line Noise Limits*.



**Table 5.3-1  
PROPERTY LINE NOISE LIMITS**

Land Use Zone	Time of Day	One-hour Average Sound Level (dBA) <sup>1</sup>
Single Family Residential	7:00 a.m. to 7:00 p.m.	50
	7:00 p.m. to 10:00 p.m.	45
	10:00 p.m. to 7:00 a.m.	40
Multi-Family Residential (up to a maximum density of 1/2000)	7:00 a.m. to 7:00 p.m.	55
	7:00 p.m. to 10:00 p.m.	50
	10:00 p.m. to 7:00 a.m.	45
All other Residential	7:00 a.m. to 7:00 p.m.	60
	7:00 p.m. to 10:00 p.m.	55
	10:00 p.m. to 7:00 a.m.	50
Commercial	7:00 a.m. to 7:00 p.m.	65
	7:00 p.m. to 10:00 p.m.	60
	10:00 p.m. to 7:00 a.m.	60
Industrial or Agricultural	Anytime	75

Source: SDMC, Chapter 5, Article 9.5, Division 4, §59.5.0401, Sound Level Limits

<sup>1</sup> The sound level limit at a location on a boundary between two zoning districts is the arithmetic mean of the respective limits for the two districts.

dBA = A-weighted decibel

## 5.3.2 Impact 1: Construction Noise

*Issue 1: Would the Project result in the exposure of people to noise levels created by the Project which exceed the City's adopted noise ordinance and/or the City's Significance Determination Thresholds?*

### 5.3.2.1 Impact Thresholds

A significant noise impact would occur from construction of a project if it would result in temporary construction noise that exceeds 75 dBA  $L_{EQ}$  (12 hour) at the property line of a residentially zoned property from 7:00 a.m. to 7:00 p.m. (as identified in SDMC Section 59.0404). In addition, a significant noise impact would occur if non-emergency construction occurring during night and evening hours Monday through Saturday would result in temporary construction noise that exceeds 45 dBA  $L_{EQ}$  (12 hour) from 7:00 p.m. to 10:00 p.m. or 40 dBA  $L_{EQ}$  (12 hour) from 10:00 p.m. to 7:00 a.m. at the property line of a single-family residentially zoned property.

### 5.3.2.2 Impact Analysis

#### Construction Noise Impacts to Residences

To analyze noise impacts from project construction activities, the combination of construction equipment that would be working simultaneously and would produce the loudest noise levels was determined for each construction phase. Noise levels at the residences nearest each construction phase were determined by the construction equipment noise emissions and distance to each residence, and are described in detail below per phase. A summary of the noise levels per phase

and whether they would exceed the City Noise Ordinance construction threshold is provided in Table 5.3-2, *Construction Noise Impacts to Residences*. The beginning and ending construction activities include mobilization and setup, lead and asbestos abatement, and demobilization, which do not use heavy construction equipment that generates substantial noise; therefore, they are not analyzed further for noise impacts.

**Table 5.3-2  
CONSTRUCTION NOISE IMPACTS TO RESIDENCES**

Phase	Construction Activity	Distance to 75 dBA L <sub>EQ</sub> (feet)	Distance to Nearest Residence (feet)	Noise Level at Residence (dBA L <sub>EQ</sub> )	Exceed 75 dBA L <sub>EQ</sub> ?
3	Demolition of La Jolla View Reservoir	98	100	74.8	No
	Demolition of Exchange Place Reservoir	98, 73 <sup>1</sup>	20	88.8, 86.2 <sup>1</sup>	<b>Yes</b>
	Pipeline Construction (30-inch only; west portion of park)	35	200	59.8	No
4	Mass Grading; Backfill of Exchange Place Reservoir	99	150	71.4	No
5	Pipeline Construction - Inlet/Outlet in Park (across Country Club Drive and east portion of Park); Pipeline Construction - Reservoir Drain/ Overflow and Discharge Structures (in park)	98	130	72.5	No
6	Reservoir Construction	161 <sup>2</sup>	300	70.3	No <sup>3</sup>
7	Reservoir Backfill	56	300	60.4	No
8	Pipeline Construction – 8-inch Supply Line & Electrical Service	35	10	85.8	<b>Yes</b>
9	Reservoir Final Grading and Site Improvements	79	100	72.9	No
10	Pipeline Construction – 8-inch Distribution – Country Club Drive; Relocate Security Pole / Test Electrical Systems; Install Temporary Irrigation & Vegetation inside Park; Pipeline Construction – 30-inch Distribution – Country Club Drive	25	15	79.3	<b>Yes</b>

**Table 5.3-2 (cont.)  
CONSTRUCTION NOISE IMPACTS TO RESIDENCES**

Phase	Construction Activity	Distance to 75 dBA L <sub>EQ</sub> (feet)	Distance to Nearest Residence (feet)	Noise Level at Residence (dBA L <sub>EQ</sub> )	Exceed 75 dBA L <sub>EQ</sub> ?
11	Curb Ramp Improvements & Paving/Temp Irrigation/Planting at Exchange Place Reservoir; Demobilization	8	15	69.9	No

Source: HELIX 2018a

<sup>1</sup> Of the two numbers listed, the first corresponds to the use of a concrete saw and the second corresponds to the use of a breaker.

<sup>2</sup> Distance to 45 dBA L<sub>EQ</sub>: 5,095 feet; distance to 40 dBA L<sub>EQ</sub>: 9,062 feet.

<sup>3</sup> Construction of the proposed reservoir would not exceed the 75 dBA L<sub>EQ</sub> daytime threshold, but would exceed the 45 dBA L<sub>EQ</sub> evening threshold when construction activities occur between 7:00 p.m. and 10:00 p.m. and the 40 dBA L<sub>EQ</sub> nighttime threshold when construction activities occur between 10:00 p.m. and 7:00 a.m.

### Phase 3

#### *Demolition of La Jolla View Reservoir*

The most substantial noise generation from demolishing the existing La Jolla View Reservoir would occur during the break-up of the concrete slab that borders the tank to the east. A concrete saw and backhoe would be used to break up the concrete slab but would not operate simultaneously. The concrete saw would be louder of the two pieces of equipment and would operate as close as 100 feet to the nearest single-family residence, located to the south along Remley Place.

It was conservatively assumed that this piece of equipment would be in operation at a constant location nearest the residence. At a distance of 100 feet, a concrete saw would generate a noise level of 74.8 dBA L<sub>EQ</sub> (12 hour). Therefore, use of a concrete saw during the demolition of the existing La Jolla View Reservoir would not exceed the City Noise Ordinance construction threshold of 75 dBA L<sub>EQ</sub> (12 hour) at the nearest residence. Although the modeled noise level is only 0.2 dBA L<sub>EQ</sub> below the threshold, this represents a conservative analysis, with actual noise levels likely to be lower than those modeled. Impacts would be less than significant.

#### *Demolition of Exchange Place Reservoir*

The most substantial noise generation from demolishing the existing Exchange Place Reservoir would occur during the break-up of the concrete walls of the reservoir and demolition of the concrete pump house, valve vault, and stairs. A concrete saw or breaker along with a backhoe would be used to break up the concrete, but would not operate simultaneously (e.g., the concrete saw or breaker would operate without the backhoe). The concrete saw or breaker would be the louder of the two pieces of equipment and would operate as close as 20 feet from the nearest single-family residence, located immediately to the east.

It was conservatively assumed that the piece of equipment would be in operation at a constant location nearest the residence. At a distance of 20 feet, a concrete saw would generate a noise level of 88.8 dBA L<sub>EQ</sub> (12 hour) and a breaker would generate a noise level of 86.2 dBA L<sub>EQ</sub> (12 hour). Therefore, use of a concrete saw or breaker during the demolition of the existing Exchange Place

Reservoir would exceed the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour) at the nearest residence, and impacts would be potentially significant.

#### *Pipeline Construction*

The most substantial noise generation from installing the 30-inch pipeline in the western portion of La Jolla Heights Natural Park would occur during trenching, using a backhoe. This process would occur as close as 200 feet to the nearest single-family residence, located to the south along Remley Place.

It was conservatively assumed that this piece of equipment would be in operation at the same location nearest the residence for the entire work day. At a distance of 200 feet, this piece of equipment would generate a noise level of 59.8 dBA  $L_{EQ}$  (12 hour). Therefore, the trenching during this phase would not exceed the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour), and impacts would be less than significant.

#### Phase 4

In Phase 4, the most substantial noise generation from mass grading would occur during the simultaneous use of a dozer and scraper. This process would occur as close as 150 feet to the nearest single-family residence, located to the south at the intersection of Brodiaea Way and Encelia Drive.

It was conservatively assumed that these pieces of equipment would be in operation simultaneously at the same location. At a distance of 150 feet, these pieces of equipment would generate a noise level of 71.4 dBA  $L_{EQ}$  (12 hour). Therefore, use of construction equipment during the mass grading phase would not exceed the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour), and impacts would be less than significant.

#### Phase 5

In Phase 5, the most substantial noise generation from installing the 30-inch pipeline across Country Club Drive and in the eastern portion of La Jolla Heights Natural Park would occur during road cutting within Country Club Drive. A concrete saw would be used to cut the asphalt road prior to trenching. This process would occur as close as 130 feet from the nearest single-family residence, located to the south on Fairway Road.

Although pipeline installation during this phase would progress at approximately 80 feet per day, it was conservatively assumed that the concrete saw would be in operation at constant location nearest the residence. At a distance of 130 feet, a concrete saw would generate a noise level of 72.5 dBA  $L_{EQ}$  (12 hour). Therefore, use of construction equipment during Phase 5 would not exceed the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour), and impacts would be less than significant.

#### Phase 6

In Phase 6, the most substantial noise generation from constructing the proposed reservoir would occur during the use of a cement truck, concrete pump, concrete vibrator, generator, trowel, man-lift, forklift, and crane in the concrete pouring process. The concrete vibrator, trowel, man-lift,

and forklift utilize engines comparable to a generator. Following the concrete work, a wrapping machine and generator would be used to reinforce the reservoir concrete. A wrapping machine also uses an engine comparable to a generator. Typical noise levels from a generator were used for modeling the generator, concrete vibrator, trowel, man-lift, and forklift. Both the concrete pouring and wrapping processes would occur as close as 300 feet from the nearest single-family residence, located to the south at the intersection of Brodiaea Way and Encelia Drive.

These pieces of equipment would be in operation simultaneously at the same location. At a distance of 300 feet, these pieces of equipment would generate a noise level of 70.3 dBA  $L_{EQ}$  (12 hour). The concrete pouring of the roof slab would occur up to approximately 18 hours per day and would occur during daytime (7:00 a.m. to 7:00 p.m.), evening (7:00 p.m. to 10:00 p.m.), and nighttime (10:00 p.m. to approximately 11:00 p.m.) hours. Therefore, the use of construction equipment during the roof slab concrete pouring process of construction of the proposed reservoir would not exceed the daytime City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour) but would exceed the evening threshold of 45 dBA  $L_{EQ}$  (12 hour) and nighttime threshold of 40 dBA  $L_{EQ}$  (12 hour), and impacts would be potentially significant.

For modeling of the wrapping process, it was assumed that two generators (used for modeling for the generator and wrapping machine) would be in operation simultaneously at the same location. At a distance of 300 feet, these pieces of equipment would generate a noise level of 63.3 dBA  $L_{EQ}$  (12 hour). Therefore, use of construction equipment during the wrapping process would not exceed the daytime City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  12-hour, and impacts would be less than significant.

#### Phase 7

In Phase 7, the most substantial noise generation from backfilling at the newly constructed reservoir would occur during the operation of a dozer. This process would occur as close as 300 feet from the nearest single-family residence, located to the south at the intersection of Brodiaea Way and Encelia Drive.

It was conservatively assumed that the dozer would be in operation at a constant location nearest the residence. At a distance of 300 feet, the dozer would generate a noise level of 60.4 dBA  $L_{EQ}$  (12 hour). Therefore, use of construction equipment during backfill at the new reservoir would not exceed the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour), and impacts would be less than significant.

#### Phase 8

In Phase 8, the most substantial noise generation from installing the 8-inch pipeline within the Encelia Drive access road would occur during the use of a backhoe for trenching. This process would occur as close as 10 feet from the nearest single-family residence, located to the southwest at the intersection of Brodiaea Way and Encelia Drive.

Although installation of the pipeline would progress at approximately 40 feet per day, it was conservatively assumed that the backhoe would be in operation at a constant location nearest the residence. At a distance of 10 feet, a backhoe would generate a noise level of 85.8 dBA  $L_{EQ}$  (12 hour). Therefore, conservatively, use of construction equipment during pipeline installation in this phase

would exceed the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour), and impacts would be potentially significant.

#### Phase 9

In Phase 9, the most substantial noise generation from final grading and site improvements at the site of the new reservoir would occur during operation of two dozers. This process would occur as close as 100 feet from the nearest single-family residence, located to the south/southwest at the intersection of Brodiaea Way and Encelia Drive.

It was conservatively assumed that these pieces of equipment would be in operation simultaneously at a constant location nearest the residence. At a distance of 100 feet, two dozers would generate a noise level of 72.9 dBA  $L_{EQ}$  (12 hour). Therefore, use of construction equipment during the final grading and site improvement phase would not exceed the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour), and impacts would be less than significant.

#### Phase 10

In Phase 10, the most substantial noise generation from installing pipeline within Country Club Drive would occur during the operation of a concrete saw to cut the asphalt prior to trenching. This process would occur as close as 10 feet from the nearest single-family residence, located to the north along Country Club Drive.

As indicated in the Acoustical Analysis Report for the Project (HELIX 2018a), the concrete saw would have a cutting rate of approximately 4 feet per minute; therefore, the concrete saw was modeled to be adjacent to a single residence for 30 minutes. At a distance of 15 feet, a concrete saw would generate a noise level of 79.3 dBA  $L_{EQ}$  (12 hour). Therefore, use of construction equipment during pipeline installation in this phase would exceed the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour), and impacts would be potentially significant.

#### Phase 11

In Phase 11, the most substantial noise generation from curb ramp improvements and paving within Country Club Drive would occur during the operation of a vibratory compactor/roller. This process would occur as close as 10 feet from the nearest single-family residence, located to the north along Country Club Drive.

A compactor/roller would progress at 4 to 5 mph during operation; therefore, it was conservatively assumed that a paver would be adjacent to a given residence for approximately 15 minutes in a day. At a distance of 15 feet, a compactor/roller would generate a noise level of 69.9 dBA  $L_{EQ}$  (12 hour). Therefore, use of construction equipment during the curb improvements and paving phase would not exceed the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour), and impacts would be less than significant.

#### Construction Traffic

Project construction traffic would likely be highest during the mass grading phase, due to the high level of haul truck trips used to dispose of the excess cut material. As discussed in Section 3.4.1, the

number of haul truck trips would be limited to a maximum of 50 per day and approximately 5 per hour (over a 10-hour period), which would reduce the potential for construction noise impacts.

The vehicles would use Country Club Drive, Exchange Place, Torrey Pines Road, and La Jolla Parkway and would be as close as 10 feet from residences. Country Club Drive and Exchange Place were analyzed because they have the lowest existing ADT and therefore provide a conservative analysis for construction traffic noise increases. Other roadways analyzed in the traffic analysis, such as Torrey Pines Road and La Jolla Parkway, have very high existing ADT values of at least 39,000 ADT, and project-added traffic would add only minor noise to these roadways.

A general rule of thumb is that a doubling in noise, a 3 dBA increase, would be considered to be perceptible. The Acoustical Analysis Report for the Project (HELIX 2018a) presents modeling for the existing and the increased mitigated traffic volumes from construction for the Country Club Drive and Exchange Place roadway segments. As shown in Table 5.3-3, *Construction Traffic Noise Levels*, construction traffic noise levels would increase by less than 3 dBA. Therefore, impacts from construction traffic noise would be less than significant.

**Table 5.3-3  
 CONSTRUCTION TRAFFIC NOISE LEVELS<sup>1</sup>**

Roadway	Existing (dBA L <sub>EQ</sub> )	Existing Plus Project Construction (dBA L <sub>EQ</sub> )	Increase (dBA L <sub>EQ</sub> )	Significant Impact? <sup>2</sup>
Country Club Drive	61.0	62.8	1.8	No
Exchange Place	63.7	64.8	1.1	No

Source: HELIX 2018a

<sup>1</sup> Noise levels measured at 10 feet.

<sup>2</sup> A 3 dBA or greater increase would be considered a significant impact.

### 5.3.2.3 Significance of Impact

Based upon the SDMC construction noise limits, construction noise during Phases 4, 5, 7, 9, and 11, as well as construction traffic noise for all phases, would be less than significant, but construction noise during Phases 3, 6, 8, and 10 would be potentially significant without mitigation.

### 5.3.2.4 Mitigation, Monitoring and Reporting

The following mitigation measures would be required to reduce construction noise impacts to below a level of significance.

**NOI-1 Noise Barrier for Construction Phase 3 - Demolition of Exchange Place Reservoir.** Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and Mitigation Monitoring Coordinator (MMC) shall ensure the following notes are included on the project plans. For demolition of the existing Exchange Place Reservoir, if a breaker is used within 73 feet or if a concrete saw is used within 98 feet of a residence, a temporary 16-foot-high noise control barrier shall be erected between the breaker or concrete saw and the residence to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA L<sub>EQ</sub> (12 hour). The barrier shall be a minimum of five feet above the first floor



foundation of the adjacent residential structure. If applicable, a construction safety barrier may be enhanced to act as a noise control barrier by meeting the specifications listed below.

The temporary noise control barrier shall be tall enough to break the line of sight between the breaker and concrete saw and the sensitive receptor. The sound attenuation barrier must be solid. It can be constructed of wood, plywood, or flexible vinyl curtains that meet a rating of Sound Transmission Class (STC) 19, as long as there are no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked. If wood or plywood is used, it can be tongue and groove and must be at least 5/8-inch total thickness or have a density of at least 3.5 pounds per square foot.

Alternative methods (including, but not limited to the use of alternative sound barriers, noise attenuation devices/modifications to construction equipment, limiting hours of operation, or a combination of these measures) may be employed to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour); however, if alternate measures are employed, they shall be evaluated by a qualified acoustician prior to the initiation of construction activities to ensure that they will reduce noise levels to within City standards.

**NOI-2 Noise Barrier for Construction Phase 6.** Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and MMC shall ensure the following notes are included on the project plans. For construction of the proposed reservoir, if concrete pouring occurs during evening and nighttime hours, a temporary 16-foot-high noise control barrier shall be erected and shall surround the construction site and operating equipment to reduce noise levels.

The sound attenuation barrier must be solid. It can be constructed of wood, plywood, or flexible vinyl curtains that meet a rating of STC 19, as long as there are no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked. If wood or plywood is used, it can be tongue and groove and must be at least 5/8-inch total thickness or have a density of at least 3.5 pounds per square foot.

**NOI-3 Noise Barrier for Construction Phase 8.** Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and MMC shall ensure the following notes are included on the project plans. For trenching within the Encelia Drive access road, if a backhoe is used within 35 feet of a residence, a temporary 10-foot-high noise control barrier shall be erected between the backhoe and residence to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour).

The temporary noise control barrier shall be tall enough to break the line of sight between the pieces of equipment and the residence. The sound barrier specifications and alternative compliance procedures shall be the same as those described in Mitigation Measure NOI-1.

**NOI-4 Noise Barrier for Construction Phase 10.** Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and MMC shall ensure the following notes are included on the project plans. For trenching within Country Club Drive, if a concrete saw is used within 25 feet of a residence, a temporary 6-foot-high noise control

barrier shall be erected between the concrete saw and the residence to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour).

The temporary noise control barrier shall be tall enough to break the line of sight between the pieces of equipment and the residence. The sound barrier specifications and alternative compliance procedures shall be the same as those described in Mitigation Measure NOI-1.

### 5.3.2.5 Significance of Impacts After Mitigation

Construction noise impacts during Phases 4, 5, 7, 9, and 11, as well as all construction traffic noise, would be less than significant without mitigation. Impacts from Phases 3, 8, and 10 would be reduced to less-than-significant levels following implementation of mitigation measures NOI-1, NOI-3, and NOI-4, as the barriers would reduce noise levels below the 75 dBA  $L_{EQ}$  threshold.

For Phase 6, however, when construction would have to occur during evening and night hours, implementation of the 16-foot noise barrier proposed in mitigation measure NOI-2 would only be able to reduce the noise level from 70.3 dBA  $L_{EQ}$  to 53.8 dBA  $L_{EQ}$ , which would still be above the 45 dBA  $L_{EQ}$  evening noise level threshold and the 40 dBA  $L_{EQ}$  nighttime noise level threshold. With the barrier, the 45 dBA  $L_{EQ}$  noise contour would extend approximately 1,350 feet and the 40 dBA  $L_{EQ}$  noise contour would extend approximately 760 feet.

Due to the construction requirements for the concrete pouring process, potential mitigation measures such as reducing the hours of construction worked or the number of pieces of equipment being used would not be feasible. Therefore, a noise barrier would be the only feasible mitigation measure in this scenario, but it would not be able to reduce noise levels below the specified thresholds, due to the physical limits on noise reduction from a barrier. Although the noise barrier would provide substantial noise attenuation (approximately 16 dBA reduction) by breaking the line of sight between the equipment and the noise receptors, some noise would still travel through the barrier or above the barrier and reach the receptor. Using a thicker or taller noise barrier would provide only negligible to marginal improvement and would not achieve the specified thresholds, since the maximum theoretical noise reduction capability of a feasible construction noise barrier is approximately 20 dBA. Therefore, although noise levels during Phase 6 would be reduced with implementation of mitigation measure NOI-2, they would still exceed the SDMC evening and nighttime noise level thresholds, and impacts would be significant and unavoidable.

## 5.3.3 Impact 2: Operational Noise

*Issue 2: Would the Project result in or create a significant permanent increase in the existing ambient noise levels?*

### 5.3.3.1 Impact Thresholds

A significant noise impact would occur from operation of a project if it would result in or create a significant permanent increase in the existing noise levels. For the purposes of this analysis, a significant increase would be greater than a perceptible change (3 dBA) over existing conditions or the generation of noise levels at a common property line that exceed the SDMC limits shown in Table 5.3-1.

### 5.3.3.2 Impact Analysis

The operational noise sources associated with the Project include occasional vehicle trips for structure and equipment inspection, as well as for long-term (five years) revegetation and restoration maintenance and monitoring. It is anticipated that maintenance trips would include two vehicle trips per week (similar to existing conditions), which would not result in a substantial increase in ambient noise levels.

The new reservoir would not include components that would emit noise, as water would enter and exit the reservoir at the inlet/outlet pipe located near the bottom of the tank. No water splashing associated with filling the reservoir would occur. Vents would be located in the roof of the tank to allow for sufficient air flow within the tank and would not emit noise. An altitude valve vault would be constructed on the north side of Country Club Drive, where the 30-inch waterline crosses under the road. The valve vault would generate minor noise emissions, which would be negligible and inaudible at the nearest residence, located over 150 feet to the southwest.

### 5.3.3.3 Significance of Impact

Operation of the Project would not result in a substantial increase in ambient noise levels, and impacts would be less than significant.

### 5.3.3.4 Mitigation, Monitoring and Reporting

As impacts from Project operation would be less than significant, no mitigation measures would be required.

## 5.3.4 Impact 3: Vibration

*Issue 3: Would the Project result in the exposure of persons to or generation of excessive ground-borne vibration levels?*

### 5.3.4.1 Impact Thresholds

A significant vibration impact would occur if a project would subject vibration-sensitive land uses to construction-related ground-borne vibration from continuous/frequent intermittent construction sources (such as impact pile drivers, vibratory pile drivers, and vibratory compaction equipment) that: (1) exceeds the "severe" vibration annoyance potential criterion for human receptors of 0.4 inch per second peak particle velocity (PPV), or (2) exceeds the potential criteria for damage to older residential structures of 0.5 inch per second PPV, as specified by California Department of Transportation (Caltrans; 2013).

### 5.3.4.2 Impact Analysis

Construction activities known to generate excessive ground-borne vibration, such as pile driving, would not be conducted by the Project. A possible source of vibration during general project construction activities would be a vibratory compactor/roller, which may be used within 15 feet of the nearest residence along Country Club Drive. A vibratory compactor/roller would create

approximately 0.210 inch per second PPV at a distance of 25 feet (Caltrans 2013). A 0.210 inch per second PPV vibration level would equal 0.368 inch per second PPV at a distance of 15 feet.<sup>1</sup> This would be lower than what is considered the “severe” human annoyance threshold of 0.4 inch per second PPV, and the structural damage impact threshold to older residential structures of 0.5 inch per second PPV. Therefore, although a vibratory roller may be perceptible to nearby human receptors, temporary construction impacts associated with the roller (and other potential equipment) would be less than significant.

The proposed Project does not include operational components that would generate substantial vibration. Therefore, operational vibration impacts would be less than significant.

### **5.3.4.3 Significance of Impact**

Project-generated vibration would not exceed applicable vibration standards, and impacts would be less than significant.

### **5.3.4.4 Mitigation, Monitoring and Reporting**

As impacts would be less than significant, no mitigation measures would be required.

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<sup>1</sup> Equipment PPV = Reference PPV \* (25/D)<sup>n</sup> (in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through the ground); formula from Caltrans 2013.

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## 5.4 Transportation/Circulation

This section evaluates potential traffic-related impacts associated with the Project in terms of vehicle miles traveled (VMT). The following discussion is based on a VMT Analysis Technical Memorandum (VMT Memo) prepared for the Project by Chen Ryan (Chen Ryan 2020). Applicable portions of the VMT Memo are summarized below, with the complete memorandum included as Appendix C of this EIR.

### 5.4.1 Existing Conditions

#### 5.4.1.1 Environmental Setting

##### Existing Roadway Network

The principal roadways in the project vicinity are briefly described below. Roadway classifications are based on designations in the adopted La Jolla Community Plan, which was last updated in June 2014.

**Exchange Place** is a two-lane, undivided roadway with a posted speed limit of 25 mph between Torrey Pines Road and Country Club Drive. Parallel parking is permitted on both sides of the roadway. Sidewalks are present on both sides of the roadway while bicycle facilities are not present on either side of the roadway. Exchange Place is classified as a two-lane Collector.

**Country Club Drive** is a two-lane, undivided roadway with a posted speed limit of 25 mph between Exchange Place and Romero Drive. Parking is prohibited along both sides of the roadway. Bicycle facilities are not provided on either side of the roadway. Sidewalks are present only on the west side of the roadway between Mar Avenue and Pepita Way. Country Club Drive is classified as a two-lane Collector.

**La Jolla Parkway** is a four-lane roadway with a raised median and a posted speed limit of 45 mph between Torrey Pines Road/Hidden Valley Road and Ardath Lane, where sidewalks are present on the north side of the roadway. Bicycle facilities are not present on either side of the roadway. Parking is prohibited on both sides of the roadway. La Jolla Parkway is classified as a four-lane Expressway between Torrey Pines Road/Hidden Valley Road and Ardath Lane.

**Brodiaea Way** is a two-lane, undivided roadway with no posted speed limit between Romero Drive and the Encelia Drive. Parallel parking is allowed on the east side of the roadway. Sidewalks are not present on either side of the roadway, and no bicycle facilities are present on either side of the roadway. Brodiaea Way is classified as a two-lane Collector.

**Torrey Pines Road** is a four-lane, undivided roadway between Exchange Place and La Jolla Parkway with a posted speed limit of 35 mph. Torrey Pines Road has a center left turn lane from Prospect Place to East Roseland Drive. Sidewalks are present along both sides of the roadway. Parking is prohibited on both sides of the roadway. Class II bike lanes are present from Prospect Place to Torrey Pines Road/Hidden Valley Road with no bicycle facilities beyond these intersections. Torrey Pines Road is classified as a four-lane Modified Collector.



**Romero Drive** is a two-lane, undivided roadway with no posted speed limit between Country Club Drive and the Brodiaea Way. Parking is prohibited on the both sides of the roadway. Sidewalks and bicycle facilities are not present on either side of the roadway. Romero Drive is classified as a two-lane Collector.

## **Existing Alternative Transportation System**

### Bicycle Network

Bicycle network facilities, specifically Class II bike lanes, are present along either side of Torrey Pines Road from Prospect Place to Torrey Pines Road/Hidden Valley Road. A Class II bike lane is characterized as a restricted right-of-way located on the paved road surface alongside the traffic lane nearest the curb and identified by signs, striping, or other pavement markings. The Class II bike lanes along Torrey Pines Road are denoted by white pavement striping. No bicycle network facilities occur along Exchange Place, Country Club Drive, La Jolla Parkway, Brodiaea Way, or Romero Drive.

### Transit Services

The La Jolla community is served by one public transit bus route, Metropolitan Transit Service (MTS) Route 30, which provides service between Downtown and University Town Center. MTS Route 30 bus stops are located at various locations along Torrey Pines Road in the project vicinity. The closest transit stop to the project site is located at the southwest corner of the Torrey Pines Road and Exchange Place intersection. The Mid-Coast Trolley project, which is planned to run just east of La Jolla and provide trolley service between Old Town and University Town Center, was under construction at the time this EIR was prepared and is estimated to be operational by the year 2021.

### Pedestrian Facilities

Sidewalks are provided along roadways in the Project vicinity, including along both sides of Exchange Place and Torrey Pines Road, along the west side of Country Club Drive between Mar Avenue and Pepita Way, and along the north side of La Jolla Parkway between Torrey Pines Road/Hidden Valley Road and Ardath Lane. No sidewalks are present along Brodiaea Way or Romero Drive.

## **5.4.1.2 Regulatory Framework**

### **State**

Senate Bill (SB) 743, signed in 2013, requires a change in the way that transportation impacts are analyzed under CEQA. Previously, environmental review of transportation impacts focused on the delay on vehicles experience at intersections and roadway segments, as expressed in level of service (LOS). The legislation, however, sets forth that upon certification of new guidelines by the Secretary of the Natural Resources Agency, automobile delay, as described solely by LOS or other similar measures of traffic congestion “shall not be considered a significant impact on the environment.” Local jurisdictions may continue to consider LOS with regard to local general plan policies, zoning codes, conditions of approval, thresholds, and other planning requirements. New criteria for measuring traffic impacts under CEQA are to focus on “the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” A preliminary

discussion draft of updated guidelines was circulated in August 2014. After extensive stakeholder input, the Governor's Office of Planning and Research (OPR) transmitted its proposed CEQA guideline implementing this legislation to the California Natural Resources Agency in April 2018. OPR published a "Technical Advisory on Evaluating Transportation Impacts in CEQA" in December 2018 to include recommendations to replace the traditional LOS metric with a VMT metric for future traffic impact evaluations. OPR then adopted the VMT metric as the primary measure for transportation impacts and directed local agencies to update their transportation procedures by July 1, 2020 to replace LOS with VMT.

## **Regional**

### 2050 Regional Transportation Plan

The SANDAG San Diego Forward: The Regional Plan is an update of the RCP and the 2050 RTP/SCS, combined into one document. The Regional Plan includes a SCS, in compliance with SB 375. The SCS aims to create sustainable, mixed-use communities conducive to public transit, walking, and biking by focusing future growth in the previously developed, western portion of the region along the major existing transit and transportation corridors. The Regional Plan has a horizon year of 2050, and projects regional growth and the construction of transportation projects over this time period.

## **Local**

### General Plan

The General Plan's Mobility Element identifies the proposed transportation network and strategies needed to support the anticipated General Plan land uses. The Mobility Element's policies promote a balanced, multimodal transportation network that gets people where they want to go while minimizing environmental and neighborhood impacts. The Mobility Element contains policies that address walking, streets, transit, regional collaboration, bicycling, parking, the movement of goods, and other components of a transportation system. Together, these policies advance a strategy for relieving congestion and increasing transportation choices.

### La Jolla Community Plan

Goals of the La Jolla Community Plan include providing an adequate circulation system to serve residents, visitors, and employees and reducing traffic congestion by promoting and increasing the efficiency of alternative transportation systems.

### Transportation Study Manual

The City adopted a Transportation Study Manual (TSM) in November 2020 to comply with SB 743 requirements and provide guidance on preparing transportation impact analyses for projects within the City that rely on VMT instead of LOS metrics. The City's TSM establishes VMT as the performance metric for measuring transportation impacts under CEQA and includes VMT screening criteria, significance thresholds, analysis methodologies, and suggested mitigation measures to address traffic impacts. Initial screening criteria consider the project's location, daily trips generated, and the type of project.

## 5.4.2 Impact 1: Transportation Systems

*Issue 1: Would the Project result in a conflict with CEQA Guidelines Section 15064.3, subdivision (b), which identifies VMT as the most appropriate measure on transportation impacts?*

*Issue 2: Would the Project have a substantial impact upon existing or planned transportation systems?*

### 5.4.2.1 Impact Thresholds

In accordance with the City's TSM, all projects requiring CEQA review shall go through a screening process to determine the level of transportation analysis that is required. Based on the screening criteria identified in the TSM, projects that can be classified within any of the following screening criteria would be presumed to have a less than significant VMT impact due to the project's characteristics and/or location and therefore would not require additional VMT CEQA analysis:

1. *Residential or Commercial Project Located in a VMT Efficient Area:* The project is a residential or commercial employment project located in a VMT efficient area (15% or more below the base year average household VMT/capita or VMT/employee) based on the applicable location-based screening map produced by SANDAG.
2. *Industrial or Agricultural Project Located in a VMT Efficient Area:* The project is an industrial employment or agricultural employment project located in VMT efficient area (in an area with average or below average base year VMT/employee) based on the applicable location-based screening map produced by SANDAG.
3. *Small Project:* The project is a small project defined as generating less than 300 daily unadjusted driveway trips using the City of San Diego trip generation rates/procedures.
4. *Locally Serving Retail/Recreational Project:* The project is a locally serving retail/recreational project defined as having 100,000 square feet gross floor area or less and demonstrates through a market study that the market capture area for the project is approximately three miles (or less) and serves a population of roughly 25,000 people or less. Locally serving retail is consistent with the definitions of Neighborhood Shopping Center in the San Diego Municipal Code Land Development Code Trip Generation Manual. Locally serving recreation land uses are listed in Appendix B of the City of San Diego TSM, if they meet the square footage and market capture area above. Adding retail/recreation square footage (even if it is 100,000 square feet gross floor area or less) to an existing regional retail shopping area is not screened out.
5. *Locally Serving Public Facility:* The project is a locally serving public facility defined as a public facility that serves the surrounding community or a public facility that is a passive use. The following are considered locally serving public facilities: transit centers, public schools, libraries, post offices, park-and-ride lots, police and fire facilities, and government offices. Passive public uses include communication and utility buildings, water sanitation, and waste management.

6. *Affordable Housing*: The project has access to transit\* and is wholly or has a portion that meets one of the following criteria: is affordable to persons with a household income equal to or less than 50% of the area median income (as defined by California Health and Safety Code Section 50093), housing for senior citizens [as defined in Section 143.0720(e)], housing for transitional foster youth, disabled veterans, or homeless persons [as defined in 143.0720(f)]. The units shall remain deed restricted for a period of at least 55 years. The project shall provide no more than the minimum amount of parking per unit, per San Diego Municipal Code Section 143.0744. Only the portion of the project that meets the above criteria is screened out. For example, if the project is 100 units with 10 deed-restricted affordable housing units, transportation VMT analysis would not be necessary for the 10 affordable units but would be necessary for the remaining 90 units (unless they meet one of the other screening criteria). For purposes of applying the small project screening criteria, the applicant would only include the trip generation for the non-affordable housing portion of the project (since the affordable housing portion is screened out).
7. *Mixed Use Project Screening Considerations*: The project's individual land uses should be compared to the screening criteria above. It is possible for some of the mixed-use project's land uses to be screened out and some to require further analysis. For purposes of applying the small project screening criteria, the applicant would only include the trip generation for portions of the project that are not screened out based on other screening criteria. For example, if a project includes residential and retail, and the retail component was screened out because it is locally serving; only the trip generation of the residential portion would be used to determine if the project meets the definition of a small project.
8. *Redevelopment Project Screening Considerations*: The project is redevelopment project that demonstrates that the proposed project's total project VMT is less than the existing land uses' total VMT. Exception: If a project replaces affordable housing (either deed restricted or other types of affordable housing) with a smaller number of moderate-income or high-income residential units, the project is not screened out and must analyze VMT impacts per Table 3.

### 5.4.2.2 Impact Analysis

#### Trip Generation

Landscape restoration monitoring visits would be performed for a period of five years after construction on a bi-weekly basis. This is estimated to consist of one to two small trucks, for up to four trips per day. At the end of the monitoring period, temporary irrigation system removal is anticipated to involve up to three small trucks over three weeks, or six trips per day. Once the Project becomes operational, the new reservoir would require maintenance visits consistent with current conditions, which involve one maintenance vehicle or two trips per day approximately once per week. Enhanced security and remote control systems at the new reservoir would help to reduce these visits further. As a result, the Project would generate up to six trips per day during the first five years after construction and up to two trips per day thereafter.

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\* Access to transit is defined as transit being located within a reasonable walking distance (½ mile) from the project driveway.

## **VMT Analysis**

Based on the screening criteria identified in the TSM and provided in Section 5.4.2.1, the Project meets the definition of a “Small Project” as it would generate no more than six trips on a given day, which is below the threshold of 300 daily unadjusted driveway trips. Also, the Project qualifies as a “Locally Serving Public Facility” because it consists of a water utilities project that serves the surrounding community and is considered a passive public use. As a result, the Project may be presumed to have a less than significant VMT impact.

### **5.4.2.3 Significance of Impacts**

The Project would not result in a substantial increase in projected traffic that would affect existing or planned transportation systems. No impacts would occur.

### **5.4.2.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures would be required.

## **5.4.3 Impact 2: Potential for Traffic Hazards**

*Issue 3: Would the Project result in an increase in traffic hazards for motor vehicles, bicyclists, or pedestrians due to a proposed, non-standard design feature (e.g., poor sight distance or driveway onto an access-restricted roadway)?*

### **5.4.3.1 Impact Threshold**

According to the City's Significance Determination Thresholds (2016a), transportation impacts may be significant if a project would increase traffic hazards to motor vehicles, bicyclists, or pedestrians due to proposed non-standard design features (e.g., poor sight distance, proposed driveway onto an access-restricted roadway).

### **5.4.3.2 Impact Analysis**

Potential traffic hazards would be limited to the temporary construction period, during which traffic control for all forms of mobility would be provided in accordance with an approved Traffic Control Plan. During pipeline installation, portions of Country Club Drive and a small portion of Brodiaea Way near its intersection with Encelia Drive would be temporarily reduced to a single lane. Flaggers would direct traffic to reduce hazards. Because there are no bicycle network facilities along Country Club Drive or Brodiaea Way and the only pedestrian facility is an approximately 115-foot sidewalk on the west side of Country Club Drive between Mar Avenue and Pepita Way, Project construction would not result in significant traffic hazards to bicyclists or pedestrians. The construction work area in Country Club Drive would be properly marked to ensure pedestrians to not encroach on the work area. In addition, all trenches through roadways would be covered with steel plates at the end of each workday. Upon completion of construction, the contractor would repair or replace all existing improvements within the right-of-way that are not designated for permanent removal to at least equal to their current conditions.

### **5.4.3.3 Significance of Impact**

With the inclusion of an approved Traffic Control Plan and other construction impact minimization measures, Project construction would result in less than significant impacts related to traffic hazards. Operationally, the reservoir and below-ground pipelines would not result in impacts related to traffic hazards.

### **5.4.3.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures would be required.

## **5.4.4 Impact 3: Alternative Transportation**

*Issue 4: Would the Project result in a conflict with adopted policies, plans, or programs supporting alternative transportation modes (e.g., bus turnouts, bicycle racks)?*

### **5.4.4.1 Impact Thresholds**

According to the City's *Significance Determination Thresholds* (2016a), transportation impacts may be significant if the Project would conflict with adopted policies, plans, or programs supporting alternative transportation modes (e.g., bus turnouts, bicycle racks).

### **5.4.4.2 Impact Analysis**

Alternative transportation facilities in the Project area, including bus stops, bicycle lanes, and sidewalks, are generally limited to Torrey Pines Road and La Jolla Parkway. Project construction would temporarily increase the amount of vehicular traffic along these roadways but would not result in lane closures or otherwise impede existing alternative transportation facilities along Torrey Pines Road or La Jolla Parkway. As mentioned in Section 5.4.3.2, trenching activities would occur within Country Club Drive where there is an approximately 115-foot sidewalk on the west side of the road between Mar Avenue and Pepita Way. While temporary lane closures would occur along Country Club Drive, construction activities are not anticipated to limit pedestrian access to the sidewalk along this roadway.

Operation of the reservoir and pipelines would require maintenance visits approximately once per week but would not generate potential users of existing alternative transportation facilities in the Project area. As such, the Project would not conflict with adopted plans, policies, or programs supporting alternative modes of transportation.

### **5.4.4.3 Significance of Impact**

The Project would not interfere with or affect existing alternative transportation systems and would not conflict with adopted plans, policies, or programs supporting alternative transportation modes. No impacts would occur.

#### **5.4.4.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures would be required.



## 5.5 Biological Resources

This section of the EIR evaluates anticipated impacts to biological resources from implementation of the Project. A Biological Technical Report (BTR) was completed for the Project by Rocks Biological Consulting (RBC; 2019), and is included as Appendix D1. A jurisdictional delineation report of the Project site also was completed by RBC (2019) and is included as Appendix D to the Project BTR. On- and off-site habitat restoration plans (HELIX 2019b and 2019c) that would be implemented to mitigate impacts to sensitive biological resources are included as Appendices D2 and D3, respectively, of this EIR.

RBC conducted general biological surveys on April 1, 2014 to map vegetation and perform a general botanical and zoological species survey within the preliminary Project area and within an approximately 100-foot mapping buffer. During the initial surveys, zoological species activity was moderate, and most spring season plant species would have been observable; however, late spring and summer flowering species would not have been present. Additional site visits were conducted on October 21, 2015, April 15, 2016, and February 23, 2018 to perform focused species surveys for San Diego thornmint (*Acanthomintha ilicifolia*), coast barrel cactus (*Ferocactus viridescens*), and Nuttall's scrub oak (*Quercus dumosa*), and to perform new vegetation mapping in an additional, adjacent area and confirm original mapping. The additional area, approximately 0.2 acre located immediately south of the proposed new reservoir site, was added to the project plan to account for required grading in this area.

U.S. Fish and Wildlife Service (USFWS) protocol surveys for the federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*) were performed in 2015 for the full project area plus a 300-foot buffer. Appendix F to the Project BTR contains the coastal California gnatcatcher survey report.

A jurisdictional delineation of the Project site and adjacent lands was conducted by RBC on November 6, 2015. RBC subsequently verified site conditions and the jurisdictional status of on-site features on January 10, 2018 and July 5, 2018. The delineation was conducted to identify and map water and wetland resources potentially subject to USACE jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344), RWQCB jurisdiction pursuant to Section 401 of the CWA and State Porter-Cologne Water Quality Control Act, and streambed and riparian habitat potentially subject to CDFW jurisdiction pursuant to Sections 1600 et seq. of the California Fish and Game Code. The delineation was also conducted to determine the presence or absence of wetlands as defined by the City's ESL Regulations.

### 5.5.1 Existing Conditions

#### 5.5.1.1 Environmental Setting

##### Vegetation Communities

The project site supports six vegetation communities, including Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, southern maritime chaparral, eucalyptus woodland, ornamental vegetation, and disturbed land (Figure 5.5-1, *Vegetation/Project Features*).

## **Jurisdictional Areas**

There are three wetland parameters analyzed during a formal jurisdictional delineation: (1) presence of wetland (hydrophytic) plants; (2) hydric soils; and (3) wetland hydrology. The federal definition of wetlands requires all three indicators to be present. The City's wetland definition, however, hinges solely on the presence of wetland hydrophytic plants.

Potentially jurisdictional areas on the project site include a large southeast-northwest trending drainage that runs the length of the on-site canyon (Feature 1), and a smaller drainage that flows into Feature 1 northwest of the Project site boundary (Feature 2; Figure 5.5-2, *Potentially Jurisdictional Areas*). Feature 1 accounts for the majority of the potentially jurisdictional acreage on site and also includes two small tributaries, features 1A and 1B. Features 1 (including 1A and 1B) and 2 are identified as potential non-wetland, ephemeral Waters of the U.S./State jurisdictional by the USACE, and as potential ephemeral streambed jurisdictional by CDFW. The potentially jurisdictional drainages on site do not meet the federal definitions of wetlands, nor do they satisfy the City's wetland definition, as explained below.

In addition, a non-jurisdictional ravine (Feature 3) was mapped to the east and outside of the project site but within the study area. As this feature was determined not to be jurisdictional, it is not addressed further herein.

### U.S. Army Corps of Engineers Jurisdictional Areas

USACE wetland boundaries are determined using three criteria established for wetland delineations (vegetation, hydrology, and soils), as described within the Wetlands Delineation Manual (USACE 1987) and Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region (USACE 2008) and mentioned briefly above.

Areas are determined to be non-wetland Waters of the U.S. if there is evidence of regular surface flow (e.g., bed and bank), but either the vegetation or soils criterion is not met. Jurisdictional limits for these areas are defined by the ordinary high-water mark (OHWM), which is defined in 33 Code of Federal Regulations (CFR) Section 329.11 as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas."

Approximately 0.096 acre of potential USACE jurisdiction in the form of non-wetland Waters of the U.S./State occurs within the project site (Figure 5.5-2).

### California Department of Fish and Wildlife Jurisdictional Areas

Potential CDFW jurisdictional boundaries are determined based on the presence of riparian vegetation or regular surface flow. Streambeds within CDFW jurisdiction are delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72).

Riparian habitat is not defined in Title 14, but the section refers to vegetation and habitat associated with a stream.

Approximately 0.096 acre of potential CDFW jurisdictional streambed occurs within the project site (Figure 5.5-2).

#### City-defined Wetlands

City wetlands include areas characterized by any of the following conditions: (1) areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by wetland (hydrophytic) vegetation, including but not limited to salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal pools; (2) areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities because human activities have removed the historic wetland vegetation or catastrophic or recurring natural events or processes have acted to preclude the establishment of wetland vegetation as in the case of salt pannes and mudflats; (3) areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands; and (4) areas mapped as wetlands on Map C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone). Naturally unvegetated reaches of streambed or streambeds supporting upland vegetation are not considered City wetlands.

As noted above, areas meeting the definition of City wetlands jurisdiction were not observed on the project site, based on the jurisdictional delineation conducted by RBC. Specifically, the on-site drainages are not considered City of San Diego-jurisdictional wetlands based on the fact that they do not support a dominance of hydrophytic vegetation. No obligate wetland vegetation such as willows (*Salix* spp.) or preponderance of hydric plant species were observed on site; however, one small patch of invasive giant reed (*Arundo donax*) was observed in the channel of Feature 1. The channel appears to have some increased water conveyance due to runoff from nearby residences and roadways; at one point a concrete-lined feature re-directs roadway runoff flows from Country Club Drive directly into the channel. *Arundo* is classified as a "facultative wetland (FACW)" species, which is defined as a species that usually occurs in wetlands but occasionally occurs in uplands. This species does not constitute a dominant species within the drainage; its occurrence is likely the result of increased urban runoff and nearby residential indirect impacts. For instance, Country Club Road runoff drains directly into the channel via a small concrete ditch; such diversion creates an increased flow within the channel. Also, development of the impervious roadways and homes above the channel likely increased flows to this area. However, the presence of giant reed does not indicate that the channel is a vegetation community "characteristically dominated by hydrophytic vegetation;" rather, the remainder of the channel supports uplands species and is overwhelmingly dominated by lemonade berry (*Rhus integrifolia*), an upland species. The presence of the small patch of giant reed is incongruent with the remaining natural portions of the channel, which do not support any other wetland species. Features 1 (including 1A and 1B) and 2 would be best described as "seasonal drainage patterns that are sufficient enough to etch the landscape (i.e., ephemeral/intermittent drainages)." Pursuant to the City's Biology Guidelines, neither channel is dominated by nor supports significant areas of wetland plant species and, therefore, they do not constitute City wetlands.

## Plant Species

A total of 77 plant species were identified during the field surveys, of which 21 (27 percent) are non-native species. As discussed earlier, rare plant surveys were conducted for special status plants with potential to occur on the project site. Ashy spike moss (*Selaginella cinerascens*), coast barrel cactus, and Nuttall's scrub oak were mapped during these surveys (Figure 5.5-1).

Ashy spike moss is a California Rare Plant Rank (CRPR) 4.1 species, which means it is on a watch list and has a "limited distribution in California." Species on CRPR lists 1 or 2 must be considered in Project CEQA analysis; lists 3 and 4 have no such mandates, but it is recommended that they be disclosed. Sometimes called club moss, ashy spike moss occurs in Diegan coastal sage scrub and chaparral habitat and is native to Baja California and San Diego County. This species is still relatively common in San Diego County. It grows in dry habitats, typically on clay soil. The plant is often gray or brown in color, forming a dull-colored carpet on the substrate.

Coast barrel cactus is a CRPR 2B.1 species, which means it is considered "seriously threatened in California but more common elsewhere," and is an MSCP-covered species. It is a stem succulent in the Cactaceae family that typically blooms from May to June. This species typically is found on dry west- and south-facing slopes in chaparral, coastal sage scrub, and grassland, as well as adjacent to vernal pools. Coast barrel cactus is known from Riverside and San Diego counties as well as from Baja California, Mexico. This species is threatened by development, non-native plant species, unauthorized collecting, trampling by foot traffic, road maintenance, agricultural practices, grazing, vehicle activity, and illegal dumping (CNPS 2014).

Nuttall's scrub oak is a CRPR 1B.1 species, which means it is "seriously threatened in California and elsewhere." It is an evergreen shrub in the Fagaceae family that typically blooms from February to April. This species is found in sandy or clay loam soils in chaparral, coastal sage scrub, and closed-cone coniferous forest. Nuttall's scrub oak is known from southern California from Orange, Santa Barbara, San Diego, and Ventura counties as well as from Baja California, Mexico. This species is threatened by development, fire suppression, and vegetation/fuels management (CNPS 2014).

No other special status plant species were observed during these surveys or are expected to occur, as indicated in Table 5.5-1, *Potential for Narrow Endemic and Sensitive Plant Species to Occur in the Project Area*.

**Table 5.5-1  
POTENTIAL FOR NARROW ENDEMIC PLANT SPECIES TO OCCUR IN THE PROJECT AREA**

Species	Potential to Occur
San Diego Thornmint ( <i>Acanthomintha ilicifolia</i> )	None. Species occurs on clay lenses (often gray in color) in open, generally grassland areas. Suitable habitat for this species occurs in the project area near the proposed reservoir site; however, the species was not observed during general biological surveys in April 2013 nor during focused surveys on April 12, 2016 (for additional information, please see survey report, Appendix K of EIR Appendix D).
Shaw's Agave ( <i>Agave shawii</i> )	None. Species occurs exclusively on coastal bluffs. Would have been observed if present.
San Diego Ambrosia ( <i>Ambrosia pumila</i> )	None. Species occurs in disturbed areas, seasonally dry drainages and broad floodplains. The project area does not have suitable floodplain habitat and generally supports dense vegetation that would preclude <i>A. pumila</i> .
Aphanisma ( <i>Aphanisma blitoides</i> )	None. Species occurs on coastal bluffs and dunes.
Coastal Dunes Milk Vetch ( <i>Astragalus tener</i> var. <i>titi</i> )	None. Species occurs on coastal dunes.
Encinitas Baccharis ( <i>Baccharis vanessae</i> )	None. Species occurs in southern maritime and southern mixed chaparrals on sandstone soils, typically in north San Diego County. Would have been observed if present.
Short-leaf Dudleya ( <i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> )	Low. Sandstone bluff soil formation habitat of species does not occur within the project area.
Variegated Dudleya ( <i>Dudleya variegata</i> )	None. Habitat is typically openings in coastal sage scrub or grasslands. There is no suitable habitat for this species within the project area.
San Diego Button-Celery ( <i>Eryngium aristulatum</i> var. <i>parishii</i> )	None. Vernal pool species; no vernal pool habitat within the project area.
Otay Tarplant ( <i>Deinandra conjugens</i> )	None. Species occurs in grasslands and coastal sage scrub in clay soils in southern San Diego County. The project area does not support clay lenses characteristic of Otay tarplant habitat.
Prostrate Navarretia ( <i>Navarretia fossalis</i> )	None. Vernal pool species; no vernal pool habitat within the project area.
Snake Cholla ( <i>Opuntia parryi</i> var. <i>serpentina</i> )	None. Species occurs in chaparral and coastal sage scrub in southern San Diego County. Would have been observed if present.
Orcutt Grass ( <i>Orcuttia californica</i> )	None. Vernal pool species; no vernal pool habitat within the project area.
San Diego Mesa Mint ( <i>Pogogyne abramsii</i> )	None. Vernal pool species; no vernal pool habitat within the project area.
Otay Mesa Mint ( <i>Pogogyne nudiuscula</i> )	None. Vernal pool species; no vernal pool habitat within the project area.

Source: RBC 2019

## Animal Species

A total of 39 animal species were observed or otherwise detected within the project study area during the biological surveys, including 4 invertebrate, 1 reptile, 33 bird, and 1 mammal species. Focused surveys for the federally listed threatened and MSCP-covered coastal California gnatcatcher were performed in 2015 for the full project area plus a 300-foot buffer; the species was not

observed during the surveys (RBC 2019). Surveys for this species are, however, now considered expired and the species is considered potentially present. A least Bell's vireo (*Vireo bellii pusillus*) (federally and state listed as endangered) was observed in the northeastern portion of the survey area within southern maritime chaparral habitat during general surveys. Based on the lack of appropriate breeding habitat and the early spring timing of the observation, however, it was concluded that the individual was likely migrating through and not a resident of the immediate area. No other special status animal species were observed during the surveys (RBC 2019). Coast horned lizard (*Phrynosoma blainvilli*) and orange-throated whiptail (*Aspidoscelis hyperythra*), which are CDFW species of special concern, are considered to have moderate potential to occur based on the presence of suitable habitats in the project area and the site's location within the species' range.

### **Sensitive Biological Resources**

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 State CEQA Guidelines. The City's ESL Regulations and Biology Guidelines define sensitive biological resources as lands included in MHPA; wetlands; Tier IIIB and higher vegetation types; and habitat for rare, endangered, threatened, or narrow endemic species. The project site is dominated by MHPA lands and includes jurisdictional drainages which are considered as potential Waters of the U.S. and State and/or streambed; these all are considered sensitive biological resources. Southern maritime chaparral is a Tier I habitat and Diegan coastal sage scrub is a Tier II habitat; both are considered sensitive biological resources.

As stated above, three sensitive plant species were observed within the project site. Although a least Bell's vireo was observed on site, it was determined to be in migration rather than a resident of the immediate area. No other sensitive plant or animal species are expected to occur.

### **Wildlife Corridors**

Wildlife corridors represent areas where wildlife movement is concentrated due to natural or anthropogenic constraints. Wildlife corridors can be local or regional in scale; their functions may vary temporally and spatially based on conditions and species presence. Local corridors provide access to resources such as food, water, and shelter. Animals use these corridors, which are often on hillsides or along tributary drainages, to move between different habitats. Regional corridors provide these functions and also link two or more large habitat areas. They provide avenues for wildlife dispersal, migration, and contact between otherwise distinct populations.

The project area is not identified as an MSCP regional wildlife corridor. While the La Jolla Heights Natural Park is isolated, with no adjacent native habitats, the park itself is a large, intact area of native habitat and does serve as a local wildlife corridor and 'stepping stone' corridor for avian species.

## 5.5.1.2 Regulatory Framework

### Federal

#### Endangered Species Act

Administered by the USFWS, the federal Endangered Species Act 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 a “take” under the Endangered Species Act. Section 9(a) of the Endangered Species Act 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.

Sections 10(a) and 7 of the federal Endangered Species Act regulate actions that could jeopardize endangered or threatened species. As projects are proposed, the responsible agency or individual landowner is required to consult with the USFWS to assess potential impacts to listed species (or critical habitat, see below), pursuant to Sections 7 and 10(a). Within the consultation process, USFWS is required to make a determination as to the extent of impact to a particular species a project could have. If it is determined that potential impacts to a listed species would likely occur, measures to avoid or reduce such impacts must be identified. USFWS may issue an incidental take statement, following consultation and the issuance of a Biological Opinion. Section 10(a) allows issuance of permits to non-federal parties for incidental take of endangered or threatened species. The term “incidental” applies if the taking of a listed species is incidental to and not the purpose of an otherwise lawful activity. A Habitat Conservation Plan (HCP) demonstrating how the taking would be minimized and what steps taken would ensure the species’ survival must be submitted for issuance of Section 10(a) permits. The MSCP serves as an HCP. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. 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.

Under the federal Endangered Species Act, the USFWS also designates critical habitat, which is land considered necessary for the recovery of endangered or threatened animal species. The project site does not contain designated critical habitat.

#### Migratory Bird Treaty Act

All migratory bird species that are native to the U.S. or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004 (Federal Register Doc. 05-5127). The MBTA is generally protective of migratory birds, but does not stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to September 15).

Pursuant to the 1997 City of San Diego MSCP Implementing Agreement, the City’s MSCP Section 10(a) Permit constitutes a Special Purpose Permit under 50 CFR Section 21.27 for the take of



covered species that are listed as threatened or endangered under the ESA and also protected by the Migratory Bird Treaty Act, except for the bald eagle. The take of such species in conjunction with projects authorized and approved by the City in accordance with the MSCP does not constitute a violation of the MBTA.

#### Clean Water 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. (including wetlands) is overseen by the USACE under Section 404 of the CWA, whereby the USACE is authorized to regulate any activity that would result in the discharge of dredged or fill material in to Waters of the U.S. Projects can be permitted on an individual basis or be covered under one of several approved Nationwide Permits.

### **State**

#### California Endangered Species Act

The California Endangered Species Act states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats that are threatened with extinction and those experiencing a significant decline, which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. The CDFW is the agency that oversees the California Endangered Species Act and is responsible for assessing projects for their potential to impact listed species and their habitats. California also lists species of special concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. State-listed special status species are addressed through the issuance of a Section 2081 permit (MOU) under the California Endangered Species Act. The City was issued a take permit for its adopted MSCP Subarea Plan pursuant to Section 2081.

#### Natural Community Conservation Planning

As described above, the Project occurs within an area covered by the MSCP, which is a program of the Natural Community Conservation Planning (NCCP) program. In 1991, the California NCCP Act was approved and the NCCP Coastal Sage Scrub program was initiated in Southern California. California law (Section 2800 et seq. of the California Fish and Game Code) established the NCCP program, which began as a cooperative effort between various agencies to protect habitats and species. Unlike the California and federal Endangered Species Acts, which were designed to identify and protect individual species that are on the decline, NCCPs take a broad-based ecosystem approach to planning for the protection of biological diversity through regional planning of habitat preserves and wildlife linkages. The NCCP program “provide(s) for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth.” The NCCP Act encourages preparation of subarea plans such as the City’s MSCP Subarea Plan that address habitat conservation and management on an ecosystem basis rather than one species or habitat at a time.

In exchange for setting aside lands required for species preservation, participating agencies receive an ESA Section 10 take permit for species covered under their NCCP. Pursuant to Section 10(a), the City was issued a take permit for its adopted NCCP program, the MSCP Subarea Plan. As such, projects permitted through the City must comply with the City's MSCP implementing regulations (e.g., Biology Guidelines, ESL Regulations, and City of San Diego MSCP Subarea Plan; see below). This includes, but is not limited to, mitigation of habitat impacts through preservation of habitats of equal or greater value. In exchange, a project applicant receives take authority for special-status species under the City's Endangered Species Act Section 10 permit.

#### Native Plant Protection Act

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in plants that are listed. The California Endangered Species Act followed the NPPA, and covers both plants and animals determined to be endangered or threatened with extinction. Plants listed as rare under NPPA were also designated rare under the California Endangered Species Act.

#### California Fish and Game Code

California Fish and Game Code 3503 states that 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 (birds of prey), falcons, and owls and their active nests are protected by California Fish and Game 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 any birds in the orders Falconiformes or Strigiformes, or destroy the nest or eggs of any such bird unless authorized by CDFW.

As discussed above, the California Fish and Game Code Sections 2050-2100 constitute the California Endangered Species Act, and Section 2800 et seq. constitute the NCCP Act.

### **Local**

#### City of San Diego

Impacts to sensitive biological resources in the City must comply with the City's ESL Regulations. The purpose of the regulations is to "protect, preserve and, where damaged restore, the environmentally sensitive lands of San Diego and the viability of the species supported by those lands." ESL are defined to include sensitive biological resources (including wetlands; MHPA lands; and Tier I, II, and IIIB habitats, as well as lands supporting listed species), steep hillsides, coastal beaches, sensitive coastal bluffs, and 100-year floodplains. ESL Regulations restrict encroachment by projects into sensitive biological habitats. In addition, all conditions of coverage for MSCP-covered species must be met by projects, and impacts to listed non-covered species and narrow endemic species also are restricted. The ESL Regulations additionally require that impacts to wetlands be avoided, and a wetland buffer be maintained as appropriate to maintain the wetland functions and values. The portions of these regulations that apply to the Project involve sensitive biological resources and steep hillsides. Wetlands regulations do not apply, as the project site does not support City-jurisdictional wetlands.

In July 1997, the USFWS, California Department of Fish and Game (CDFG, now known as CDFW), and City adopted the Implementing Agreement for the MSCP (City 1997). This program allows the incidental take of threatened and endangered species as well as regionally sensitive species that are conserved by the MSCP (i.e., covered species). The MSCP designates that 90 percent or more of the regional MHPA will be ultimately conserved to form the final regional MSCP Preserve.

## 5.5.2 Impact 1: Sensitive Species and Habitats

*Issue 1: Would implementation of the Project result in a reduction in the number of any unique, rare, endangered, sensitive, or fully protected species of plants or animals?*

*Issue 2: Would the Project result in impacts to a sensitive habitat or sensitive natural community as identified in local, regional, state, or federal plans, policies, or regulations?*

*Issue 3: Would the Project result in an impact on City, State, or Federally regulated wetlands through direct removal, filling, hydrological interruption, or other means?*

### 5.5.2.1 Impact Thresholds

In accordance with the City's CEQA Significance Determination Thresholds (2016a) and LDC Biology Guidelines (2012), the Project would have a significant impact if it would:

- Result in a substantial adverse impact, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in the MSCP or other local or regional plans, policies or regulations, or by CDFW or USFWS;
- Result in a substantial adverse impact on any Tier I Habitats, Tier II Habitats, Tier IIIA Habitats, or Tier IIIB Habitats as identified in the Biology Guidelines of the Land Development Manual or other sensitive natural community identified in local or regional plans, policies or regulations, or by CDFW or USFWS; or
- Result in a substantial adverse impact on wetlands (including, but not limited to, marsh, vernal pool, riparian, etc.) through direct removal, filling, hydrological interruption, or other means.

### 5.5.2.2 Impact Analysis

#### Sensitive Species

##### Sensitive Plant Species

Ashy spike moss, coast barrel cactus, and Nuttall's scrub oak were documented within the project impact area during focused surveys conducted in 2015, 2016, and 2018. These individuals would be impacted with implementation of the Project. No other special status plant species were observed during these surveys or are expected to occur, as indicated in Table 5.5-1.

### *Ashy Spike Moss*

Ashy spike moss is not an MSCP-covered species; however, as a regional conservation program, the MSCP also protects 'non-target' and non-covered species such as ashly spike moss through habitat acquisition and preservation efforts. Pursuant to the City's Biology Guidelines, "In general, it is accepted that securing comparable habitat at the required ratio will mitigate for the direct impact to most sensitive species. Species-specific analysis for sensitive species not covered by the MSCP may be required as part of the CEQA process. It is expected that the majority of CEQA sensitive species not covered by the MSCP will be adequately mitigated through the habitat-based mitigation described in Section III of these Guidelines." Because ashly spike moss occurs throughout San Diego and is being conserved incidentally through the habitat-based mitigation requirements of the City Biology Guidelines, associated impacts would be less than significant.

### *Coast Barrel Cactus*

Coast barrel cactus is an MSCP-covered species; thus, take of the species is allowed for projects that comply with the City's MSCP implementing regulations. Following is the MSCP condition of coverage for this species (Subarea Plan Appendix A):

Area specific management directives must include measures to protect this species from edge effects, unauthorized collection, and include appropriate fire management/control practices to protect against a too frequent fire cycle.

Area specific management directives refer to management plans prepared for MHPA preserve areas. No management plan has been prepared for the project area; if and when a plan is prepared, it would need to have protection measures for coast barrel cactus. This condition does not apply to the Project as it is not within a management plan. Also, the Project would not create edge effects as it is replacement of an existing above-ground reservoir with an underground reservoir; no new urban edges would be created and associated impacts would not occur. The Project would comply with MSCP implementing regulations and coast barrel cactus is a covered species under the plan; as such, Project impacts on the species would be less than significant. Additionally, all coast barrel cactus within the Project impact area would be collected and salvaged by the qualified Project restoration contractor prior to any clearing, grubbing, or grading. These individuals would be maintained by the restoration contractor during Project construction, then planted as part of the Project restoration effort.

### *Nuttall's Scrub Oak*

Nuttall's scrub oak is not an MSCP-covered species. Pursuant to the City's Biology Guidelines, however, securing comparable habitat in accordance with the City's Biology Guidelines will mitigate for impacts to most special-status species as well, including CRPR 1B.1 species. The regional MSCP plan was designed to protect regional native habitats and the species they support. Nuttall's scrub oak is being conserved incidentally through the habitat-based (Tier I) mitigation requirements of the City Biology Guidelines. Therefore, although potentially adverse, the loss of Nuttall's scrub oak within the project area would not be considered significant. Additionally, Nuttall's scrub oak is included in the planned revegetation species palette and would be re-planted on-site, substantially offsetting any loss. Based on the foregoing, impacts to 45 Nuttall's scrub oak individuals would be less than significant.

### Sensitive Animal Species

Focused (protocol-level) surveys for the federally listed threatened and MSCP-covered coastal California gnatcatcher were performed in 2015. The species was not observed on site. As identified in Appendix F to the BTR, however, the coastal California gnatcatcher has some potential to occur on the project site and the previous protocol surveys have expired. While the potential for this species to occur is considered low, it is conservatively assumed to potentially occur. As coastal California gnatcatcher is an MSCP covered species, take of the species is allowed for projects that comply with the City's MSCP implementing regulations. The Project would not result in the creation of new urban edges. No clearing of occupied habitat would be allowed, as the Project would be required to comply with the City's MHPA Adjacency Guidelines and avian protection measures. As such, impacts would be less than significant.

As noted above, a least Bell's vireo (federally and state listed as endangered) was observed in the northeastern portion of the survey area within southern maritime chaparral habitat. Based on the lack of appropriate breeding habitat in the La Jolla Heights Natural Park and the early spring timing of the observation, it was concluded that the individual was in migration and not a resident of the immediate area. No associated impacts are expected to occur.

Coast horned lizard and orange-throated whiptail are MSCP covered species; thus, take of the species is allowed for projects that comply with the City's MSCP implementing regulations. The MSCP conditions of coverage for both species require that area-specific management directives address edge effects and (for the coast horned lizard) maintain native ant species and discourage Argentine ant. Area specific management directives refer to management plans prepared for MHPA preserve areas. No management plan has been prepared for the Project area; if and when a plan is prepared, it would need to address potential edge effects for this species. The Project would not create edge effects as it is replacement of an existing reservoir with an underground reservoir; no new urban edges would be created. The project revegetation would require temporary watering, which could encourage Argentine ant population increases; however, irrigation would be removed upon successful revegetation of the area. The Project would comply with MSCP implementing regulations and these species are covered under the plan; as such, Project impacts on the species would be less than significant.

As no other sensitive animal species were observed or detected and none are expected to occur within the project impact areas, no impacts to other sensitive animal species are anticipated.

### *Nesting Birds*

Portions of the project site, including the existing Exchange Place Reservoir demolition site, provide suitable nesting and foraging habitat, primarily for common bird species, including raptors. No impacts to nesting birds are anticipated as the Project would comply with the MBTA and the California Fish and Game Code (Section 3503).

### **Vegetation Communities/Habitats**

As illustrated in Figure 5.5-1, the Project would result in direct impacts to approximately 5.67 acres of sensitive upland habitat, consisting of Tier I southern maritime chaparral (5.53 acres) and Tier II

Diegan coastal sage scrub (0.14 acre) (Table 5.5-2, *Vegetation Communities Impacts*). Impacts to Tier I and Tier II habitat are considered significant and require mitigation.

**Table 5.5-2  
VEGETATION COMMUNITIES IMPACTS**

Habitat Type (Tier)	Total Impact (acres; all within MHPA)
Southern Maritime Chaparral (Tier I)	5.53
Diegan coastal sage scrub (Tier II)	0.14
Eucalyptus Woodland (Tier IV)	0.79
Ornamental (Tier IV)	0.31
Disturbed Land (Tier IV)	2.92
<b>TOTAL</b>	<b>9.69</b>

Source: RBC 2019

MHPA = Multi-habitat Planning Area

### Potential Jurisdictional Areas

The Project would result in impacts to potentially jurisdictional areas, including Waters of the U.S./State and streambed (Figure 5.5-1). As shown in Table 5.5-3, *Potential Jurisdictional Resource Areas Impacts*, impacts associated with the Project total 0.074 acre (854 linear feet) of potential Waters of the U.S./State and streambed. Additional information is provided in the project Jurisdictional Delineation Report (Appendix D to the Project BTR). Based on the proposed impacts to potentially jurisdictional areas, consultation with federal and state wetland permitting agencies is required prior to project implementation. Such impacts are considered significant. As no wetlands occur on site, none would be impacted by the Project and no wetland buffers are present/required.

**Table 5.5-3  
POTENTIAL JURISDICTIONAL RESOURCE AREAS IMPACTS**

Resource Name	Total Impacted Acreage	Total Impacted Feet
Feature 1	0.057	499
Feature 1A	0.007	147
Feature 1B	0.001	20
Feature 2	0.009	188
<b>TOTAL</b>	<b>0.074</b>	<b>854</b>

Source: RBC 2019

### 5.5.2.3 Significance of Impact

Construction of the Project would result in significant impacts to southern maritime chaparral (Tier I habitat) and Diegan coastal sage scrub (Tier II habitat). Impacts to potential USACE and CDFW jurisdictional areas also would be significant. No federal, State, or City-regulated wetlands would be impacted by the Project. While the Project would impact three sensitive plant species (ashy spike moss, coast barrel cactus, and Nuttall's scrub oak), these impacts would not be significant for the reasons described above. Impacts to coastal California gnatcatcher and other nesting birds would be avoided through compliance with the MSCP Land Use Adjacency Guidelines, MBTA, and California Fish and Game Code.

## 5.5.2.4 Mitigation, Monitoring and Reporting

### Biological Resource Protection During Construction

#### ***Mitigation Measure BIO-1***

##### I. Prior to Construction

- A. **Biologist Verification** – The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.
- B. **Preconstruction Meeting** – The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.
- C. **Biological Documents** – The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, MSCP, ESL, project permit conditions; CEQA; endangered species acts (ESAs); and/or other local, state or federal requirements.
- D. **BCME** – The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C, above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coast barrel cactus), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.
- E. **Avian Protection Requirements** – To avoid any direct impacts to the coastal California gnatcatcher and avian species identified as a listed, candidate, sensitive, or special status species in the MSCP, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting coastal California gnatcatcher, sensitive, or MSCP-covered birds are detected, a letter report or mitigation plan in conformance with the



City's Biology Guidelines and applicable state and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Qualified Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

- F. Resource Delineation – Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora and fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.
- G. Education – Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

## II. During Construction

- A. Monitoring – All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVSR). The CSVSR shall be e-mailed to MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.
- B. Subsequent Resource Identification – The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

## III. Post Construction Measures

- A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other

applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

## Vegetation Communities

Under the City's Biology Guidelines, project impacts to Tiers I-III habitats must be mitigated. Project mitigation must occur at ratios outlined in Table 5.5-4, *Mitigation Requirements for Project Impacts to Sensitive Upland Vegetation Communities*, which also itemizes the impacts anticipated in each habitat type, and the resulting mitigation requirement.

**Table 5.5-4  
MITIGATION REQUIREMENTS FOR PROJECT IMPACTS TO SENSITIVE  
UPLAND VEGETATION COMMUNITIES**

Habitat Type (Tier)	Project Impact Inside MHPA (acres)	Project Impact Outside MHPA (acres)	Mitigation Requirement Inside MHPA (acres)	Mitigation Requirement Outside MHPA (acres)	On-site Mitigation Inside MHPA (acres)	On-site Mitigation Outside MHPA (acres)	Off-site Mitigation (acres) <sup>4</sup>
Southern Maritime Chaparral (Tier I)	5.53	--	11.06 (2:1 ratio)	16.59 (3:1 ratio)	4.53 <sup>2</sup>	0.04 <sup>3</sup>	6.50 <sup>5</sup>
Diegan coastal sage scrub (Tier II)	0.13	0.01	0.14 (1:1 ratio)	0.28 (2:1/1.5:1 ratio <sup>1</sup> )	--	--	0.14
<b>TOTALS</b>	<b>5.66</b>	<b>0.01</b>	<b>11.20</b>	<b>16.87</b>	<b>4.53</b>	<b>0.04</b>	<b>6.64</b>

Source: RBC 2019

<sup>1</sup> Mitigation for impacts inside the MHPA is 2:1; mitigation for impacts outside the MHPA is 1.5:1.

<sup>2</sup> Based on a 2:1 mitigation ratio, 4.53 acres of on-site restoration provides mitigation for 2.27 acres of project impact.

<sup>3</sup> Based on a 3:1 mitigation ratio, 0.04 acre of on-site restoration provides mitigation for 0.01 acre of project impact.

<sup>4</sup> All off-site mitigation will be achieved within the MHPA; see discussion of off-site mitigation below.

<sup>5</sup> Based on 2.28 acres of southern maritime chaparral mitigated on-site (see footnotes 1 and 2, above) and a 2:1 mitigation ratio for off-site mitigation within the MHPA [(5.53-2.28) x 2 = 6.50].

Mitigation will be achieved by conserving lands on and off site.

With the exception of the reservoir facility, utility easements, and required brush management areas for adjacent homeowners, all project areas will be restored for mitigation purposes (refer to Preliminary Revegetation Plans in Appendix H to the BTR). As native plant restoration areas (versus revegetation), these areas will require a five-year mitigation and monitoring program. As shown in Table 5.5-4, it is anticipated that on-site restoration will achieve approximately 4.57 acres of mitigation, which is only a portion of the total mitigation needed for project impacts.

With 4.57 acres of Tier I habitat land available for mitigation through on-site restoration, the balance of 6.50 acres of Tier I habitat and 0.14 acre of Tier II habitat will need to be mitigated off site. Mitigation for the remaining 6.64 acres for Project upland impacts will occur on City-owned lands in the Los Peñasquitos Canyon Preserve. At this site, 7.01 acres of combined Tier IIIB disturbed non-native grassland will be converted and Tier II disturbed Diegan coastal sage scrub will be enhanced to Tier I maritime succulent scrub. This approach to mitigation for Tier I impacts

associated with the proposed project is acceptable considering the current condition of existing habitat and the presence of similar Tier I vegetation in the vicinity of the proposed mitigation site. The proposed conversion/enhancement of existing disturbed non-native grassland/Diegan coastal sage scrub to Tier I habitat likewise would provide a benefit by restoring habitat that used to be more common in coastal areas historically, and was more abundant within Los Peñasquitos canyon prior to recent fires that favored an expansion of non-native grasses. The proposed mitigation site is within the MHPA and near existing maritime succulent scrub habitat.

It is anticipated that increasing the density and species richness of native vegetation will provide higher quality habitat to facilitate improved use of the site by coastal California gnatcatcher. Based on the presence of appropriate soils and slope aspect within the proposed mitigation area, and existing maritime succulent scrub located nearby on similar soils and slope aspect, target maritime succulent scrub is expected to be self-sustaining at the selected mitigation site. To ensure long-term sustainability, the site will be maintained and monitored for five years, and remedial measures such as re-planting and invasives control will be implemented as the target species establish. The project applicant will be responsible for ensuring compliance with all revegetation and restoration performance standards as outlined in the project restoration plan. Pursuant to the Off-Site Tier I Maritime Succulent Scrub Restoration Plan for the La Jolla View Reservoir Replacement Project (HELIX 2019c), final approval of the mitigation effort will be provided by the City MMC when sustained success of the community is achieved. The mitigation area is located within the MHPA on land owned by the City in fee title and managed by the Parks and Recreation Department. Success of the site will be measured and achieved using a reference maritime succulent scrub site located at Kate O. Sessions Neighborhood Park, as outlined and fully described in the Off-Site Tier I Maritime Succulent Scrub Restoration Plan for the La Jolla View Reservoir Replacement Project (HELIX 2019c). Upon successful completion and final approval of the mitigation effort, the Parks and Recreation Department will again be responsible for provision of long-term management in accordance with the MSCP Framework Management Plan and applicable area-specific management directives as part of their Open Space management program. Restoration of 7.01 acres of maritime succulent scrub would exceed the requirement for 6.50 acres of Tier I and 0.14 acre Tier II off-site habitat mitigation by 0.37 acre.

### ***Mitigation Measure BIO-2***

Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental Designee shall verify that the Project has ensured the restoration and preservation of upland habitats based on the ratios shown in Table 5.5-4. This shall be conducted in accordance with the Conceptual On-site Upland and Ephemeral Drainage Restoration and Revegetation Plan (HELIX 2019b) and Off-Site Tier I Maritime Succulent Scrub Restoration Plan (HELIX 2019c).

Prior to the issuance of a Notice to Proceed (NTP) or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits the ADD environmental designee of the City's LDR Division shall incorporate the following mitigation measures into the project design and include them verbatim on all appropriate construction documents. Note that these requirements apply to both on-site and off-site restoration activities.

## Prior to Permit Issuance

### A. Land Development Review (LDR) Plan Check

1. Prior to NTP or issuance for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, whichever is applicable, the ADD environmental designee shall verify that the requirements for the revegetation/restoration plans and specifications, including mitigation of direct impacts to southern maritime chaparral have been shown and noted on the appropriate landscape construction documents. The landscape construction documents and specifications must be found to be in conformance with the La Jolla View Reservoir Replacement Project Conceptual On-Site Upland and Ephemeral Drainage Restoration and Revegetation Plan prepared by HELIX Environmental Planning (2019b) the requirements of which are summarized below.

### B. Revegetation/Restoration Plan(s) and Specifications

1. Landscape Construction Documents (LCD) shall be prepared on D-sheets and submitted to the City of San Diego Development Services Department, Landscape Architecture Section (LAS) for review and approval. LAS shall consult with Mitigation Monitoring Coordination (MMC) and obtain concurrence prior to approval of LCD. The LCD shall consist of revegetation/restoration, planting, irrigation and erosion control plans; including all required graphics, notes, details, specifications, letters, and reports as outlined below.
2. Landscape Revegetation/Restoration Planting and Irrigation Plans shall be prepared in accordance with the San Diego Land Development Code (LDC) Chapter 14, Article 2, Division 4, the LDC Landscape Standards submittal requirements, and Attachment "B" (General Outline for Revegetation/Restoration Plans) of the City of San Diego's LDC Biology Guidelines (LDC 2012). The Principal Qualified Biologist (PQB) shall identify and adequately document all pertinent information concerning the revegetation/restoration goals and requirements, such as but not limited to, plant/seed palettes, timing of installation, plant installation specifications, method of watering, protection of adjacent habitat, erosion and sediment control, performance/success criteria, inspection schedule by City staff, document submittals, reporting schedule, etc. The LCD shall also include comprehensive graphics and notes addressing the ongoing maintenance requirements (after final acceptance by the City).
3. The Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Construction Manager (CM) and Grading Contractor (GC), where applicable shall be responsible to ensure that for all grading and contouring, clearing and grubbing, installation of plant materials, and any necessary maintenance activities or remedial actions required during installation and the 120 day plant establishment period are done per approved LCD. The following procedures at a minimum, but not limited to, shall be performed:
  - a. The RMC shall be responsible for the maintenance of the upland mitigation area for a minimum period of 120 days. Maintenance visits shall be conducted on a weekly basis throughout the plant establishment period.

- b. At the end of the 120-day period the PQB shall review the mitigation area to assess the completion of the short-term plant establishment period and submit a report for approval by MMC.
  - c. MMC will provide approval in writing to begin the five-year long-term establishment/maintenance and monitoring program.
  - d. Existing indigenous/native species shall not be pruned, thinned or cleared in the revegetation/mitigation area.
  - e. The revegetation site shall not be fertilized.
  - f. The RIC is responsible for reseeding (if applicable) if weeds are not removed, within one week of written recommendation by the PQB.
  - g. Weed control measures shall include the following: (1) hand removal; (2) cutting, with power equipment; and (3) chemical control. Hand removal of weeds is the most desirable method of control and will be used wherever possible.
  - h. Damaged areas shall be repaired immediately by the RIC/RMC. Insect infestations, plant diseases, herbivory, and other pest problems will be closely monitored throughout the five-year maintenance period. Protective mechanisms such as metal wire netting shall be used as necessary. Diseased and infected plants shall be immediately disposed of off-site in a legally acceptable manner at the discretion of the PQB or Qualified Biological Monitor (QBM) (City approved). Where possible, biological controls will be used instead of pesticides and herbicides.
4. If a Brush Management Program is required the revegetation/restoration plan shall show the dimensions of each brush management zone and notes shall be provided describing the restrictions on planting and maintenance and identify that the area is impact neutral and shall not be used for habitat mitigation/credit purposes.

C. Letters of Qualification Have Been Submitted to ADD

1. The applicant shall submit, for approval, a letter verifying the qualifications of the biological professional to MMC. This letter shall identify the PQB, Principal Restoration Specialist (PRS), and QBM, where applicable, and the names of all other persons involved in the implementation of the revegetation/restoration plan and biological monitoring program, as they are defined in the City of San Diego Biological Review References. Resumes and the biology worksheet should be updated annually.
2. MMC will provide a letter to the applicant confirming the qualifications of the PQB/PRS/QBM and all City Approved persons involved in the revegetation/restoration plan and biological monitoring of the project.
3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the project.

4. PQB must also submit evidence to MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program (SWPPP) training.

Prior to Start of Construction

A. PQB/PRS Shall Attend Preconstruction (Precon) Meetings

1. Prior to beginning any work that requires monitoring:
  - a. The owner/permittee or their authorized representative shall arrange and perform Precon Meeting that shall include the PQB or PRS, Construction Manager (CM) and/or Grading Contractor (GC), Landscape Architect (LA), Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC.
  - b. The PQB shall also attend any other grading/excavation related Precon Meetings to make comments and/or suggestions concerning the revegetation/restoration plan(s) and specifications with the RIC, CM and/or GC.
  - c. If the PQB is unable to attend the Precon Meeting, the owner shall schedule a focused Precon Meeting with MMC, PQB/PRS, CM, BI, LA, RIC, RMC, RE and/or BI, if appropriate, prior to the start of any work associated with the revegetation/restoration phase of the project, including site grading preparation.
2. Where Revegetation/Restoration Work Will Occur
  - a. Prior to the start of any work, the PQB/PRS shall also submit a revegetation/restoration monitoring exhibit (RRME) based on the appropriate reduced LCD (reduced to 11"x 17" format) to MMC, and the RE, identifying the areas to be revegetated/restored including the delineation of the limits of any disturbance/grading and any excavation.
  - b. PQB shall coordinate with the construction superintendent to identify appropriate best management practices (BMPs) on the RRME.
3. When Biological Monitoring Will Occur
  - a. Prior to the start of any work, the PQB/PRS shall also submit a monitoring procedures schedule to MMC and the RE indicating when and where biological monitoring and related activities will occur.
4. PQB Shall Contact MMC to Request Modification
  - a. The PQB may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the revegetation/restoration plans and specifications. This request shall be based on relevant information (such as other sensitive species not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA) which may reduce or increase the potential for biological resources to be present.

## During Construction

### A. PQB or QBM Present During Construction/Grading/Planting

1. The PQB or QBM shall be present full-time during construction activities including but not limited to, site preparation, cleaning, grading, excavation, landscape establishment in association with restoration or revegetation activities which could result in impacts to sensitive biological resources as identified in the LCD and on the RRME. The RIC and/or QBM are responsible for notifying the PQB/PRS of changes to any approved construction plans, procedures, and/or activities. The PQB/PRS is responsible to notify the CM, LA, RE, BI and MMC of the changes.
2. The PQB or QBM shall document field activity via the Consultant Site Visit Record Forms (CSVr). The CSVrs shall be faxed by the CM the first day of monitoring, the last day of monitoring, monthly, and in the event that there is a deviation from conditions identified within the LCD and/or biological monitoring program. The RE shall forward copies to MMC.
3. The PQB or QBM shall be responsible for maintaining and submitting the CSVr at the time that CM responsibilities end (i.e., upon the completion of construction activity other than that of associated with biology).
4. All construction activities (including staging areas) shall be restricted to the development areas as shown on the LCD. The PQB/PRS or QBM staff shall monitor construction activities as needed, with MMC concurrence on method and schedule. This is to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved LCD.
5. The PQB or QBM shall supervise the placement of orange construction fencing or City approved equivalent, along the limits of potential disturbance adjacent to (or at the edge of) all sensitive habitats, including southern maritime chaparral and Diegan coastal sage scrub, as shown on the approved LCD.
6. The PQB shall provide a letter to MMC that limits of potential disturbance has been surveyed, staked and that the construction fencing is installed properly.
7. The PQB or QBM shall oversee implementation of BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measures, as needed to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible to verify the removal of all temporary construction BMPs upon completion of construction activities. Removal of temporary construction BMPs shall be verified in writing on the final construction phase CSVr.
8. PQB shall verify in writing on the CSVrs that no trash stockpiling or oil dumping, fueling of equipment, storage of hazardous wastes or construction equipment/material, parking or other construction related activities shall occur adjacent to sensitive habitat. These activities shall occur only within the designated staging area located outside the area defined as biological sensitive area.



9. The long-term establishment inspection and reporting schedule per LCD must all be approved by MMC prior to the issuance of the Notice of Completion (NOC) or any bond release.

B. Disturbance/Discovery Notification Process

1. If unauthorized disturbances occurs or sensitive biological resources are discovered that where not previously identified on the LCD and/or RRME, the PQB or QBM shall direct the contractor to temporarily divert construction in the area of disturbance or discovery and immediately notify the RE or BI, as appropriate.
2. The PQB shall also immediately notify MMC by telephone of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate best management practices (BMPs). After obtaining concurrence with MMC and the RE, PQB and CM shall install the approved protection and agreement on BMPs.
3. The PQB shall also submit written documentation of the disturbance to MMC within 24 hours by fax or email with photos of the resource in context (e.g., show adjacent vegetation).

C. Determination of Significance

1. The PQB shall evaluate the significance of disturbance and/or discovered biological resource and provide a detailed analysis and recommendation in a letter report with the appropriate photo documentation to MMC to obtain concurrence and formulate a plan of action which can include fines, fees, and supplemental mitigation costs.
2. MMC shall review this letter report and provide the RE with MMC's recommendations and procedures.

Post Construction

A. Mitigation, Monitoring and Reporting Period

1. Five-Year Mitigation Establishment/Maintenance Period
  - a. The RMC shall be retained to complete maintenance monitoring activities throughout the five-year mitigation monitoring period.
  - b. Maintenance visits will be conducted twice per month for the first six months, once per month for the remainder of the first year, and quarterly thereafter.
  - c. Maintenance activities will include all items described in the LCD.
  - d. Plant replacement will be conducted as recommended by the PQB (note: plants shall be increased in container size relative to the time of initial installation or establishment or maintenance period may be extended to the satisfaction of MMC).

## 2. Five-Year Biological Monitoring

- a. All biological monitoring and reporting shall be conducted by a PQB or QBM, as appropriate, consistent with the LCD.
- b. Monitoring shall involve both qualitative horticultural monitoring and quantitative monitoring (i.e., performance/success criteria). Horticultural monitoring shall focus on soil conditions (e.g., moisture and fertility), container plant health, seed germination rates, presence of native and non-native (e.g., invasive exotic) species, any significant disease or pest problems, irrigation repair and scheduling, trash removal, illegal trespass, and any erosion problems.
- c. After plant installation is complete, qualitative monitoring surveys will occur monthly during year one and quarterly during years two through five.
- d. Upon the completion of the 120 days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 6, 12, 24, 36, 48 and 60 months by the PQB or QBM. The revegetation/restoration effort shall be quantitatively evaluated once per year (in spring) during years three through five, to determine compliance with the performance standards identified on the LCD. All plant material must have survived without supplemental irrigation for the last two years.
- e. Quantitative monitoring shall include the use of fixed transects and photo points to determine the vegetative cover within the revegetated habitat. Collection of fixed transect data within the revegetation/restoration site shall result in the calculation of percent cover for each plant species present, percent cover of target vegetation, tree height and diameter at breast height (if applicable) and percent cover of non-native/non-invasive vegetation. Container plants will also be counted to determine percent survivorship. The data will be used determine attainment of performance/success criteria identified within the LCD.
- f. Biological monitoring requirements may be reduced if, before the end of the fifth year, the revegetation meets the fifth year criteria and the irrigation has been terminated for a period of the last two years.
- g. The PQB or QBM shall oversee implementation of post-construction BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measure, as needed to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible to verify the removal of all temporary post-construction BMPs upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSV.

## B. Submittal of Draft Monitoring Report

1. A draft monitoring letter report shall be prepared to document the completion of the 120-day plant establishment period. The report shall include discussion on weed control, horticultural treatments (pruning, mulching, and disease control), erosion control, trash/debris removal, replacement planting/reseeding, site protection/signage, pest

management, vandalism, and irrigation maintenance. The revegetation/restoration effort shall be visually assessed at the end of 120-day period to determine mortality of individuals.

2. The PQB shall submit two copies of the Draft Monitoring Report which describes the results, analysis, and conclusions of all phases of the Biological Monitoring and Reporting Program (with appropriate graphics) to MMC for review and approval within 30 days following the completion of monitoring. Monitoring reports shall be prepared on an annual basis for a period of five years. Site progress reports shall be prepared by the PQB following each site visit and provided to the owner, RMC and RIC. Site progress reports shall review maintenance activities, qualitative and quantitative (when appropriate) monitoring results including progress of the revegetation relative to the performance/success criteria, and the need for any remedial measures.
3. Draft annual reports (three copies) summarizing the results of each progress report including quantitative monitoring results and photographs taken from permanent viewpoints shall be submitted to MMC for review and approval within 30 days following the completion of monitoring.
4. MMC shall return the Draft Monitoring Report to the PQB for revision or, for preparation of each report.
5. The PQB shall submit revised Monitoring Report to MMC (with a copy to RE) for approval within 30 days.
6. MMC will provide written acceptance of the PQB and RE of the approved report.

C. Final Monitoring Reports(s)

1. PQB shall prepare a Final Monitoring upon achievement of the fifth year performance/success criteria and completion of the five year maintenance period.
  - a. This report may occur before the end of the fifth year if the revegetation meets the fifth year performance/success criteria and the irrigation has been terminated for a period of the last two years.
  - b. The Final Monitoring report shall be submitted to MMC for evaluation of the success of the mitigation effort and final acceptance. A request for a pre-final inspection shall be submitted at this time, MMC will schedule after review of report.
  - c. If at the end of the five years any of the revegetated area fails to meet the project's final success standards, the applicant must consult with MMC. This consultation shall take place to determine whether the revegetation effort is acceptable. The applicant understands that failure of any significant portion of the revegetation/restoration area may result in a requirement to replace or renegotiate that portion of the site and/or extend the monitoring and establishment/maintenance period until all success standards are met.

## Potentially Jurisdictional Areas

As described above, impacts to federal and state potentially jurisdictional waters have not yet been permitted. If jurisdiction is confirmed, mitigation ratios will be determined during consultation with the USACE and CDFW and will depend on mitigation type (creation, restoration, etc.), mitigation location, and quality of mitigation proposed. Accordingly, there is no mitigation table for potentially jurisdictional areas contained within this EIR; however, a 1:1 to 3:1 mitigation to impact ratio range is anticipated.

### **Mitigation Measure BIO-3**

Applicable 404 permits and/or clearances shall be obtained prior to any disturbance of the jurisdictional features on site. All mitigation measures and conditions required per such permits shall be implemented. As a minimum, the following shall be completed for mitigation for impacts to Waters of the U.S. and jurisdictional streambeds. Mitigation options include on site, offsite, in lieu fee mitigation, or a combination, to replace on-site jurisdictional features. Avoided jurisdictional waters shall be fenced or flagged for avoidance. BMPs shall be implemented to avoid indirect impacts to jurisdictional waters, including the following:

1. Vehicles and equipment will not be operated in ponded or flowing water except as described in the permits.
2. Water containing mud, silt, or other pollutants from grading or other activities will not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.
3. Spoil sites will not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages.
4. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil, or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, will be prevented from contaminating the soil and/or entering avoided jurisdictional waters.
5. No equipment maintenance will occur within 100 feet of jurisdictional waters and no petroleum products or other pollutants from the equipment will be allowed to enter these areas or enter any off-site state-jurisdictional waters under any flow.

## 5.5.3 Impact 2: Wildlife Corridors

*Issue 4: Would the proposed Project result in interference with the movement of any native resident or migratory wildlife through linkages or wildlife corridors?*

### 5.5.3.1 Impact Threshold

In accordance with the City Significance Determination Thresholds (2016a) and LDC Biology Guidelines (2012), the Project would have a significant impact if it would:

- Result in substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, including linkages identified in the MSCP Plan, or impedance of the use of native wildlife nursery sites.

### **5.5.3.2 Impact Analysis**

While the project area is not identified as an MSCP regional wildlife corridor, it does serve as a local wildlife corridor and a stepping stone corridor for avian species. However, the Project does not propose any new barriers such as fencing or development that would preclude wildlife movement. Because the Project would replace the existing above-grade reservoir with a below-ground reservoir, it would result in fewer obstructions through this area than currently exist. As such, no impacts on wildlife corridors would occur with project implementation.

### **5.5.3.3 Significance of Impact**

No significant impacts to wildlife corridors or movement would occur as a result of implementation of the Project.

### **5.5.3.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures are required.

## **5.5.4 Impact 3: Local Plans and Policies**

*Issue 5: Would the proposed Project conflict with provisions of adopted local habitat conservation plans or policies protecting biological resources?*

*Issue 6: Would the proposed Project introduce land uses within or adjacent to the MHPA that would result in adverse edge effects?*

### **5.5.4.1 Impact Thresholds**

In accordance with the City Significance Determination Thresholds (2016a) and LDC Biology Guidelines (2012), the Project would have a significant impact if it would:

- Result in a conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, either within the MSCP plan area or in the surrounding region;
- Result in introduction of a land use within an area adjacent to the MHPA that would result in adverse edge effects; or
- Result in a conflict with any local policies or ordinances protecting biological resources.

### 5.5.4.2 Impact Analysis

#### **Biology Guidelines Requirements for Development Within the MHPA or OR-1-2 Zone**

The City of San Diego Biology Guidelines include specific regulations related to development within the MHPA or OR-1-2 zone, such as the Project. These regulations include, among other provisions, requirements that encroachment into steep hillsides containing sensitive biological resources within the Coastal Overlay Zone be avoided to the maximum extent possible. As noted above, the Exchange Place Reservoir and Pump Station that are proposed for demolition are located on developed land that is not within the MHPA; as such, no further discussion of the existing Exchange Place Reservoir and Pump Station is contained herein.

Based on input from the City Engineering and Capital Projects Department and project engineers, the Project has been designed to avoid sensitive resources to the maximum extent feasible. According to the La Jolla View Reservoir Study (City 2010), alternative sites within the La Jolla Heights Natural Park were evaluated for a new reservoir, as was the possibility of not replacing the existing La Jolla View Reservoir, which was found to be infeasible.

Planning studies also found that to meet system needs, the new facility must have a larger volume than the existing facility and be situated at a higher elevation than the current reservoir but within a limited band of acceptable elevation. Because of this, the location of the new facility is further constrained by the topography and geomorphology in the project area. The existing reservoir is at a relatively high elevation; therefore, the need to site the new reservoir at an even higher elevation significantly limits locations for the new reservoir. One of the first steps in the conceptual design process was to conduct vegetation mapping and special-status plant species mapping and documentation, along with a cultural resources study and survey. The data collected during the biological and cultural resource surveys were used to the extent feasible in placing and configuring the proposed new facilities, within the previously described constraints. The selected site satisfies the conditions needed to meet water system operational requirements; allows for the reservoir to be fully buried, thereby minimizing impacts in the La Jolla Heights Natural Park, consistent with the MOU between the City Parks and Recreation Department and the Public Utilities Department; and reflects important biological and cultural constraints.

Because no City of San Diego-jurisdictional wetlands or associated buffers are present within the Project site, the Project would be consistent with wetlands-related avoidance requirements of the Biology Guidelines.

Lastly, MSCP regulations restrict development to 25 percent or less of a parcel that is entirely within the MHPA; for essential public facility projects, "up to an additional 5% development area inside the MHPA is permitted in order to accommodate essential public facilities as identified in an adopted Land Use Plan (e.g., Community Plan, Specific Plan)." Replacement of the La Jolla View Reservoir is on the City's facilities improvement list and is a public potable water reservoir. As such, the Project likely qualifies as an essential public facility; however, the additional five percent development area is not necessary for the Project. The La Jolla View Reservoir and associated pipeline work area would be almost entirely contained within the 42.6-acre parcel owned by the City (APN 350-680-05). Of the parcel's 42.6 acres, nearly all (37 acres, or 87 percent) are MHPA lands. The Project would impact 7.57 acres of land within the parcel, 96 percent of which are MHPA lands. As such, Project development constitutes approximately 18 percent of the total parcel, and less than the MHPA

development limit (Figure 5.5-3, *MHPA Encroachment*). The Exchange Place Reservoir and Pump Station that are to be demolished are located entirely on a separate 0.94-acre parcel owned by the City. None of this parcel is designated MHPA.

Based on the foregoing, the Project would comply with the Biology Guidelines requirements/MHPA encroachment regulations.

### **MSCP Consistency Analysis**

As previously noted, the project site lies within the City's MSCP Subarea Plan and a majority of the Project occurs within lands designated as MHPA (Figure 5.5-3). Compliance with several MSCP Subarea Plan directives, therefore, is required for the Project in addition to compliance with the City's other MSCP implementing regulations.

#### MHPA Compatible Land Uses (Section 1.4.1)

The Project is almost entirely within lands designated MHPA. Section 1.4.1 of the MSCP Subarea Plan precludes development within the MHPA except in limited circumstances that are considered "conditionally compatible with the biological objectives of the MSCP." The allowed uses are as follows:

- Passive recreation
- Utility lines and roads in compliance with Section 1.4.2 (see below)
- Limited water facilities and other essential public facilities
- Limited low-density residential uses
- Brush management (Zone 2)
- Limited agriculture

As a water reservoir and associated utility lines, the Project would qualify as a "limited water facility" and "utility lines;" accordingly, these are conditionally compatible allowed uses within the MHPA, when design and construction are performed in conformance with relevant planning and design guidelines, as outlined below.

#### General Planning Policies and Design Guidelines (Section 1.4.2)

The Project would be required to comply with guidelines from MSCP Subarea Plan Section 1.4.2 regarding Roads and Utilities; Fencing, Lighting, and Signage; and Materials Storage. The following discussion includes Project-relevant requirements from each of the noted guidelines categories, and an analysis of the Project's compliance with each.

Roads and Utilities – Construction and Maintenance Policies. The following applicable policies are included in the MSCP Subarea Plan.

1. *All proposed utility lines (e.g., sewer, water, etc.) should be designed to avoid or minimize intrusion into the MHPA. These facilities should be routed through developed or developing areas rather than*



*the MHPA, where possible. If no other routing is feasible, the lines should follow previously existing roads, easements, rights of way, and disturbed areas, minimizing habitat fragmentation.*

The existing reservoir was built prior to the surrounding lands being classified as MHPA lands. According to input from the City Engineering and Capital Projects Department and project engineers, alternative routing of the utility line through non-MHPA lands was found to be not feasible (see also Section 8.3.3, *Alternative Pipeline Alignments*). As described above, placement of the new reservoir was heavily restricted due to specific elevation requirements, severely narrowing the potential locations for the replacement site (see also Section 8.3.2, *Alternative Reservoir Sites*). No developed areas are available nearby whereupon the reservoir could be relocated. As such, the proposed new reservoir location is considered to be in compliance with limitations on utilities intrusion within the MHPA. Additionally, the associated utility lines must branch off from the reservoir, so the lines also have very limited placement options.

2. *All new development for utilities and facilities within or crossing the MHPA shall be planned, designed, located and constructed to minimize environmental impacts. All such activities must avoid disturbing the habitat of MSCP covered species, and wetlands. If avoidance is infeasible, mitigation will be required.*

Please see above for a discussion of the approach taken to reduce impacts on MHPA lands, MSCP-covered species, and other sensitive biological resources. No impacts to wetlands would occur and applicable measures to avoid or minimize indirect impacts to the MHPA are described below.

3. *Temporary construction areas and roads, staging areas, or permanent access roads must not disturb existing habitat unless determined to be unavoidable. All such activities must occur on existing agricultural lands or in other disturbed areas rather than in habitat. If temporary habitat disturbance is unavoidable, then restoration of, and/or mitigation for, the disturbed area after project completion will be required.*

Construction staging areas would occur in developed areas or within the footprint of the La Jolla View Reservoir and Exchange Place Reservoir demolition activities, prior to revegetation. Construction staging would not result in additional disturbance beyond the areas identified as project impact areas (Figure 5.5-1).

The Project includes a temporary construction access road using reservoir excavation soil stockpiles. The temporary road would run from Country Club Road to the proposed reservoir site. Construction of this temporary road would impact native habitats within the MHPA. The temporary road would be associated with temporary stockpiling of material on site to minimize the truck traffic anticipated with soil export and subsequent import. An alternative that would not include this access road and stockpile is analyzed in Section 8.4.2, *Encelia Drive Construction Access Alternative*.

Impacts from the proposed temporary construction roadway would be significant (see Section 5.5.3, Issue 1 above). All habitat areas impacted by the roadway would be restored upon completion of reservoir relocation, and all project impacts would be mitigated in accordance with the City's Biology Guidelines (2012). Land grades would be returned to their approximate pre-construction contours and levels upon project completion. See Impact 1 discussion, above, for the Project mitigation measures for direct impacts to habitats.

Permanent maintenance access to the new reservoir is proposed to occur via a new paved road that replaces a portion of the existing Encelia Drive (Figure 5.5-1). This approach offers the shortest and most direct permanent access route to the new reservoir facility from existing paved streets.

Fencing, Lighting, and Signage. The following applicable policies are included in the MSCP Subarea Plan.

1. *Fencing, or other barriers will be used where it is determined to be the best method to achieve conservation goals and adjacent to land uses incompatible with the MHPA. For example, use chain link or cattle wire to direct wildlife to appropriate corridor crossings, natural rocks/boulders or split rail fencing to direct public access to appropriate locations, and chain link to provide added protection of certain sensitive species or habitats (e.g., vernal pools).*

The new facility would be buried, and no need for fencing or other barriers is anticipated.

2. *Lighting shall be designed to avoid intrusion into the MHPA and effects on wildlife. Lighting in areas of wildlife crossings should be of low-sodium or similar lighting.*

No permanent lighting is currently proposed in association with the Project. Temporary night lighting may be used during construction on the limited number of days when work extends for longer hours (e.g., tank floor concrete pour). Based on input from the project engineering team, the floor of the tank would be constructed in an excavated bowl that is up to 60 feet deep relative to the surrounding ground surface. This setting would provide some measure of light shielding. Additional requirements would include using an illumination level commensurate with the nature of the work (e.g., use high illumination levels only in areas where detailed work is taking place), using shielded light fixtures, directing light fixtures to shine downward mainly on the area of work, avoiding glare, and using a lighting system that illuminates the work area without spilling over to adjoining property.

3. *Signage will be limited to access and litter control and educational purposes.*

Signage would be limited and primarily aimed at discouraging public access into the MHPA and reservoir vicinity, similar to the "No Trespassing" and "No Parking" signage currently present at the existing La Jolla View Reservoir facility.

Materials Storage. The following applicable policies are included in the MSCP Subarea Plan.

1. *Prohibit storage of materials (e.g., hazardous or toxic, chemicals, equipment, etc.) within the MHPA and ensure appropriate storage applicable in any areas that may impact the MHPA, especially due to leakage.*

No storage of hazardous or toxic materials is proposed within the MHPA. Storage for construction or operation of the new reservoir (if any) would be done in accordance with relevant materials safety regulations. This requirement seems to apply primarily to hazardous waste or equipment that could leak hazardous substances; as such, stockpiling clean soil within the MHPA for use as an access road would not conflict with materials storage requirements of the MSCP.

### Flood Control

The City's MSCP Subarea Plan's Compatible Land Uses: Flood Control section includes the following guidance (City 1997):

*No riprap, concrete, or other unnatural material shall be used to stabilize river, creek, tributary, and channel banks within the MHPA. River, stream, and channel banks shall be natural, and stabilized where necessary with willows and other appropriate native plantings. Rock gabions may be used where necessary to dissipate flows and should incorporate design features to ensure wildlife movement.*

MSCP guidance regarding riprap material being used to stabilize the banks of drainages within the MHPA is intended for flood control projects rather than small facility outfalls; as such, the Project would be in compliance with the guidance, as explained below.

The reservoir would include an emergency overflow pipe and outfall that would occur immediately adjacent a small on-site channel. The outflow structure would have a small (approximately 8-foot-long) area of riprap in order to dissipate water energy prior to release into the canyon. The dissipator riprap at the outfall would not be within the channel itself, but would be part of the reservoir dissipator located adjacent to the channel. The riprap would not be used to stabilize the existing channel but to slow flows that could go into the channel in the event of an emergency or reservoir tank clearing. Note that the MSCP guidance does allow for the use of rock gabions for flood control purposes, presumably to ensure that riprap would not be carried downstream. In the case of the proposed outflow, water velocities have been calculated and would not result in riprap erosion or conveyance of rocks downstream. Unlike natural streams, the dissipator outflow velocities would not increase with exceptionally heavy rains but rather are based on the reservoir volumes.

The maximum potential overflow rate is slightly less than the flow rate that is estimated to result from the natural storm water runoff generated by a 2-year storm event in the La Jolla Heights Natural Park area (i.e., 11.9 cubic feet per second [cfs] at a concentration point at the loop along Crespo Street). Though riprap is not allowed for stream stabilization within the MHPA, the proposed small area of riprap would not conflict with MSCP regulations as it is: (1) located at the outflow feature, not within the channel or stabilizing the channel itself; and (2) a very small area of riprap, not a large area stabilizing a streambank.

### MHPA Land Use Adjacency Guidelines (Section 1.4.3)

The project area occurs within and adjacent to MHPA land associated with the La Jolla Heights Natural Park. Projects occurring adjacent to the City's MHPA must adhere to the City's MHPA land use adjacency guidelines pursuant to Section 1.4.3 of the City's MSCP Subarea Plan. The adjacency guidelines, which pertain to drainage, toxics, lighting, noise, barriers, invasives, brush management, and grading/land development, and analysis of the Project's conformance with each, are presented below. These requirements will become conditions of project approval.

Drainage. The Subarea Plan states:

*All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural*

*environment or ecosystem processes within the MHPA. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.*

The Project would install a new small area of hardscape (approximately 4,000 square feet), but would remove a substantially larger area (approximately 25,000 square feet), representing a substantial net removal of existing hardscape and associated storm water runoff within and near MHPA lands.

Demolition of the existing La Jolla View Reservoir and a portion of the existing paved Encelia Drive would accomplish the removal of approximately 14,000 square feet of impervious surface area (the reservoir roof, the roadway paving, and a paved parking area) located within, and currently draining to, the MHPA. These areas would be graded and revegetated to reflect approximately the historical terrain.

To accommodate reservoir operations and maintenance, the new reservoir facility would include a small paved parking area (approximately 4,000 square feet, suitable for parking and turnaround of medium-sized maintenance trucks). The parking area would be graded to match the existing topography and paved. To match existing conditions, drainage off the new parking area would be in the form of sheet flow that matches runoff from the existing surrounding terrain. The proposed reservoir facility would be accessed via a portion of the existing Encelia Drive that is proposed to be repaved to the same width and cross-slope as the existing roadway, thereby preserving approximately the same sheet flow drainage pattern that currently exists. Replacement of the La Jolla View Reservoir would thus accomplish a net removal of 10,000 square feet of hardscape within the MHPA.

During project construction activities, grading and fill for the temporary roadway have the potential to create erosion and sedimentation. A Stormwater Pollution Prevention Plan (SWPPP) would be prepared for the Project, as described in Section 5.11, *Hydrology and Water Quality*, of this EIR. Through development and implementation of a project-specific SWPPP, impacts associated with runoff, water quality, and erosion would be minimized and would be less than significant.

Toxics. The Subarea Plan requires:

*Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. Such measures should include drainage/detention basins, swales, or holding areas with non-invasive grasses or wetland-type native vegetation to filter out the toxic materials. Regular maintenance should be provided. Where applicable, this requirement should be incorporated into leases on publicly owned property as leases come up for renewal.*

Please see the preceding discussion of *Drainage* for an analysis of the Project's conformance to the land use adjacency guidelines regarding toxics. Additionally, the operations of the reservoir would not generate potentially toxic materials.

Lighting. The Subarea Plan states:

*Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.*

No permanent lighting is currently proposed as part of the Project operations. Night lighting during construction is anticipated to be limited to approximately 20 days when nighttime work is required, with potential for light overspill minimized as previously described. MHPA land use adjacency guidelines regarding lighting will be part of the project conditions of approval to ensure conformance during the construction process.

Noise. The Subarea Plan states:

*Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.*

Protocol surveys for the coastal California gnatcatcher were performed in 2015 (see Appendix D to the Project BTR). As the surveys were negative, no indirect noise impacts on this species are anticipated with Project construction or implementation. However, because the surveys will be more than two years old at the start of construction, preconstruction surveys are required. Contractors would be required to implement reasonable and feasible noise control measures. Depending on construction timing, preconstruction surveys for other species, including nesting birds, also could be required as described in Mitigation Measure BIO-1.

Barriers. The Subarea Plan states:

*New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.*

As the new reservoir facility would be buried, no need for fencing or other barriers is anticipated.

Invasives. The Subarea Plan states:

*No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.*

No ornamental landscaping is proposed as part of project development. Per the terms of the MOU, once the existing La Jolla View Reservoir and appurtenances are removed, the former reservoir site would be restored to approximate prior (historic) contours and revegetated with appropriate native species. Except for the small paved parking area described above, the area disturbed for construction of the replacement facility also would be revegetated with native species. The new facility is not proposed to include ornamental landscape plantings of any type. Following removal, the Exchange Place Reservoir site would be minimally landscaped with drought tolerant vegetation.

In accordance with the MHPA Land Use Adjacency Guidelines, no species listed as “most invasive” or “moderately invasive” by the *San Diego County Invasive Ornamental Plant Guide* (San Diego Chapter of the American Society of the Landscape Architects [SD/ASLA] and the San Diego Chapter of the California Native Plant Society [CNPS; 2005]) would be included in the Exchange Place Reservoir site plant palette based on its proximity to the La Jolla Heights Natural Park.

Brush Management. The Subarea Plan states:

*New residential development located adjacent to and topographically above the MHPA (e.g., along canyon edges) must be set back from slope edges to incorporate Zone 1 brush management areas on the development pad and outside of the MHPA. Zones 2 and 3 will be combined into one zone (Zone 2) and may be located in the MHPA upon granting of an easement to the City (or other acceptable agency) except where narrow wildlife corridors require it to be located outside of the MHPA. Zone 2 will be increased by 30 feet, except in areas with a low fire hazard severity rating where no Zone 2 would be required. Brush management zones will not be greater in size than is currently required by the City's regulations. The amount of woody vegetation clearing shall not exceed 50 percent of the vegetation existing when the initial clearing is done. Vegetation clearing shall be done consistent with City standards and shall avoid/minimize impacts to covered species to the maximum extent possible. For all new development, regardless of the ownership, the brush management in the Zone 2 area will be the responsibility of a homeowners association or other private party. For existing and approved Projects, the brush management zones, standards and locations, and clearing techniques will not change from those required under existing regulations.*

The Project would not require brush management as it would not include any flammable structures requiring fire protection.

Grading/Land Development. The Subarea Plan states:

*Manufactured slopes associated with site development shall be included within the development footprint for Projects within or adjacent to the MHPA.*

All Project features and grading have been included in the project impact footprint analyzed herein. The existing La Jolla View Reservoir would be removed and the site returned to the approximate pre-existing grade. Following construction, the new La Jolla View Reservoir site would also be returned to approximate natural topography and revegetated with native species appropriate for the area. In one area, directly above the new reservoir, some of the final grading would be slightly lower than the original terrain (by up to 12 feet) in order to reduce the excessive soil loading on top of the new tank.

#### *General Management Directives (Section 1.5.2)*

Much of the City's MSCP Subarea Plan General Management Directives (Section 1.5.2) applies to management of lands preserved under the program, which is the responsibility of the City as set forth under the MSCP implementing agreement. Generally, the department with ownership of MHPA lands preserved under the MSCP has responsibility for management required under the MSCP. For the project area, the land is owned by the City's Department of Parks and Recreation. Pursuant to the MOU for the reservoir replacement, revegetation, and habitat restoration for the

project is the responsibility of PUD; however, most ongoing management directives are the responsibility of the Department of Parks and Recreation and are not project-specific directives.

As Section 1.5.2 does include directives regarding mitigation and restoration that would be applicable to the Project, the directives and an analysis of each is provided below.

Mitigation. Mitigation, when required as part of project approvals, shall be performed in accordance with the City ESL Regulations and Biology Guidelines.

Project mitigation shall be performed in accordance with all City of San Diego ESL Regulations, as outlined under Mitigation, Monitoring and Reporting, below.

Restoration. Restoration or revegetation undertaken in the MHPA shall be performed in a manner acceptable to the City. Where a plant's covered species status identifies the need for reintroduction and/or increasing the population, the covered species will be included in restoration/revegetation plans, as appropriate. Restoration or revegetation proposals will be required to prepare a plan that includes elements addressing financial responsibility, site preparation, planting specifications, maintenance, monitoring, and success criteria, and remediation and contingency measures. Wetland restoration/revegetation proposals are subject to permit authorization by federal and state agencies.

All coast barrel cactus within the Project impact area would be collected and salvaged by the qualified Project restoration contractor prior to any clearing, grubbing, or grading. These individuals would be maintained by the restoration contractor during Project construction, then planted as part of the Project restoration effort. Planting areas would generally be in the areas where the individuals were salvaged and/or south and southwest-facing slopes with open Diegan coastal sage scrub and/or southern maritime chaparral habitat. Unlike coast barrel cactus, Nuttall's scrub oak does not transfer well; therefore, salvage is not being pursued for this species, but individuals will be planted during implementation of the project restoration plan.

#### **5.5.4.3 Significance of Impact**

The Project would not conflict with the preservation goals of the MSCP or other local plans to protect biological resources. The Project would adhere to the City's Biology Guidelines for development within the MHPA. It also would comply with the relevant MSCP Subarea Plan directives including those regarding MHPA Compatible Land Uses, General Planning Policies and Guidelines, MHPA Land Use Adjacency Guidelines, and General Management Directives regarding mitigation and restoration. Therefore, the Project would not conflict with provisions of adopted local plans or policies protecting biological resources. The Project would not introduce land uses within or adjacent to the MHPA that would result in adverse edge effects, and no significant impacts related to these issues would occur.

#### **5.5.4.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures are required.

## **5.5.5 Impact 4: Invasive Species**

*Issue 7: Would the proposed Project introduce invasive species into natural open space areas?*

### **5.5.5.1 Impact Threshold**

In accordance with the City Significance Determination Thresholds (2016a) and LDC Biology Guidelines (2012), the Project would have a significant impact if it would:

- Result in introduction of invasive species of plants into a natural open space area.

### **5.5.5.2 Impact Analysis**

No ornamental landscaping is proposed as part of the La Jolla View Reservoir replacement, and landscaping of the Exchange Place Reservoir site would be minimal and not include invasive plant species. Additional information about invasive species is provided above under the MHPA Land Use Adjacency Guidelines discussion.

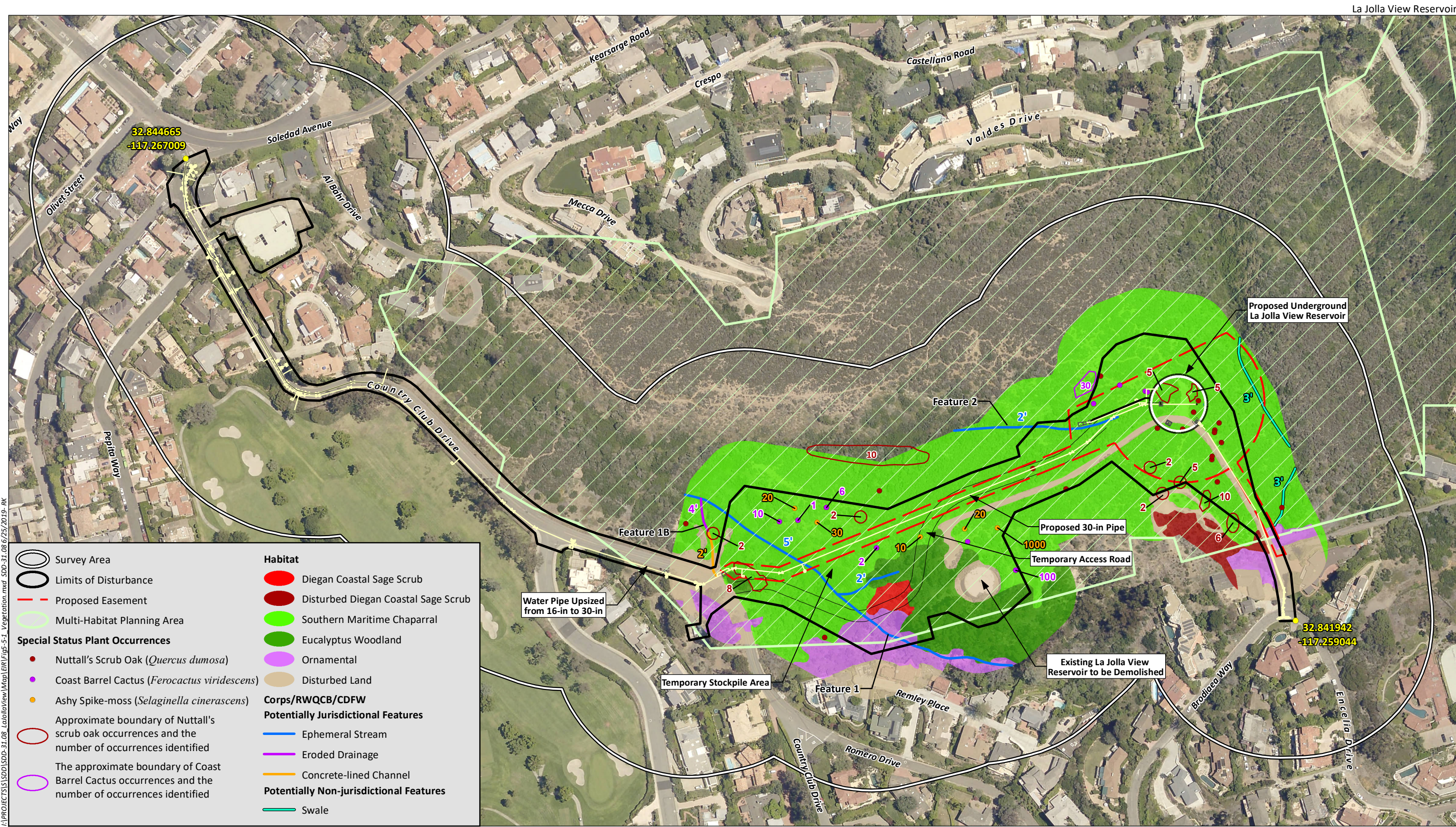
### **5.5.5.3 Significance of Impact**

Introduction of invasive plant species into a natural open space area (i.e., La Jolla Heights Natural Park) would not occur as a result of the Project. Impacts would be less than significant.

### **5.5.5.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures are required.



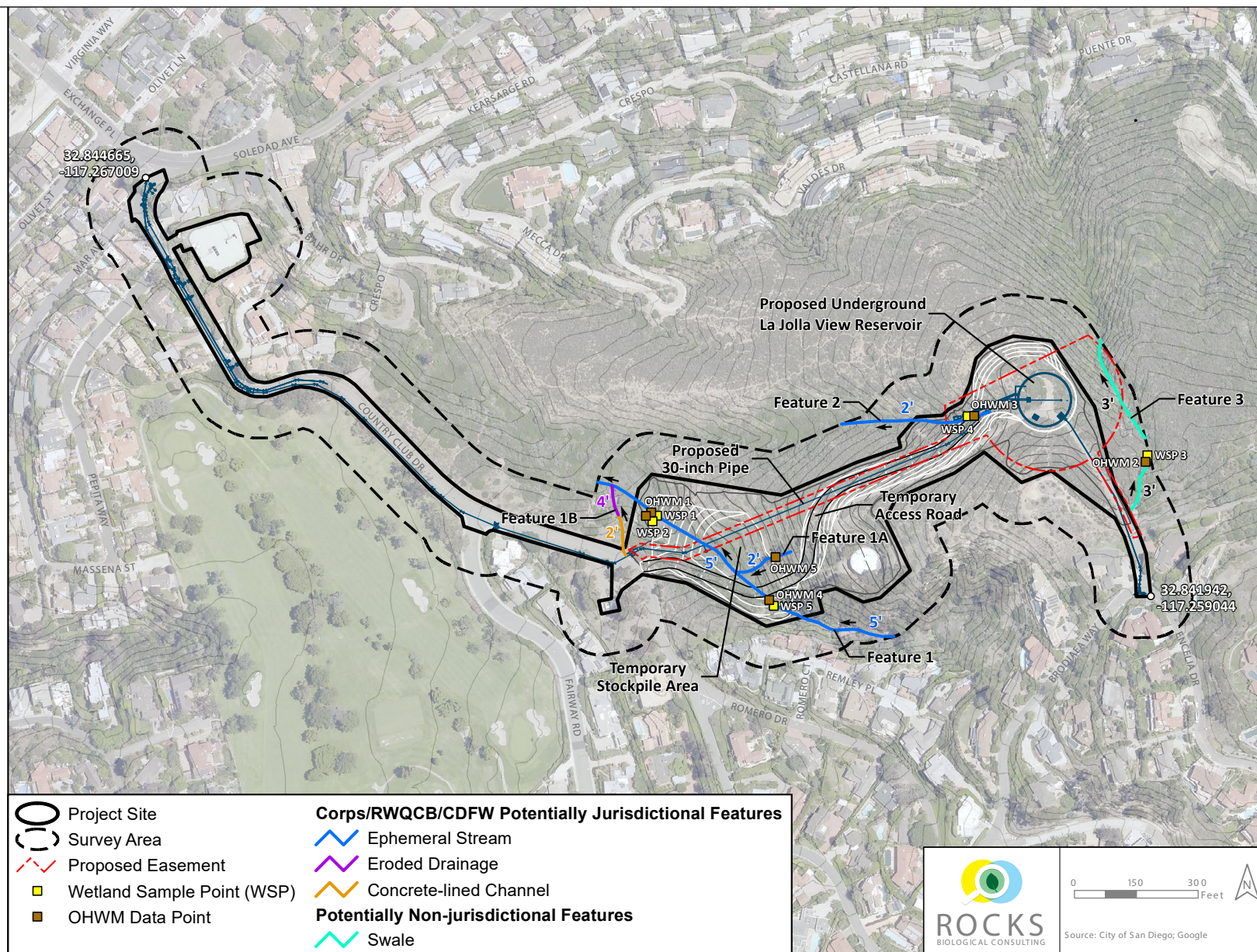


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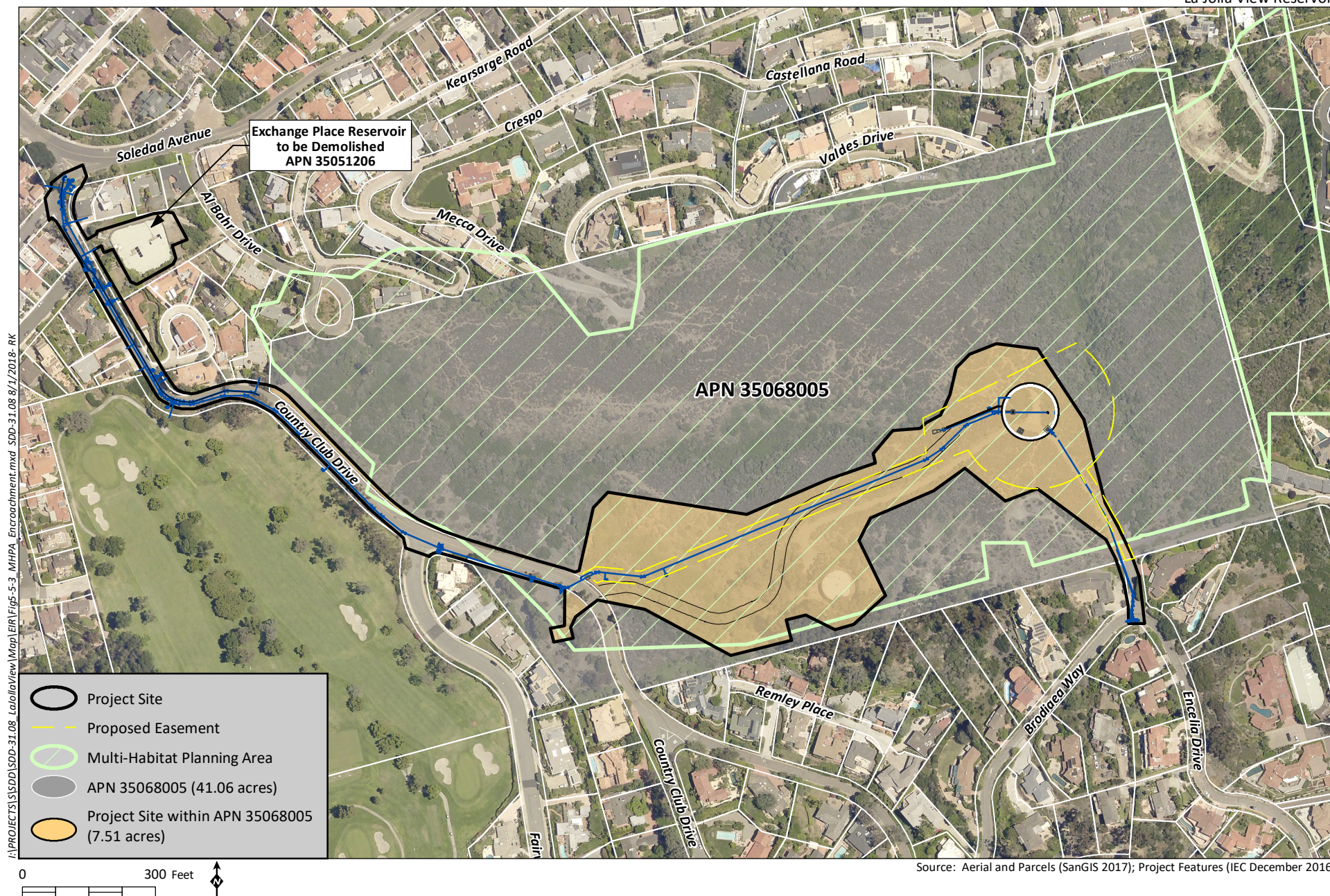


Source: Aerial (SanGIS 2017); Project Limits (IEC December 2016); Vegetation and Species (IEC 2016)











## 5.6 Historical and Tribal Cultural Resources

This section of the EIR evaluates anticipated impacts to historical resources, archaeological resources, and TCRs from implementation of the Project. A Cultural Resource Survey, Testing, and Geotechnical Monitoring Report (Cultural Report) was prepared for the Project by Laguna Mountain Environmental, Inc. (2018). Additionally, Historical Resource Technical Reports were prepared by IS Architecture for the Exchange Place Reservoir and Pump Station (2015a) and the La Jolla View Reservoir (2015b) to evaluate the potential eligibility for these structures to be designated as historical resources. These reports are summarized in this section and are included as Appendices E1, E2, and E3 to this EIR, respectively.

For purposes of this discussion, historical resources consist of archaeological sites and built environment resources determined as significant under CEQA. Historical resources are physical features, both natural and constructed, that reflect past human existence and are of historical, archaeological, scientific, educational, cultural, architectural, aesthetic, or traditional significance. These resources may include such physical objects and features as archaeological sites and artifacts, buildings, groups of buildings, structures, districts, street furniture, signs, cultural properties, and landscapes. Historical resources in the San Diego region span a timeframe of at least the last 10,000 years and include both the prehistoric and historic periods.

Archaeological resources include prehistoric and historic locations or sites where human actions have resulted in detectable changes to the area. This can include changes in the soil, as well as the presence of physical cultural remains. Archaeological resources can have a surface component, a subsurface component, or both. Historic archaeological resources are those originating after European contact. These resources may include subsurface features such as wells, cisterns, or privies. Other historic archaeological remains include artifact concentrations, building foundations, or remnants of structures.

TCRs are addressed in California PRC Section 21074 and are defined as 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. A TCR may be considered significant if it is (1) listed or eligible for listing in the California Register of Historical Resources (CRHR), or in a local register of historical resources; 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 PRC Section 5024.1.

### 5.6.1 Existing Conditions

#### 5.6.1.1 Background

##### Cultural Setting

##### Pre-historic Period

The prehistory of the project area and the San Diego region can generally be divided into three major periods: Paleoindian (also referred to as the San Dieguito complex), Archaic (or the La Jolla and Pauma complexes), and Late Prehistoric (or Cuyamaca complex).

San Diego County was occupied prehistorically by at least two major cultural groups. The San Dieguito are generally accepted as the first sedentary inhabitants of the region, occupying San Diego County as early as 9,000 years ago. Controversy surrounds the subsequent occupation from 9,000 years ago to 1,300 years ago (Early Period). The initial occupation (San Dieguito Complex) is believed to represent a group of people who entered San Diego County from the desert. These people hunted, fished, milled seeds, and collected and processed plants and shellfish. The occupation from at least 8,300 years ago to roughly 1,300 years ago is identified as the La Jolla Complex and Pauma Complex. Archaeological sites reflecting this occupation include coastal shell habitation sites, inland hunting and milling camps, and quarry sites. Both the San Dieguito and the La Jolla/Pauma Complex are believed to be of the same cultural stock, representing a long period of occupation by one people.

Occupation after 1,300 years ago (Late Period) is well documented by the numerous Kumeyaay/Diegueño and Luiseño habitation sites within San Diego County. Artifacts and cultural patterns reflecting this Late Period occupation include small projectile points, pottery, obsidian from Obsidian Butte, and interment by cremation. The project area falls within the Kumeyaay territory.

#### Ethnohistoric Period

The Ethnohistoric period refers to a brief period when Native American culture was initially being affected by Euroamerican culture and historical records on Native American activities were limited. When the Spanish colonists began to settle California, the project area was within the territory of a loosely integrated cultural group historically known as the Kumeyaay, or Northern and Southern Diegueño because of their association with the San Diego Mission. The Kumeyaay as a whole speak a Yuman language, which differentiates them from the Luiseño, who speak a Takic language to the north. Both of these groups were hunter-gatherers with highly developed social systems. European contact introduced diseases that dramatically reduced the Native American population and helped to break down cultural institutions. The transition to a largely Euroamerican lifestyle occurred relatively rapidly in the nineteenth century.

#### Historic Period

Cultural activities within San Diego County between the late 1700s and the present provide a record of Native American, Spanish, Mexican, and American control, occupation, and land use. An abbreviated history of San Diego County is presented for the purpose of providing a background on the presence, chronological significance, and historical relationship of cultural resources within the county.

Native American control of the southern California region ended in the political views of western nations with Spanish colonization of the area beginning in 1769. De facto Native American control of the majority of the population of California did not end until several decades later. In southern California, Euroamerican control was firmly established by the end of the Garra uprising in the early 1850s.

The Spanish Period (1769-1821) represents a period of Euroamerican exploration and settlement. Dual military and religious contingents established the San Diego Presidio and the San Diego and San Luis Rey Missions. The Mission system used Native Americans to build a footing for greater European settlement. The Mission system also introduced horses, cattle, other agricultural goods

and implements; and provided construction methods and new architectural styles. The cultural and institutional systems established by the Spanish continued beyond the year 1821, when California came under Mexican rule.

The Mexican Period (1821-1848) includes the retention of many Spanish institutions and laws. The mission system was secularized in 1834, which dispossessed many Native Americans and increased Mexican settlement. After secularization, large tracts of land were granted to individuals and families and the rancho system was established. Cattle ranching dominated other agricultural activities and the development of the hide and tallow trade with the United States increased during the early part of this period. The Pueblo of San Diego was established during this period and Native American influence and control greatly declined. The Mexican Period ended when Mexico ceded California to the United States after the Mexican-American War of 1846-48.

Soon after American control was established (1848-present), gold was discovered in California. The tremendous influx of American and Europeans that resulted quickly drowned out much of the Spanish and Mexican cultural influences and eliminated the last vestiges of de facto Native American control. Few Mexican ranchos remained intact because of land claim disputes and the homestead system increased American settlement beyond the coastal plain.

## **Historical Setting**

### La Jolla Early History

The first United States surveys passed through the La Jolla area in the 1850s. The La Jolla Park subdivision was recorded in 1887; however, the area's tourist industry did not develop until the first railroad car arrived seven years later.

By 1892, the Pacific Coast Land Bureau erected four, four-roomed cottages on the east side of Prospect Street between Herschel Avenue and Girard Avenue, as accommodations to attract buyers at the upcoming La Jolla Park land auction. Another cottage was built at 7917 Girard Avenue. One of these cottages became the "Cottage Hotel," and another a restaurant. The short-lived La Jolla Park Hotel had its grand opening on January 1, 1893, only to burn down on June 14, 1896. The railroad established a tent city in the park above the cove in 1894. By 1900, La Jolla had a small residential community, a dancing pavilion, and a few commercial establishments.

### La Jolla Park Subdivision

Frank Terrell Botsford was the first to undertake developing La Jolla on a large scale. In March 1886, he purchased several acres in what would be known as La Jolla Park. In July 1886, Botsford sold one-quarter of his interest in La Jolla Park to George W. Heald. Immediately after selling partial interest to Heald, Botsford began to search for water. In February 1887, Botsford purchased 20 acres of Pueblo land, which likely yielded water because on March 14, 1887, he contracted to install a water works. His property extended from the coast to 400 feet south of Pearl Street, to Girard Avenue, and by Virginia Way to the eastern shore. On March 22, 1887, this subdivision was recorded by Frank Botsford and Heald with the backing of the Pacific Coast Land Bureau.

On April 30, 1887, a grand auction was held to sell the property owned by Botsford and Heald. While Wendell Easton, the President of the Pacific Land Bureau, stated at the auction that water was

readily available throughout the property, water was actually quite limited and not every lot had water piped to it. Nevertheless, the auction was successful, and La Jolla Park became one of the first subdivisions to develop with successful community amenities.

By 1908, many of the streets were paved and sidewalks were added. In 1915, sewer pipes were installed in Silverado Street. By the 1920s, a paved road between San Diego and La Jolla and transportation services via electric rail were making it easier for people to reside full time in the coastal community. Architecturally, the La Jolla Park subdivision consisted of eclectic architectural revival styles popular in the 1920s, including Folk Victorian, Spanish Eclectic, Tudor Revival, and Craftsman Bungalow. Later infill development in the 1940s through the 1960s included early Ranch and Modern architectural styles.

### **Record Search and Literature Review**

An archival record search was initially performed for the Project on March 20, 2013 at the South Coastal Information Center (SCIC) at San Diego State University (SDSU) and was updated on September 14, 2015 and October 22, 2018. The record search concluded that the project area has not been previously surveyed prior to the current studies, but that at least 216 cultural resource investigations have been conducted and 130 cultural resources have been identified within a one-mile radius of the project area. Two prehistoric cultural resources were identified within or adjacent to the study area (P-37-029299 [CA-SDI-18740] and P-37-029797 [CA-SDI-19057]). Both of these sites represent modern day redeposited prehistoric cultural material from other locations.

### **Native American Consultation**

Federal, state, and City guidelines identify Native American consultation and participation as an important aspect of the cultural resource evaluation process. To address the potential for Native American concerns, a Native American contact program was conducted for the Project, which included a Sacred Lands Search by the Native American Heritage Commission (NAHC) and a contact program consisting of informational contact letters sent to interested parties identified by the NAHC. Responses from the contact program did not identify sacred sites within the project area, but construction monitoring was recommended. The City also provided notification to the Jamul Indian Village of California and the Lipay Nation of Santa Ysabel pursuant to AB 52. They concurred with the construction monitoring recommendations and did not request further consultation.

### **Survey and Testing Results**

The most recent survey was conducted by Laguna Mountain Environmental, Inc. and Red Tail Monitoring and Research (Kumeyaay Native American monitor) on March 15, 2013. The results of this survey indicated that the steep slopes of the area precluded most prehistoric occupation. Site P-37-029299 was relocated within the study area as previously recorded. Site P-37-029797 was not relocated but is outside the study area on private property. Exposed cobble outcrops provided a source of workable stone (lithic) material in the area. Two previously unrecorded small prehistoric cobble procurement sites (P-37-033100 [CA-SDI-20842] and P-37-033101 [CA-SDI-20843]) and isolated pieces of debitage (P-37-033099 [CA-SDI-18740]) were identified within the study area during the survey. The survey also identified a single isolated piece of pre-1920 age amethyst bottle glass (P-37-033098) within the study area.

The redeposited material (two lithic artifacts) at site P-37-033099 served as a mitigation measure for Native American concerns and would be avoided. Sites P-37-033100 and P-37-033101 have not been previously evaluated for California Register eligibility. Isolates P-37-033098 and P-37-033099 do not qualify as eligible for California Register nomination; however, different surface survey conditions with fewer surface visibility constraints could result in the expansion of P-37-033099 into a site.

Site P-37-033101 was located within the potential area of direct impacts; therefore, a testing and evaluation program was conducted on August 18, 2014 by Laguna Mountain Environmental, Inc. to determine the significance of potential project impacts. The testing program was monitored by Red Tail Monitoring and Research. Testing included surface collection and mapping in addition to the excavation of five Shovel Test Pits (STPs) to determine if a subsurface component was present at the site. Testing did not identify a subsurface component at the site. Artifacts from more than three lithic reduction events were mapped and surface-collected from the site. The absence of datable or diagnostic material and association with a subsurface component indicates that no additional site material is present. The Cultural Report concluded that no further research potential exists at the site itself. Testing indicates that site P-37-033101 does not qualify as eligible for listing on the National Register of Historic Places (NRHP) or the CRHR or local historic resource designation under the City HRG. The cultural material recovered from the site will be curated, but no additional work at the site was recommended in the Cultural Report.

A monitoring program for preconstruction geotechnical studies was conducted by Red Tail Monitoring and Research in February and March of 2014. The results of the geotechnical monitoring program were negative in that no cultural resources were identified or affected.

## **Historical Evaluation**

Lead agencies have a responsibility to evaluate historical resources against the local, CRHR, and NRHP criteria prior to making a finding as to a proposed project's impacts to historical resources. The Project proposes to replace aging water conveyance and storage facilities with a modern water storage system. These aging structures were evaluated to determine their potential eligibility to be designated as historical resources. The Muirlands Pump Station is less than 50 years of age; therefore, it is not considered historic. The La Jolla View Reservoir and La Jolla Exchange Place Reservoir and its associated pump station were evaluated based on their history, features, and ability to reflect historic contexts with which they are associated. These structures were recommended as ineligible for the NRHP, the CRHR, or as a local San Diego Historic Resource, because they did not meet any of the criteria for designation.

### **5.6.1.2 Regulatory Framework**

#### **Federal**

##### National Register of Historic Places

Federal criteria are those used to determine eligibility for the NRHP. The NRHP was established by the National Historic Preservation Act (1966). The NRHP is the official list of sites, buildings, structures, districts, and objects significant in American history, architecture, archaeology, engineering, and culture. The NRHP is administered by the National Park Service. Nominations to the NRHP may come from the various State Historic Preservation Offices, Tribal Historic Preservation



Offices, local governments, and private individuals and organizations. The NRHP criteria state that the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- a. Are associated with events that have made a significant contribution to the broad patterns of our history;
- b. Are associated with the lives of persons important in our past;
- c. Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values; or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. Have yielded, or may be likely to yield, information important in prehistory or history.

Certain properties are usually not considered for eligibility for the NRHP. These include ordinary cemeteries, birthplaces or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved or reconstructed, properties primarily commemorative in nature, or properties that have become significant within the last 50 years. These types of properties can qualify if they are an integral part of a district that does meet the criteria, or if they fall within certain specific categories relating to architecture or association with historically significant people or events. The vast majority of archaeological sites that qualify for listing do so under criterion D, research potential.

#### Native American Involvement

Native American involvement in the development review process is addressed when an undertaking under federal law triggers environmental review pursuant to the National Environmental Policy Act (NEPA). This often occurs when a project is funded by a federal agency or is being proposed by a federal agency and requires review under Section 106 of the National Historic Preservation Act. The Native American Graves Protection and Repatriation Act of 1990 ensures that Native American human remains and cultural items are treated with respect and dignity during all phases of project evaluation.

#### **State**

##### California Register of Historic Resources/California Environmental Quality Act

Similar to the NRHP, the CRHR program encourages public recognition and protection of resources of architectural, historical, archaeological, and cultural significance; identifies resources for planning purposes; determines eligibility for state historic grant funding; and provides certain protections under CEQA. State criteria are those listed in CEQA and used to determine whether an historic resource qualifies for the CRHR. A resource may be listed in the CRHR if it is significant at the federal, state, or local level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history and cultural heritage of California or the United States.

2. Is associated with the lives of persons important to the nation or to California's past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history of the state or nation.

CEQA was amended in 1998 to define "historical resources" as a resource listed in or determined eligible for listing on the CRHR, a resource included in a local register of historical resources or identified as significant in a historical resource survey that meets certain requirements, and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant.

For the purposes of CEQA, a significant historical resource is one which qualifies for the CRHR or is listed in a local historic register or deemed significant in a historical resource survey, as provided under PRC Section 5024.1(g). A resource that is not listed in, or determined to be eligible for listing in, the CRHR, not included in a local register of historic resources, or not deemed significant in a historical resource survey may nonetheless be historically significant for purposes of CEQA (CCR Section 15064.5 and PRC Section 21083.2).

The City's determination of significance of impacts on historical and unique archaeological resources is based on the criteria found in Section 15064.5 of the State CEQA Guidelines. Archaeological resources are considered "historical resources" for the purposes of CEQA. Most archaeological sites which qualify for the CRHR do so under criterion 4 (i.e., research potential).

Since resources that are not listed or determined eligible for the state or local registers may still be historically significant, their significance would be determined if they are affected by a development proposal. The significance of a historical resource under criterion 4 rests on its ability to address important research questions.

#### Native American Involvement

Native American involvement in the development review process is addressed by several state laws. The most notable of the state laws is SB 18, which includes detailed requirements for local agencies to consult with identified California Native American Tribes early in the planning and/or development process. The California Native American Graves Protection and Repatriation Act (2001), like the federal act, ensures that Native American human remains and cultural items are treated with respect and dignity during all phases of the archaeological evaluation process in accordance with CEQA and applicable local regulations.

#### Assembly Bill 52

AB 52 (Chapter 532, Statutes of 2014) was passed on September 25, 2014, and applies to all projects that file a NOP, or Notice of Intent to Adopt a negative declaration, mitigated negative declaration or EIR, on or after July 1, 2015. The bill requires that a lead agency begin consultation with a California Native American tribe if that tribe has requested, in writing, to be kept informed of projects by the lead agency, prior to the determination whether a negative declaration, mitigated negative

declaration, or EIR will be prepared. The bill also specifies mitigation measures that may be considered to avoid or minimize impacts on TCRs.

## **Local**

### Historical Resources Regulations

The Historical Resources Regulations (HRR) are part of the SDMC (Chapter 14, Article 3, Division 2: Purpose of HRR or Sections 143.0201-143.0280). The HRR have been developed to implement applicable local, state, and federal policies and mandates. Included in these are the General Plan, CEQA, and Section 106 of the National Historic Preservation Act of 1966.

Part of the HRR consists of a Development Review Process for all projects in the City. This review process is composed of two parts: implementation of the HRR and a determination of impacts and mitigation under CEQA. The implementation of the HRR begins with the determination of the need for a survey of the project site. The need for a survey is based on historical resource information and the date and results of any previous surveys of a project site. Surveys are required if more than five years have elapsed since the last survey and the potential for resources exists. A historic property (built environment) survey is required if the structure/site is over 45 years old, may meet one or more criteria for designation, and appears to have integrity of setting, design, materials, workmanship, feeling, and association. Surveys must be conducted according to criteria in the Historical Resource Guidelines. If the survey results are negative, the review process is complete and no mitigation is required.

Historical resources, in the HRR context, include site improvements, buildings, structures, historic districts, signs, features (including significant trees or other landscaping), places, place names, interior elements and fixtures designated in conjunction with a property, or other objects of historical, archaeological, scientific, educational, cultural, architectural, aesthetic, or traditional significance to the citizens of the City. These include structures, buildings, archaeological sites, objects, districts, or landscapes having physical evidence of human activities. These are usually over 45 years old, and they may have been altered or still be in use.

In addition to direct and indirect impacts, cumulative impacts must also be addressed during the CEQA review process. Cumulative impacts are a result of individually minor but collectively significant projects occurring over a period of time. Data recovery may be considered a cumulative impact due to the loss of a portion of the resource database. Cumulative impacts also occur in districts when several minor changes to contributing properties, their setting, or landscaping eventually results in a significant loss of integrity.

### Historical Resources Guidelines

The City's HRG, amended in April 2001, are designed to implement the HRR contained in Chapter 14, Division 3, Article 2 of the LDC. If resources have been recorded on the property, those resources must be evaluated for significance/ importance in accordance with criteria listed in the HRG.

The Guidelines state that any improvement, building, structure, sign, interior element and fixture, site, place, district, area, or object may be designated a historical resource by the City's Historical Resources Board if it meets one or more of the following designation criteria:

- A. Exemplifies or reflects special elements of the City's, a community's, or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping or architectural development;
- B. Identified with persons or events significant in local, state or national history;
- C. Embodies distinctive characteristics of a style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship;
- D. Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist, or craftsman;
- E. Is listed or has been determined eligible by the National Park Service for listing on the National Register of Historic Places or is listed or has been determined eligible by the State Historical Preservation Office for listing on the State Register of Historical Resources; or
- F. Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

Resources determined to be significant/important must be avoided; a data recovery program for important archaeological sites must be developed and approved prior to permit issuance in order to assure adequate mitigation for the recovery of cultural and scientific information related to the resource's significance/importance; or prudent and feasible measures to minimize harm to a historic resource must be undertaken.

#### General Plan Historic Preservation Element

The Historic Preservation Element of the General Plan sets a series of goals for the City for the preservation of historic resources. The first of these goals is to preserve significant historical resources. These goals would be realized through implementation of policies that encourage the identification and preservation of historical resources. Specific policies are shown in Table 5.6-1, *General Plan Historic Preservation Element Policies*.

**TABLE 5.6-1  
GENERAL PLAN HISTORIC PRESERVATION ELEMENT POLICIES**

<b>Policy</b>	<b>Description</b>
HP-A.1	Strengthen historic preservation planning.
HP-A.2	Fully integrate the consideration of historical and cultural resources in the larger land use planning process.
HP-A.3	Foster government-to-government relationships with the Kumeyaay/Diegueño tribes of San Diego.
HP-A.4	Actively pursue a program to identify, document, and evaluate the historical and cultural resources in the City of San Diego.
HP-A.5	Designate and preserve significant historical and cultural resources for current and future generations.
HP-B.1	Foster greater public participation and education in historical and cultural resources.
HP-B.2	Promote the maintenance, restoration, and rehabilitation of historical resources through a variety of financial and development incentives. Continue to use existing programs and develop new approaches as needed. Encourage continued private ownership and utilization of historic structures through a variety of incentives.
HP-B.3	Develop a historic preservation sponsorship program.
HP-B.4	Increase opportunities for cultural heritage tourism. Additional discussion and policies can be found in the Economic Prosperity Element, Section I.

Source: City of San Diego General Plan 2008

## 5.6.2 Impact 1: Prehistoric, Historic, and Tribal Cultural Resources

*Issue 1: Would the Project result in an alteration, including the adverse physical or aesthetic effects and/or the destruction of a prehistoric or historic building (including an architecturally significant building), structure, or object or site?*

*Issue 2: Would the Project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074?*

*Issue 3: Would the Project result in the disturbance of any human remains, including those interred outside of formal cemeteries?*

### 5.6.2.1 Impact Thresholds

In accordance with the City's Significance Determination Thresholds (2016a), historical resource impacts may be significant if a project would result in:

- An alteration, including the adverse physical or aesthetic effects and/or the destruction of, a prehistoric or historic building (including an architecturally significant building), structure, object or site;
- A substantial adverse change in the significance of a TCR; and/or
- The disturbance of human remains, including those interred outside of formal cemeteries.

### **5.6.2.2 Impact Analysis**

The existing water conveyance and storage facilities proposed to be demolished do not meet the criteria for designation as a historical resource under the NRHP, the CRHR, or as a local San Diego Historic Resource; therefore, these resources are not considered significant with respect to CEQA. These resources were reviewed within Historic Resource Technical Reports and cleared from historic review for five years.

Two small lithic procurement sites (P-37-033100 and P-37-033101) and an isolated lithic (P-37-033099) were identified in the project area. It was determined that site P-37-033100 would not be affected by the Project. A single isolated piece of historic-age amethyst glass (P-37-033098) was also identified within the project area. Isolates P-37-033098 and P-37-033099 do not qualify as eligible for CRHR and NRHP nomination based on their limited attributes and absence of significant associations. Site testing was conducted to determine if significant cultural resources would be impacted by the Project, which included the evaluation of P-37-033101 under both CRHR and NRHP criteria. Because the quantities and types of cultural material recovered from this site during testing were sparse, and tools that might provide information on the prehistoric past were not present, the results of testing indicate that P-37-033101 does not qualify as eligible for listing on the NRHP or CRHR, or for local historic resource designation under the City LDC and HRG.

A previously recorded site (P-37-029299), consisting of secondary deposits of prehistoric Native American cultural material, was relocated and placed in open space for preservation directly adjacent to the project area. This resource has not been formally evaluated for significance but will be treated as significant for the purposes of this Project.

As noted above, a Native American contact program and notification pursuant to AB 52 were conducted to address the potential for Native American concerns. Responses from the contact program did not identify sacred sites within the project area, but construction monitoring was recommended.

### **5.6.2.3 Significance of Impacts**

No historically designated properties would be affected by the Project. While no identified significant cultural resources would be affected by implementation of the Project, the potential exists for additional, unidentified subsurface deposits to be encountered during construction activities and especially where grading would occur to remove surficial soils. These potential deposits could include archaeological resources and/or TCRs, as well as human remains, and as such their disturbance would be considered a potentially significant impact requiring mitigation.

### **5.6.2.4 Mitigation, Monitoring and Reporting**

The following mitigation measure would reduce potential project impacts to previously unidentified subsurface deposits, including human remains and archaeological resources and/or TCRs, to below a level of significance.

**Mitigation Measure HIS-1:** The following measures shall be implemented.

**I. Prior to Permit Issuance or Bid Opening/Bid Award**

A. Entitlements Plan Check

1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.

B. Letters of Qualification have been submitted to ADD

1. Prior to Bid Award, the applicant shall submit a letter of verification to MMC identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego HRG. If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.
3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

**II. Prior to Start of Construction**

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site-specific records search (1/4-mile radius) has been completed. Verification includes but is not limited to a copy of a confirmation letter from SCIC, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the 1/4-mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), CM and/or Grading Contractor, RE, Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and



Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the CM and/or Grading Contractor.

- a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
  - a. The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program.
3. Identify Areas to be Monitored
  - a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11"x17") to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
  - b. The AME shall be based on the results of a site-specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation).
  - c. MMC shall notify the PI that the AME has been approved.
4. When Monitoring Will Occur
  - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
  - b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as age of existing pipe to be replaced, depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.
5. Approval of AME and Construction Schedule
  - a. After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Construction Schedule from the CM.

### III. During Construction

#### A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. The CM is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.
2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.
4. The archaeological and Native American consultant/monitor shall document field activity via the CSV. The CSVs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.

#### B. Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

### C. Determination of Significance

1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.
  - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
  - b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the program from MMC, CM and RE. ADRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume. Note: If a unique archaeological site is also an historical resource as defined in CEQA Section 15064.5, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.
    - (1) Note: For pipeline trenching and other linear projects in the public Right-of-Way, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
  - c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.
    - (1) Note: For Pipeline Trenching and other linear projects in the public Right-of-Way, if the deposit is limited in size, both in length and depth; the information value is limited and is not associated with any other resource; and there are no unique features/artifacts associated with the deposit, the discovery should be considered not significant.
    - (2) Note: for Pipeline Trenching and other linear projects in the public Right-of-Way, if significance cannot be determined, the Final Monitoring Report and Site Record (DPR Form 523A/B) shall identify the discovery as Potentially Significant.

### D. Discovery Process for Significant Resources - Pipeline Trenching and other Linear Projects in the Public Right-of-Way

The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities or for other linear project types within the Public Right-of-Way including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance:

1. Procedures for documentation, curation and reporting
  - a. One hundred percent of the artifacts within the trench alignment and width shall be documented in-situ, to include photographic records, plan view of the trench and profiles of side walls, recovered, photographed after cleaning and analyzed and curated. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact.
  - b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section VI-A.
  - c. The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) the resource(s) encountered during the Archaeological Monitoring Program in accordance with the City's HRG. The DPR forms shall be submitted to the SCIC for either a Primary Record or SDI Number and included in the Final Monitoring Report.
  - d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

#### **IV. Discovery of Human Remains**

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California PRC (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

##### **A. Notification**

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the DSD to assist with the discovery notification process.
2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

##### **B. Isolate discovery site**

1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.

3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.
- C. If Human Remains are determined to be Native American
1. The Medical Examiner will notify the NAHC within 24 hours. By law, only the Medical Examiner can make this call.
  2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
  3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
  4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
  5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
    - a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being granted access to the site, OR;
    - b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, the landowner shall reinter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance, THEN
    - c. To protect these sites, the landowner shall do one or more of the following:
      - (1) Record the site with the NAHC;
      - (2) Record an open space or conservation easement; or
      - (3) Record a document with the County. The document shall be titled "Notice of Reinterment of Native American Remains" and shall include a legal description of the property, the name of the property owner, and the owner's acknowledged signature, in addition to any other information required by PRC 5097.98. The document shall be indexed as a notice under the name of the owner.
    - d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate

treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and items associated and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.

D. If Human Remains are not Native American

1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

**V. Night and/or Weekend Work**

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting.
2. The following procedures shall be followed.
  - a. No Discoveries: In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVr and submit to MMC via fax by 8:00 a.m. of the next business day.
  - b. Discoveries: All discoveries shall be processed and documented using the existing procedures detailed in Section III – During Construction, and Section IV – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.
  - c. Potentially Significant Discoveries: If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III – During Construction and IV-Discovery of Human Remains shall be followed.
  - d. The PI shall immediately contact the RE and MMC, or by 8:00 a.m. of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

- B. If night and/or weekend work becomes necessary during the course of construction
  - 1. The CM shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
  - 2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

## **VI. Post Construction**

- A. Submittal of Draft Monitoring Report
  - 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the HRG (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring. It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe as a result of delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.
    - a. For significant archaeological resources encountered during monitoring, the ADRP or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
    - b. Recording Sites with State of California Department of Parks and Recreation

The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's HRG, and submittal of such forms to the SCIC with the Final Monitoring Report.
  - 2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
  - 3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
  - 4. MMC shall provide written verification to the PI of the approved report.
  - 5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.
- B. Handling of Artifacts
  - 1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued



2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

C. Curation of artifacts: Accession Agreement and Acceptance Verification

1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
2. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection C.
3. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
4. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC.
5. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)

1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report.
2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

## 5.7 Paleontological Resources

The following analysis is based on a Geotechnical Evaluation conducted for the project by Ninyo & Moore (2014, included as Appendix I), the City CEQA Significance Determination Thresholds (2016a), and other applicable source documents.

### 5.7.1 Existing Conditions

#### 5.7.1.1 Environmental Setting

Paleontology is the science dealing with prehistoric plant and non-human animal life. Paleontological resources (or fossils) typically encompass the remains or traces of hard and resistant materials such as bones, teeth or shells, although plant materials and occasionally less resistant remains (e.g., tissue or feathers) can also be preserved. The formation of fossils typically involves the rapid burial of plant or animal remains and the creation of casts, molds, or impressions in the associated sediment (which subsequently becomes sedimentary rock). Because of this, the potential for fossil remains in a given geologic formation can be predicted based on its identification as sedimentary, along with data on known fossil occurrences from similar (or correlated) geologic formations in other locations. The assessment of paleontological resource sensitivity for surficial and geologic units is based on the following designations derived from Deméré and Walsh (1993):

- High Sensitivity – These formations are known to contain paleontological localities with rare, well-preserved, critical fossil materials. Generally, high-sensitivity formations produce vertebrate fossil remains or are considered to have the potential to produce such remains.
- Moderate Sensitivity – Moderate sensitivity is assigned to formations known to contain paleontological localities and that are judged to have a strong, but often unproven, potential for producing unique fossil remains.
- Low Sensitivity – Low sensitivity is assigned to geologic or surficial formations/materials that, based on their relatively young age and/or high-energy depositional history, are judged unlikely to produce unique fossil remains.
- Zero Sensitivity – These formations consist of volcanic or plutonic igneous rocks with a molten origin (such as basalt or granite), or artificially and/or mechanically-generated materials (such as fill and topsoil), and do not exhibit any potential for producing fossil remains.

Based on the referenced project Geotechnical Evaluation, surficial materials and geologic formations observed or (potentially) expected to occur within the site include: (1) historic fill deposits; (2) Quaternary-age topsoil/colluvium and Very Old Paralic Deposits<sup>1</sup> (formerly designated as the Lindavista Formation); (3) the Tertiary-age Ardath Shale and Mount Soledad Formation; and (4) the Cretaceous-age Cabrillo Formation. The general locations of these units within the site and

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<sup>1</sup> Paralic deposits are generally defined to include interfingering marine and non-marine deposits laid down on the landward side of a coast, or in shallow water subject to marine invasions.

associated paleontological resource sensitivities are provided below (with additional information provided in Section 5.12, *Geology and Soils*, and on Figure 5.12-1, *Geologic Map*).

- Artificial Fill - Fill deposits were observed in several on-site exploratory borings conducted as part of the project Geotechnical Evaluation, and are expected to underlie portions of the site including existing roads, pipelines, reservoirs and related structures, and paved areas. As indicated above, fill materials exhibit zero potential for the occurrence of sensitive paleontological resources.
- Quaternary Topsoil/Colluvium - These deposits are anticipated to occur within most or all of the undeveloped portions of the site, and exhibit zero or low potential for the occurrence of sensitive paleontological resources.
- Quaternary Very Old Paralic Deposits - Paralic deposits were observed in portions of the site including the proposed new reservoir location and the western part of the proposed pipeline alignment. These deposits exhibit a moderate potential for the occurrence of sensitive paleontological resources in the project area.
- Tertiary Ardath Shale - The Ardath Shale was not encountered during site geotechnical explorations, although it is mapped in the westernmost portion of the proposed pipeline alignment. This unit exhibits a high potential for the occurrence of sensitive paleontological resources in all areas where it occurs.
- Cretaceous Mount Soledad Formation - The Mount Soledad Formation is mapped in the central portion of the proposed pipeline alignment, and was encountered in one geotechnical exploratory boring (B-5, refer to Appendix I). This formation exhibits a moderate potential for the occurrence of sensitive paleontological resources in the project area.

### 5.7.1.2 Regulatory Framework

#### CEQA Guidelines

Pursuant to Section 15065 of the State CEQA Guidelines (CCR Sections 15000–15387), a lead agency must find that “a project may have a significant effect on the environment...where the project has the potential to eliminate important examples of the major periods of California history or prehistory, which includes the destruction of significant paleontological resources.”

### 5.7.2 Impact 1: Paleontological Resources

*Issue 1: Would the Project require over 1,000 cy of excavation in a high resource potential geologic deposit/formation/rock unit, or over 2,000 cy of excavation in a moderate resource potential geologic deposit/formation/rock unit?*

### **5.7.2.1 Impact Thresholds**

Based on the City Significance Determination Thresholds (2016a), impacts related to paleontological resources would be significant if a project would require excavation exceeding:

- Over 1,000 cy of excavation extending to a depth of 10 feet or greater in a high resource potential geologic deposit/formation/rock unit, or
- Over 2,000 cy of excavation extending to a depth of 10 feet or greater in a moderate resource potential geologic deposit/formation/rock unit.

### **5.7.2.2 Impact Analysis**

As outlined above, the project site includes three geologic units with high or moderate potential for the occurrence of sensitive paleontological resources, including the Ardath Shale (high potential), Quaternary Very Old Paralic Deposits (moderate potential), and Cretaceous Mount Soledad Formation (moderate potential). Topsoil/Colluvium deposits, which have zero or low potential for the occurrence of sensitive paleontological resources, also are anticipated to be present within the project site; however, impacts to these deposits would not be considered significant.

The Project would result in a total of approximately 78,000 cy of cut, with associated excavations anticipated to extend up to 70 feet in depth for the proposed reservoir, 60 feet for the associated access road, and 20 feet for portions of the proposed 30-inch diameter pipeline (along with shallower excavations for portions of this pipeline as well as smaller diameter pipelines and other facilities). These proposed activities would include excavation within one or more of the three geologic units exhibiting high or moderate potential for the occurrence of sensitive paleontological resources. Based on the described site geology and proposed grading quantities and depths, earthwork associated with the proposed project could potentially encounter undisturbed formational areas with high or moderate paleontological resource potential and exceed the noted significance criteria.

### **5.7.2.3 Significance of Impacts**

Based on the nature of proposed construction activities and the presence of formational units exhibiting high and moderate potential for the occurrence of sensitive paleontological resources within the project site, associated potential impacts from proposed development would be significant.

### **5.7.2.4 Mitigation, Monitoring and Reporting**

Potential impacts to paleontological resources associated with implementation of the Project would be reduced through implementation of the following mitigation measure.

### ***Mitigation Measure PAL-1***

#### **I. Prior to Permit Issuance or Bid Opening/Bid Award**

##### **A. Entitlements Plan Check**

1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, Environmental Designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

##### **B. Letters of Qualification have been submitted to ADD**

1. Prior to Bid Award, the applicant shall submit a letter of verification to MMC identifying the PI for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

#### **II. Prior to Start of Construction**

##### **A. Verification of Records Search**

1. The PI shall provide verification to MMC that a site-specific records search has been completed. Verification includes, but is not limited to, a copy of a confirmation letter from San Diego Natural History Museum, other institution, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

##### **B. PI Shall Attend Precon Meetings**

1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, CM and/or Grading Contractor, RE, BI, if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the CM and/or Grading Contractor.
  - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)

The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the paleontological monitoring program.

3. Identify Areas to be Monitored

- a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11"x17") to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or as determined by the PI in consultation with the MMC. The determination shall be based on site-specific records search data which supports monitoring at depths less than 10 feet.
- b. The PME shall be based on the results of a site-specific records search as well as information regarding existing known soil conditions (native or formation).
- c. MMC shall notify PI that the PME has been approved.

4. When Monitoring Will Occur

- a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
- b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

5. Approval of PME and Construction Schedule

After approval of the PME by MMC, the PI shall submit MMC written authorization of the PME and Construction Schedule from the CM.

### **III. During Construction**

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. The CM is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances, OSHA safety requirements may necessitate modification of the PME.

2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
3. The monitor shall document field activity via the CSV. The CSVs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

C. Determination of Significance

1. The PI shall evaluate the significance of the resource.
  - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
  - b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC, MC, and/or RE. PRP and any mitigation must be approved by MMC, RE, and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.
    - (1) Note: For pipeline trenching projects only, the PI shall implement the Discovery Process for Pipeline Trenching Projects identified below under "D."
  - c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.



- d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.
  - (1) Note: For Pipeline Trenching Projects Only. If the fossil discovery is limited in size, both in length and depth, the information value is limited and there are no unique fossil features associated with the discovery area, then the discovery should be considered not significant.
  - (2) Note: For Pipeline Trenching Projects Only. If significance cannot be determined, the Final Monitoring Report and the Site Record shall identify the discovery as Potentially significant.

#### D. Discovery Process for Significant Resources – Pipeline Trenching Projects

The following procedures constitute adequate mitigation of a significant discovery encountered during pipeline trenching activities including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance.

- 1. Procedures for documentation, curation, and reporting
  - a. One hundred percent of the fossil resources within the trench alignment and width shall be documented in-situ, photographically drawn in plan view (trench and profiles of side walls), recovered from the trench and photographed after cleaning, then analyzed and curated consistent with the Society of Invertebrate Paleontology Standards. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact and so documented.
  - b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE and indicated in Section VI-A.
  - c. The PI shall be responsible for recording (on the appropriate forms for the San Diego Natural History Museum) the resource(s) encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines. The forms shall be submitted to the San Diego Natural History Museum and included in the Final Monitoring Report.
  - d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

#### IV. Night and/or Weekend Work

- A. If night and/or weekend work is included in the contract
  - 1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting.

2. The following procedures shall be followed.
  - a. No Discoveries: In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSV and submit to MMC via fax by 8:00 a.m. on the next business day.
  - b. Discoveries: All discoveries shall be processed and documented using the existing procedures detailed in Section III - During Construction.
  - c. Potentially Significant Discoveries. If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.
  - d. The PI shall immediately contact MMC, or by 8:00 a.m. on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.
- B. If night and/or weekend work becomes necessary during the course of construction
  1. The CM shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
  2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

## **V. Post Construction**

- A. Preparation and Submittal of Draft Monitoring Report
  1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring,
    - a. For significant paleontological resources encountered during monitoring, the PRP shall be included in the Draft Monitoring Report.
    - b. Recording Sites with the San Diego Natural History Museum: The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
  2. MMC shall return the Draft Monitoring Report to the PI for revision or for preparation of the Final Report.

3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
  4. MMC shall provide written verification to the PI of the approved report.
  5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.
- B. Handling of Fossil Remains
1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.
  2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.
- C. Curation of fossil remains: Deed of Gift and Acceptance Verification
1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
  2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
  3. The RE or BI, as appropriate, shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.
  4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
- D. Final Monitoring Report(s)
1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.
  2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

### **5.7.2.5 Impacts After Mitigation**

Implementation of Mitigation Measure PAL-1 would reduce impacts to important paleontological resources from development of the Project to below a level of significance.

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## 5.8 Air Quality

This section presents the results of an assessment of potential air quality impacts associated with the Project. This section is based on the analysis presented in the Project's Air Quality Impact Analysis (HELIX 2019a). The technical report is included as Appendix F.

### 5.8.1 Existing Conditions

#### 5.8.1.1 Climate and Meteorology

The climate in southern California, including the SDAB, 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 project site is from the west to northwest and the average wind speed is approximately 4 mph. The annual average maximum temperature in the project area is approximately 67°F, and the annual average minimum temperature is approximately 56°F. Total precipitation in the project area averages approximately 10 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer (HELIX 2019a).

Due to its climate, 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<sub>2</sub>) 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<sub>2</sub> emissions. High NO<sub>2</sub> levels usually occur during autumn or winter, on days with summer-like conditions.

#### 5.8.1.2 Regulatory Framework

##### Criteria Pollutants

Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public. In general, air pollutants include the following compounds:

- Ozone
- Reactive organic gases (ROGs) or volatile organic compounds (VOCs)
- CO
- NO<sub>2</sub>
- Respirable particulate matter (PM<sub>10</sub>) and fine particulate matter (PM<sub>2.5</sub>)
- Sulfur dioxide (SO<sub>2</sub>)
- Lead

The following specific descriptions of health effects for each of the air pollutants potentially associated with Project construction and operations are based on information provided by the USEPA (2007) and CARB (2009).

**Ozone.** Ozone is considered a photochemical oxidant, which is a chemical that is formed when VOCs and nitrogen oxides ( $\text{NO}_x$ ), both by-products of fuel combustion, react in the presence of ultraviolet light. Ozone is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to ozone.

**Reactive Organic Gases.** ROGs (also known as VOCs) are compounds composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of ROGs. Other sources of ROGs include evaporative emissions from paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. Adverse effects on human health are not caused directly by ROGs, but rather by reactions of ROGs with  $\text{NO}_x$  that form secondary pollutants such as ozone.

**Carbon Monoxide.** CO is a product of fuel combustion. CO is an odorless, colorless gas. It affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body's organs and tissues. CO can cause health effects to those with cardiovascular disease and can also affect mental alertness and vision.

**Nitrogen Dioxide.**  $\text{NO}_2$  is also a by-product of fuel combustion and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitric oxide (NO) with oxygen.  $\text{NO}_2$  is a respiratory irritant and may affect those with existing respiratory illness, including asthma.  $\text{NO}_2$  can also increase the risk of respiratory illness.

**Respirable Particulate Matter and Fine Particulate Matter.** Respirable particulate matter, or  $\text{PM}_{10}$ , refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or  $\text{PM}_{2.5}$ , refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in these size ranges has been determined to have the potential to lodge in the lungs and contribute to respiratory problems.  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  arise from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations, and windblown dust.  $\text{PM}_{10}$  and  $\text{PM}_{2.5}$  can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis.  $\text{PM}_{2.5}$  is considered to have the potential to lodge deeper in the lungs. Diesel particulate matter (DPM) is classified a carcinogen by CARB.

**Sulfur Dioxide.**  $\text{SO}_2$  is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil and by other industrial processes. Generally, the highest concentrations of  $\text{SO}_2$  are found near large industrial sources.  $\text{SO}_2$  is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to  $\text{SO}_2$  can cause respiratory illness and aggravate existing cardiovascular disease.

**Lead.** Lead in the atmosphere occurs as particulate matter. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Lead has the potential to cause gastrointestinal, central nervous system, kidney, and blood diseases upon prolonged exposure. Lead is also classified as a probable human carcinogen. Because emissions of

lead are found only in projects that require permits from the SDAPCD and are generally large manufacturing facilities, lead is not an air pollutant of concern for the Project.

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 general public. The USEPA is responsible for enforcing the federal CAA of 1970 and its 1977 and 1990 Amendments. The CAA required 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 discussed above. Table 5.8-1, *Ambient Air Quality Standards*, shows the federal and state ambient air quality standards for these pollutants.

**Table 5.8-1  
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	California Standards	Federal Standards Primary <sup>1</sup>	Federal Standards Secondary <sup>2</sup>
Ozone	1 Hour	0.09 ppm (180 µg/m <sup>3</sup> )	-	-
	8 Hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.070 ppm (137 µg/m <sup>3</sup> )	Same as Primary
PM <sub>10</sub>	24 Hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	Same as Primary
	AAM	20 µg/m <sup>3</sup>	-	Same as Primary
PM <sub>2.5</sub>	24 Hour	-	35 µg/m <sup>3</sup>	Same as Primary
	AAM	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>	15.0 µg/m <sup>3</sup>
CO	1 Hour	20 ppm (23 mg/m <sup>3</sup> )	35 ppm (40 mg/m <sup>3</sup> )	-
	8 Hour	9.0 ppm (10 mg/m <sup>3</sup> )	9 ppm (10 mg/m <sup>3</sup> )	-
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m <sup>3</sup> )	-	-
NO <sub>2</sub>	1 Hour	0.18 ppm (339 µg/m <sup>3</sup> )	0.100 ppm (188 µg/m <sup>3</sup> )	-
	AAM	0.030 ppm (57 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	Same as Primary
SO <sub>2</sub>	1 Hour	0.25 ppm (655 µg/m <sup>3</sup> )	0.075 ppm (196 µg/m <sup>3</sup> )	-
	3 Hour	-	-	0.5 ppm (1,300 µg/m <sup>3</sup> )
	24 Hour	0.04 ppm (105 µg/m <sup>3</sup> )	-	-
Lead	30-day Avg.	1.5 µg/m <sup>3</sup>	-	-
	Calendar Quarter	-	1.5 µg/m <sup>3</sup>	Same as Primary
	Rolling 3-month Avg.	-	0.15 µg/m <sup>3</sup>	-
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



**Table 5.8-1 (cont.)  
AMBIENT AIR QUALITY STANDARDS**

<b>Pollutant</b>	<b>Averaging Time</b>	<b>California Standards</b>	<b>Federal Standards Primary<sup>1</sup></b>	<b>Federal Standards Secondary<sup>2</sup></b>
Sulfates	24 Hour	25 µg/m <sup>3</sup>	No Federal Standards	No Federal Standards
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m <sup>3</sup> )	No Federal Standards	No Federal Standards
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m <sup>3</sup> )	No Federal Standards	No Federal Standards

Source: CARB 2016

<sup>1</sup> National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

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

O<sub>3</sub> = ozone; ppm = parts per million; µg/m<sup>3</sup> = micrograms per cubic meter; PM<sub>10</sub> = large particulate matter;

AAM = Annual Arithmetic Mean; PM<sub>2.5</sub> = fine particulate matter; CO = carbon monoxide; mg/m<sup>3</sup> = milligrams per cubic meter;

NO<sub>2</sub> = nitrogen dioxide; SO<sub>2</sub> = sulfur dioxide = km: kilometer; – = No Standard.

Note: More detailed information of the data presented in this table can be found at the CARB website ([www.arb.ca.gov](http://www.arb.ca.gov)).

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 through the California Clean Air Act of 1988 (CCAA), and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide (H<sub>2</sub>S), vinyl chloride, and visibility-reducing particles. Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be “nonattainment areas” for that pollutant. On April 30, 2012, the SDAB was classified as a marginal nonattainment area for the 8-hour NAAQS for ozone. The SDAB is an attainment area under the NAAQS for all other criteria pollutants. The SDAB currently falls under a national “maintenance plan” for CO, following a 1998 redesignation as a CO attainment area (SDAPCD 2010). The SDAB is currently classified as a nonattainment area under the CAAQS for ozone (serious nonattainment), PM<sub>10</sub>, and PM<sub>2.5</sub>.

The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for San Diego County. The SDAPCD and 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 County's RAQS was initially adopted in 1991, and the most recent version was adopted by the SDAPCD in 2016. The local RAQS, in combination with those from all other California nonattainment areas with serious (or worse) air quality problems, is submitted to CARB, which develops the California SIP. 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. The current federal and state attainment status for San Diego County is presented in Table 5.8-2, *Federal and State Air Quality Designation for the San Diego Air Basin*.

**Table 5.8-2**  
**FEDERAL AND STATE AIR QUALITY DESIGNATION FOR THE SAN DIEGO AIR BASIN**

Criteria Pollutant	Federal Designation	State Designation
Ozone (1-hour)	No federal standard	Nonattainment
Ozone (8-hour)	Marginal nonattainment	Nonattainment
CO	Attainment	Attainment
PM <sub>10</sub>	Unclassified	Nonattainment
PM <sub>2.5</sub>	Attainment	Nonattainment
NO <sub>2</sub>	Attainment	Attainment
SO <sub>2</sub>	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No federal standard	Attainment
Hydrogen Sulfide	No federal standard	Unclassified
Visibility	No federal standard	Unclassified

Source: CARB 2017a

CO: carbon monoxide; PM<sub>10</sub>: particulate matter 10 microns in diameter; PM<sub>2.5</sub>: particulate matter 2.5 microns or less in diameter; NO<sub>2</sub>: nitrogen dioxide; SO<sub>2</sub>: sulfur dioxide

### 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 sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as farms, landfills, construction sites, and residential areas. Adverse health effects of TACs can be carcinogenic (cancer-causing), short-term (acute) noncarcinogenic, and long-term (chronic) noncarcinogenic. Public exposure to TACs is a significant environmental health issue in California.

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

On August 27, 1998, CARB formally identified PM emitted in both gaseous and particulate forms by diesel-fueled engines as a TAC. The particles emitted by diesel engines are coated with chemicals, many of which have been identified by the USEPA as HAPs and by CARB as TACs. CARB's Scientific Advisory Committee has recommended a unit risk factor of 300 in 1 million over a 70-year exposure period for diesel particulates. In September 2000, the CARB approved the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (Diesel Risk Reduction Plan). The Diesel Risk Reduction Plan outlined a comprehensive and ambitious program that included the development of numerous new control measures over the next several years 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 are now in force on a statewide basis.

## Existing Air Quality

### Attainment Designations

Attainment designations are discussed above and provided in Table 5.8-2. The SDAB is classified as a marginal nonattainment area for the 8-hour NAAQS for ozone. The SDAB currently falls under a national “maintenance plan” for CO. The SDAB is currently classified as a nonattainment area under the CAAQS for ozone (serious nonattainment), PM<sub>10</sub>, and PM<sub>2.5</sub>. The SDAB is an attainment area for all other criteria pollutants.

### Monitored Air Quality

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 the CAAQS and the NAAQS. The nearest ambient monitoring station to the project site is the Del Mar-Mira Costa College monitoring station located near 832 Highway 101 in Del Mar, approximately 7.7 miles north of the project site. Air quality data for this monitoring station for the years 2014, 2015, and 2016 (the most current available data) are shown in Table 5.8-3, *Air Quality Monitoring Data*. The Del Mar-Mira Costa College station did not record concentrations for NO<sub>2</sub>, PM<sub>2.5</sub> and PM<sub>10</sub>; the next closest station, San Diego-Kearny Villa Road, located approximately 7.8 miles east of the project site, was used for these values in Table 5.8-3. No stations in San Diego County have monitored CO since 2013; values at a downtown San Diego station were within acceptable levels during 2013.

**Table 5.8-3  
AIR QUALITY MONITORING DATA**

Pollutant	2014	2015	2016
<b>Ozone (O<sub>3</sub>)</b>			
Maximum 1-hour concentration (ppm)	0.100	0.098	0.79
Days above 1-hour state standard (>0.09 ppm)	1	1	0
Maximum 8-hour concentration (ppm)	0.087	0.078	0.071
Days above 8-hour state standard (>0.070 ppm)	4	2	1
Days above 8-hour federal standard (>0.075 ppm)	2	1	0
<b>Respirable Particulate Matter (PM<sub>10</sub>)</b>			
Maximum 24-hour concentration (µg/m <sup>3</sup> )	39.0	39.0	36.0
Days above state standard (>50 µg/m <sup>3</sup> )	0	0	0
Days above federal standard (>150 µg/m <sup>3</sup> )	0	0	0
<b>Fine Particulate Matter (PM<sub>2.5</sub>)</b>			
Maximum 24-hour concentration (µg/m <sup>3</sup> )	20.2	25.7	19.4
Days above federal standard (>35 µg/m <sup>3</sup> )	0	0	0
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>			
Maximum 1-hour concentration (ppm)	0.051	0.051	0.053
Days above state 1-hour standard (0.18 ppm)	0	0	0

Source: CARB 2018

ppm = parts per million, µg/m<sup>3</sup> = micrograms per cubic meter

The San Diego-Kearny Villa Road had acceptable levels of NO<sub>2</sub>, PM<sub>2.5</sub> and PM<sub>10</sub>. At the Del Mar-Mira Costa College station, the state 8-hour ozone standard was violated four times in 2014, twice in 2015, and once in 2016, and the federal 8-hour ozone standard was violated twice in 2014 and once in 2015. The 1-hour ozone standard was violated once in 2014 and 2015.

## **5.8.2 Impact 1: Air Quality Management Plan Consistency**

*Issue 1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?*

### **5.8.2.1 Impact Thresholds**

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 RAQS and SIP, prepared by the APCD for the region. Both the RAQS 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 RAQS/SIP if it results in population and/or employment growth that exceed growth estimates for the area.

### **5.8.2.2 Impact Analysis**

The purpose of the Project is to replace two reservoirs at the end of their life cycle, provide an updated facility to meet current City standards, increase the reservoir storage capacity in the area, and to increase the elevation at which the reservoir in the area resides for increased functionality. Achieving these goals would maintain the water 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 Project 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 Project would not generate population and employment growth beyond the levels assumed for the region, the Project would not conflict with population projections for the region and would, therefore, be consistent with the RAQS/SIP. In addition, the Project would comply with all 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 Project would not conflict with the applicable air quality attainment plan, and no impacts to regional air quality would occur.

### **5.8.2.3 Significance of Impact**

The Project would not conflict with regional air quality plans and impacts would be less than significant.

### **5.8.2.4 Mitigation, Monitoring and Reporting**

As impacts would be less than significant, no mitigation measures would be required.

## 5.8.3 Impact 2: Criteria Pollutant Emissions

*Issue 2: Would the Project result in a violation of any air quality standard or contribute substantially to an existing or projected air quality violation?*

### 5.8.3.1 Impact Thresholds

To determine whether a project would result in 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 presented in Table 5.8-4, *Screening-Level Thresholds for Air Quality Impact Analysis*.

**Table 5.8-4  
SCREENING-LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSIS**

Pollutant	Total Emissions		
Construction Emissions (Pounds per Day)			
Respirable Particulate Matter (PM <sub>10</sub> )	100		
Fine Particulate Matter (PM <sub>2.5</sub> )	55		
Oxides of Nitrogen (NO <sub>x</sub> )	250		
Oxides of Sulfur (SO <sub>x</sub> )	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	75		
Operational Emissions			
	Pounds per Hour	Pounds per Day	Tons per Year
Respirable Particulate Matter (PM <sub>10</sub> )	---	100	15
Fine Particulate Matter (PM <sub>2.5</sub> )	---	55	10
Oxides of Nitrogen (NO <sub>x</sub> )	25	250	40
Oxides of Sulfur (SO <sub>x</sub> )	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOC)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

Source: SDAPCD Rule 20.2 and Rule 1210

T-BACT = Toxics-Best Available Control Technology

### 5.8.3.2 Impact Analysis

#### Construction Emissions

The Project would generate criteria pollutants in the short term during construction. The Project's construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), a computer model used to estimate criteria air pollutant resulting from construction and operation of land development projects throughout the state of California. Project-specific input was based on general information provided in Chapter 3.0, *Project Description*, and default model settings to

estimate reasonably conservative conditions. Additional details of phasing, selection of construction equipment, and other input parameters, including CalEEMod data, are included in the Project's Air Quality Impact Analysis (HELIX 2019a).

The results of the calculations for project construction are shown in Table 5.8-5, *Maximum Daily Construction Emissions*. The data are presented as the maximum anticipated daily emissions for comparison with the SDAPCD thresholds. The beginning and ending construction activities include mobilization and setup, lead and asbestos abatement, and demobilization, which do not use heavy construction equipment that generates substantial pollutants; therefore, they are not analyzed further for air quality impacts.

**Table 5.8-5  
MAXIMUM DAILY CONSTRUCTION EMISSIONS**

Phase	ROG*	NO <sub>x</sub> *	CO*	SO <sub>x</sub> *	PM <sub>10</sub> *	PM <sub>2.5</sub> *
Demolition	2	14	17	<0.5	1	1
Mass Grading	4	43	24	<0.5	6	3
Pipeline Construction (Inlet/Outlet)	2	18	12	<0.5	1	1
Reservoir Construction	5	41	48	<0.5	2	2
Reservoir Backfill	2	26	16	<0.5	5	3
Pipeline Construction (Supply Line)	<0.5	1	2	<0.5	<0.5	<0.5
Final Grading	2	27	17	<0.5	8	4
Pipeline Construction (Distribution)	1	4	6	<0.5	<0.5	<0.5
Paving	<0.5	4	5	<0.5	<0.5	<0.5
<b>Maximum Daily Emissions</b>	<b>6</b>	<b>57</b>	<b>48</b>	<b>&lt;0.5</b>	<b>8</b>	<b>4</b>
<i>SDAPCD Thresholds</i>	75	250	550	250	100	55
<b>Significant Impact?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

Source: CalEEMod (output data is provided in Appendix A of the Project Air Quality Impact Analysis; HELIX 2019a)

Note: The highest values for ROG and NO<sub>x</sub> occur during the overlap of the demolition and mass grading phases.

\*Pollutant Emissions (pounds per day)

ROG = reactive organic gas; NO<sub>x</sub> = nitrogen oxides; CO = carbon monoxide; SO<sub>x</sub> = sulfur oxides; PM<sub>10</sub> = particulate matter 10 microns in diameter; PM<sub>2.5</sub> = particulate matter 2.5 microns or less in diameter

As shown in Table 5.8-5, emissions of all criteria pollutants related to project construction would be below the SDAPCD's significance thresholds. Therefore, direct impacts from criteria pollutants generated during construction would not cause a violation of any air quality standard, contribute substantially to an existing or projected air quality violation, or exceed the particulate matter threshold and thus, impacts would be less than significant.

## Operational Emissions

During operation, one maintenance trip per week would result in negligible criteria pollutant emissions. In addition, the valve vault would be powered electrically and would not have a diesel or other fuel component; therefore, no local emissions would result from its operation. The Project would not involve other operational components that would result in criteria air pollutant emissions. Therefore, operational emissions would be negligible and less than significant.

### **Cumulatively Considerable Increase in Nonattainment Pollutants**

The region is a federal and/or state nonattainment area for PM<sub>10</sub>, PM<sub>2.5</sub>, and ozone. The Project would contribute particulates and the ozone precursors VOC and NO<sub>x</sub> to the area during project construction. As described above, emissions during construction would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. In addition, as described above, operational emissions would be negligible and would not be cumulatively considerable. Therefore, the Project's emissions would not be cumulatively considerable, and the impact would be less than significant.

#### **5.8.3.3 Significance of Impact**

The Project would not result in a violation of an air quality standard, nor would it contribute substantially to an existing or projected air quality violation that would contribute to a direct or cumulative impact to air quality. Therefore, impacts associated with the Project's construction and operational emissions would be less than significant.

#### **5.8.3.4 Mitigation, Monitoring and Reporting**

As impacts would be less than significant, no mitigation measures would be required.

### **5.8.4 Impact 3: Sensitive Receptors**

*Issue 3: Would the Project expose sensitive receptors to substantial pollutant concentrations?*

#### **5.8.4.1 Impact Thresholds**

Impacts to sensitive receptors are typically analyzed for operational period CO hotspots and exposure to TACs, including diesel PM.

A CO hot spot is an area of localized CO pollution caused by severe vehicle congestion on major roadways, typically near intersections. CO hotspots are evaluated relative to the CAAQS presented in Table 5.8-1.

TAC thresholds are presented in Table 5.8-4 above. 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 (MEI) are higher if a fixed exposure occurs over a longer time period. According to the Office of Environmental Health Hazard Assessment, Health Risk Assessments (HRAs), which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the Project.



## 5.8.4.2 Impact Analysis

### Carbon Monoxide Hotspots

#### During Construction

Temporary delays may occur in the immediate vicinity of lane closures due to construction and at street segments and intersections used by construction vehicles; however, these delays would be limited to the construction period and would cease upon Project construction. Based on these factors, the potential for a CO hot spot or substantial exposure of sensitive receptors to Project-generated local CO emissions is low. CO exposure impacts would be less than significant.

#### During Operation

As discussed in Section 5.8.3.2, the Project would not involve operational components that would result in substantial criteria air pollutant emissions, including CO emissions.

### Exposure to TACs

#### During Construction

Construction activities would result in short-term, project-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment. There would be relatively few pieces of off-road, heavy-duty diesel equipment used during construction, and the construction period would be relatively short, especially when compared to 70 years, which is the standard for HRAs. 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.

The existing Exchange Place and La Jolla View reservoirs may contain lead-based paint and/or asbestos that would be removed prior to demolition of the reservoir (see also Section 5.13.3, *Hazardous Materials*). Per the City's hazardous materials abatement specification, the contractor would be directed to use a strategy of abatement that entails removing lead-based paint using chemicals, heat guns, and certain contained abrasive methods, but not open flame burning, open abrasive blasting, sandblasting, water blasting, extensive dry scraping, or methylene chloride removers. Lead- and asbestos-containing materials would be adequately wetted with water or a removal encapsulant before and during the removal process, to reduce dust emissions. With implementation of these construction BMPs, emissions of hazardous materials would be avoided, and no impacts related to exposure of sensitive receptors to such materials would occur.

In summary, impacts from construction emissions of TACs would be less than significant.

#### During Operation

As the proposed Project would involve the development of a potable water storage reservoir and ancillary components, Project operation would not introduce new stationary sources of TACs. Therefore, no impacts from operational emissions of TACs would occur.

### **5.8.4.3 Significance of Impact**

No exceedances of the CO standard are predicted, and the Project would not cause or contribute to a violation of the air quality standard; therefore, the Project would not result in a significant exposure of sensitive receptors to Project-generated local CO emissions.

Construction and operational emissions would not expose sensitive receptors to substantial emissions of TACs. The impact would be less than significant.

### **5.8.4.4 Mitigation, Monitoring and Reporting**

As no significant impact would occur, no mitigation measures would be required.

## 5.9 Greenhouse Gas Emissions

This section presents the results of an assessment of potential GHG impacts associated with the Project. This section is based on the information and analysis presented in the Project's CAP Consistency Checklist (HELIX 2018b) included as Appendix G.

### 5.9.1 Existing Conditions

#### 5.9.1.1 Environmental Setting

##### Climate Change Background

Global climate change refers to changes in average climatic conditions on Earth, as a whole, 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 light in but preventing 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. GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHGs to disperse around the globe. Because GHGs 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<sub>2</sub>. Carbon dioxide equivalent (CO<sub>2</sub>e) is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP.

The temperature trend, including data through 2010, shows the climate has warmed by approximately 0.36°Fahrenheit (F) per decade since the late 1970s (National Aeronautics and Space Administration [NASA] 2011). The United Nations Intergovernmental Panel on Climate Change (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) CO<sub>2</sub>e by the year 2100 (IPCC 2014). The IPCC estimated the concentration of CO<sub>2</sub>e in 2011 to be 430 ppm (IPCC 2014).

##### GHG Emission Inventories

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 million metric tons (MMT) of CO<sub>2</sub>e. Statewide GHG emissions totaled 433 MMT CO<sub>2</sub>e in 1990 (CARB 2015), 467 MMT CO<sub>2</sub>e in 2000, 446 MMT CO<sub>2</sub>e in 2010, and 440 MMT CO<sub>2</sub>e in 2015 (CARB 2017b). Transportation-related sources consistently contribute the most GHG emissions, with 39 percent of the total in 2015, followed by industrial

emissions (23 percent), electricity generation (19 percent), agriculture (8 percent), residential (6 percent), and commercial (5 percent).

A San Diego regional emissions inventory was prepared by the University of San Diego School of Law, Energy Policy Initiative Center (EPIC) that took into account the unique characteristics of the region. Their 2010 emissions inventory for San Diego County showed emissions of 33.2 MMT CO<sub>2</sub>e (EPIC 2013). Similar to statewide GHG emissions, transportation contributed the most countywide, with 43 percent of total emissions.

For the City, the most recent GHG inventory, for the year 2016, estimated the total emissions at approximately 10.5 MMT CO<sub>2</sub>e per year (City 2017a). As with state and County emissions, transportation is the largest emissions category, with 53 percent of total emissions. Energy consumption is the next largest source of emissions, with 44 percent of the total.

### Types of GHGs

The GHGs, as defined under California's AB 32, include CO<sub>2</sub>, methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>).

CO<sub>2</sub> is the most common anthropogenic GHG. CO<sub>2</sub> 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<sub>2</sub> include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores indicate that CO<sub>2</sub> concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO<sub>2</sub> 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 May 2016, the CO<sub>2</sub> concentration exceeded 404 ppm (National Oceanic and Atmospheric Administration [NOAA] 2016).

CH<sub>4</sub> is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. 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.

N<sub>2</sub>O is produced by both natural and human-related sources. N<sub>2</sub>O 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<sub>2</sub>O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

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.

SF<sub>6</sub> is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF<sub>6</sub> 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.

### **5.9.1.2 Regulatory Framework**

#### **Federal Clean Air Act**

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. USEPA*, that CO<sub>2</sub> 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<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFC, PFC, and SF<sub>6</sub>) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA).

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

On June 1, 2005, California's governor signed Executive Order (EO) S-3-05, which 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. In an effort 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.

#### **Assembly Bill 32 – Global Warming Solution Act of 2006**

The California Global Warming Solutions Act of 2006, 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 reductions.

#### **Executive Order B-30-15**

On April 29, 2015, EO B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG reduction targets with those of leading international governments, including the 28-nation European Union. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the ultimate goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

#### **Senate Bill 32**

As a follow-up to AB 32 and in response to EO-B-30-15, SB 32 was passed by the California legislature in August 2016 to codify the EO's California GHG reduction target of 40 percent below 1990 levels by 2030.

### **Assembly Bill 197**

A condition of approval for SB 32 was the passage of AB 197, which also occurred in the California legislature in August 2016. AB 197 requires that CARB consider the social costs of GHG emissions and prioritize direct reductions in GHG emissions at mobile sources and large stationary sources. AB 197 also gives the California legislature more oversight over CARB through the addition of two legislatively appointed members to the CARB Board and the establishment of a legislative committee to make recommendations about CARB programs to the legislature.

### **Assembly Bill 341**

In 2011, the State legislature enacted AB 341 (California PRC Section 42649.2), increasing the solid waste diversion target to 75 percent statewide.

### **California Air Resources Board: Scoping Plan**

On December 11, 2008, CARB adopted the Scoping Plan (CARB 2008) as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. Measures applicable to development projects include those related to energy-efficiency building and appliance standards, the use of renewable sources for electricity generation, regional transportation targets, and green building strategy. Relative to transportation, the Scoping Plan includes nine measures or recommended actions related to reducing vehicle miles traveled (VMT) and vehicle GHGs through fuel and efficiency measures. These measures would be implemented statewide rather than on a project-by-project basis.

CARB released the First Update to the Climate Change Scoping Plan in May 2014 to provide information on the development of measure-specific regulations and to adjust projections in consideration of the economic recession (CARB 2014). To determine the amount of GHG emission reductions needed to achieve the goal of AB 32 (i.e., 1990 levels by 2020), CARB developed a forecast of the AB 32 Baseline 2020 emissions, which is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan was implemented. CARB estimated the AB 32 Baseline 2020 to be 509 MMT of CO<sub>2</sub>e.

### **City of San Diego General Plan**

The City General Plan includes several climate change-related policies aimed at reducing GHG emissions from future development and City operations. For example, Conservation Element policy CE-A.2 aims to reduce the City's carbon footprint and to develop and adopt new or amended regulations, programs, and incentives as appropriate to implement the goals and policies set forth related to climate change (City 2008a). The Land Use and Community Planning Element; the Mobility Element; the Urban Design Element; and the Public Facilities, Services and Safety Element also identify GHG reduction and climate change adaptation goals. These elements contain policy language related to sustainable land use patterns, alternative modes of transportation, energy efficiency, water conservation, waste reduction, and greater landfill efficiency. The overall intent of these policies is to support climate protection actions, while retaining flexibility in the design of implementation measures, which could be influenced by new scientific research, technological advances, environmental conditions, or state and federal legislation. The 2008 General Plan was adopted in 2009, and amended in 2010 and 2012.

## City of San Diego Climate Action Plan

In October 2010, the City Council established the Environmental and Economic Sustainability Task Force as an independent advisory body to work with City staff on the development of a plan for both city operations and the community to reduce GHG emissions and to begin to evaluate vulnerabilities in the community and outline adaptation strategies. The City prepared a CAP that was approved by the City Council in December 2015 (City 2015a).

The CAP serves four primary purposes: (1) providing a roadmap for the City to achieve GHG reductions; (2) conforming the City's climate change efforts to California laws and regulations; (3) implementing climate change actions from the General Plan; and (4) providing CEQA tiering for the GHG emissions of new development.

To provide a mechanism for CEQA tiering, the City developed a CAP Consistency Checklist to provide a streamlined review process for GHG emissions analysis of proposed new developments that are subject to CEQA. The checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emissions targets identified in the CAP are achieved. Implementation of these measures would ensure that new development is consistent with the CAP's assumptions for relevant CAP strategies toward achieving the identified GHG reduction targets. Projects that are consistent with the CAP as determined through the use of this Checklist may rely on the CAP for the cumulative impacts analysis of GHG emissions. Projects that are not consistent with the CAP must prepare a comprehensive project-specific analysis of GHG emissions, including quantification of existing and projected GHG emissions and incorporation of the measures in this Checklist to the extent feasible. Cumulative GHG impacts would be significant for any project that is not consistent with the CAP.

### 5.9.2 Impact 1: Potential for GHG Emissions

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

#### 5.9.2.1 Impact Thresholds

Projects that are consistent with the City's CAP, as determined using the CAP Consistency Checklist, would result in less-than-significant GHG impacts. If a project is not consistent with the City's CAP, as determined with the CAP Consistency Checklist, potentially significant GHG impacts would occur.

#### 5.9.2.2 Impact Analysis

The Project was analyzed for consistency with the CAP's Checklist (see Appendix G for the Checklist).

Step 1 of the CAP Consistency Checklist states that a project consistent with the existing land use plan and zoning designations would be consistent with the CAP's land use assumptions. The project site is located within the LJCP area, which designates the Project site for "Parks, Open Space." The General Plan land use designation is "Park, Open Space, & Recreation" and the zoning designation is "OP-2-1 (Open Space - Park)." This area has been historically used for the existing La Jolla View Reservoir. With implementation of the new reservoir, the reservoir would be buried underground



and the old reservoir and access road would be demolished and restored to a park land use. Associated infrastructure with the new reservoir, such as access roads, would be minimal within the park. Open park land would be increased upon completion of the project. Therefore, the Project would be consistent with the existing land use and zoning designations.

Step 2 of the CAP Consistency Checklist determines a project's consistency with the applicable strategies and actions of the CAP. Due to the nature of the Project as an infrastructure project with no certificate of occupancy or dwelling units, these strategies and actions would not be applicable to the Project. Specifically, as the Project would be built almost entirely underground, Checklist Strategy 1.1 (cool or green roofs) would not be applicable. As a water infrastructure project, the Project would not have buildings with plumbing fixtures and fittings that the Checklist Strategy 1.2 (plumbing fixtures and fittings) standards were based upon. Therefore, Checklist Strategy 1.2 would not apply to the Project. As a water infrastructure project, the Project would only supply two parking spaces and access for occasional maintenance workers. Therefore, Checklist Strategy 3.3 (electric vehicle charging) and Checklist Strategy 3.4 (bicycle parking spaces) would not apply to the Project. As the Project would not have tenant occupants, Checklist Strategy 3.5 (shower facilities) and Checklist Strategy 3.7 (transportation demand management program) would not apply. The Project is a nonresidential use not located in a TPA; therefore, Checklist Strategy 3.6 (designated parking spaces) would not apply.

### **5.9.2.3 Significance of Impacts**

The Project would be consistent with Step 1 and would not conflict with Step 2 of the CAP Consistency Checklist. Therefore, the Project would be consistent with the City's CAP and no quantification of GHG emissions is necessary. GHG impacts would be less than significant.

### **5.9.2.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures would be required.

## **5.9.3 Impact 2: GHG Reduction Plan Consistency**

*Issue 2: Would the Project conflict with the City's CAP or another applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

### **5.9.3.1 Impact Thresholds**

A significant impact would occur if implementation of a project would conflict with an applicable plan, policy, or regulation for the purpose of reducing GHG emissions.

### **5.9.3.2 Impact Analysis**

There are numerous plans, policies, and regulations adopted for the purpose of reducing GHG emissions, as detailed in Section 5.9.1.2. The principal overall state plan and policy are AB 32 and the follow-up legislation, SB 32. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020 and the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030. The City's CAP outlines the measures for the City to achieve its share of state GHG reductions. As

discussed under Issue 1, the Project would be consistent with the City's CAP and, therefore, would be consistent with state GHG reduction goals.

Statewide plans and regulations such as regulations requiring an increasing fraction of electricity to be generated from renewable sources are being implemented at the statewide, rather than project-specific level. Therefore, the Project does not conflict with those plans and regulations.

The City has also adopted the City General Plan with policies to reduce GHG emissions. The Conservation Element of the General Plan lists City policies to reduce emissions. The Project's consistency with these policies is analyzed in Table 5.9-1, *City General Plan Implementation Strategies*. As shown in the table, the Project would be consistent with the City's General Plan policies for reducing GHG emissions.

**Table 5.9-1**  
**CITY GENERAL PLAN IMPLEMENTATION STRATEGIES**

<b>Policy</b>	<b>Project Consistency</b>
CE-A.9: Reuse building materials, use materials that have recycled content, or use materials that are derived from sustainable or rapidly renewable sources to the extent possible.	Consistent. The Project would utilize recycled construction materials where feasible, with a minimum target of 5 percent and a goal of 10 percent.
CE-A.11: Implement sustainable landscape design and maintenance.	Consistent. The Project would use drought-tolerant vegetation when replanting areas disturbed by construction activities.

### **5.9.3.3 Significance of Impacts**

The Project would not conflict with the CAP or any applicable plan, policy, or regulation for the purpose of reducing GHG emissions. Impacts would be less than significant.

### **5.9.3.4 Mitigation, Monitoring and Reporting**

As no significant impacts would occur, no mitigation measures would be required.

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## 5.10 Energy

This section provides an evaluation of existing energy production/consumption conditions and potential energy use and related impacts from the Project. The following discussion is consistent with and fulfills the intent of CEQA Guidelines Appendix F, and is based on information from the Air Quality Impact Analysis prepared by HELIX (2019a; Appendix F).

### 5.10.1 Existing Conditions

#### 5.10.1.1 Environmental Setting

##### Existing Energy Consumption and Generation

###### Units of Measure

The units of energy used in this section are the British thermal units (BTU), kilowatt hours (kWh), therms, and gallons. A BTU is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit (°F) 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.

###### Overview of Energy Supply and Demand

The major sources of energy in the San Diego region, which encompasses the project area, include petroleum, electricity, and natural gas. Because energy consumption associated with the Project would be almost entirely related to consumption of petroleum during construction activities, this section focuses on petroleum-related energy.

Automobiles and trucks consume gasoline and diesel fuel, which are nonrenewable energy products derived from crude oil. In addition to energy consumption associated with on-road vehicle use, energy is consumed in connection with construction and maintenance of transportation infrastructure. Passenger cars and light-duty trucks are by far the largest consumers of transportation fuel, accounting for approximately 1.6 billion gallons of gasoline and diesel fuel per year (SANDAG 2009).

Based on the CARB EMFAC Emissions Database, the average fuel economy of the 2018 vehicle fleet in the county was estimated as 23 miles per gallon (mpg) for gasoline and 10 mpg for diesel. Based on the CARB EMFAC2017 vehicle fleet type breakdown for the County, approximately 94 percent of the VMT is from gasoline-powered vehicles and approximately 6 percent is from diesel-powered trucks. The energy consumption rates for gasoline- and diesel-powered vehicles are 5,378 and

14,183 BTU per VMT, respectively. The total automobile and truck-related energy usage in the county in 2018 is estimated at approximately 207 trillion BTU.

### 5.10.1.2 Regulatory Framework

#### Regulatory Setting

Energy consumption is a significant source of GHGs. Regulations to address energy also address GHGs; resulting in some overlap in the discussions in the following text and Section 5.9, *Greenhouse Gas Emissions*.

#### Federal Energy Regulations

##### *Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards*

The USEPA and the NHTSA have worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. The rules require vehicles to meet a 2016 standard that is equivalent to 35.5 mpg, and a 2025 standard that is equivalent to 54.5 mpg if the levels were achieved solely through improvements in fuel efficiency. The agencies expect, however, that a portion of these improvements will be made through improvements in air conditioning leakage and the use of alternative refrigerants that would not contribute to fuel economy. These standards would cut GHG emissions by an estimated 2 billion metric tons (MT) and 4 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2017-2025). The combined USEPA GHG standards and NHTSA Corporate Average Fuel Economy (CAFE) standards resolve previously conflicting requirements under both federal programs and the standards of the State of California and other states that have adopted the California standards (USEPA 2011; USEPA and NHTSA 2012).

#### Local Energy Regulations

##### *Climate Action Plan*

The City adopted a CAP in December 2015 (City 2015a). The CAP quantifies GHG emissions; establishes Citywide reduction targets for 2020 and 2035; identifies strategies and measures to reduce GHG levels; and provides guidance for monitoring progress on an annual basis. The City CAP identifies a comprehensive set of goals and actions, including ordinances, policies, resolutions, programs, and incentives, that the City can use to reduce GHG emissions. Many of these goals and actions would have the effect of reducing energy use.

### 5.10.2 Impact 1: Potential for Wasteful Energy Use

*Issue 1: Would the project result in the use of excessive amounts of fuel or other forms of energy (including natural gas, oil, etc.)?*

### 5.10.2.1 Impact Thresholds

Consistent with CEQA Guidelines Appendix F, a project would result in a significant impact to energy conservation if it would:

1. Substantially increase the consumption of electricity, natural gas, gasoline, diesel, or other non-renewable energy types such that the construction of new facilities and sources of energy or major improvements to local infrastructure would be required; or
2. Cause the use of large amounts of energy in a manner that is wasteful or otherwise inconsistent with adopted plans or policies.

### 5.10.2.2 Impact Analysis

Per CEQA Guidelines Appendix F, energy conservation impacts were analyzed by estimating project energy requirements by amount and type, and by evaluating project compliance with regulatory requirements. These data were used to evaluate the Project's effects on energy resources and the degree to which the Project would comply with existing energy standards. The analysis included in this section utilizes the CalEEMod Version 2016.3.2 results from the Project's air quality analysis to evaluate energy impacts (refer to EIR Appendix F).

#### Potential to Substantially Increase Consumption of Non-renewable Energy

##### Construction Impacts

Project construction would require the use of construction equipment for demolition, grading, facility construction/installation, backfilling, and paving, as well as construction workers, vendors, and haul trucks traveling to and from the Project site. Construction equipment requires gasoline, diesel, and potentially other fuel sources to operate. Construction data used in CalEEMod, including equipment type, number, usage hours per day, horse power, load factor, and total number of days in use (refer to Section 5.8 for details), were utilized to determine energy consumption associated with the proposed construction activities.

Construction energy was calculated based on the fuel consumption rates from the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook for each piece of off-road heavy-duty equipment (SCAQMD 1993). Fuel economy (i.e., gasoline and diesel) for all off-road equipment was determined using values provided in the CARB's OFFROAD2011 model. Fuel economy for on-road vehicles was determined by using the average fuel economy in the county for 2018 (estimated as 23 mpg for gasoline and 10 mpg for diesel) based on the CARB EMFAC Emissions Database. The analysis did not assume increases in fleet fuel economy due to changes in technology, as the effects on the average fuel economy of the future years' equipment and vehicle fleet remain uncertain.

Table 5.10-1, *Total Energy Consumption from Construction Equipment and Vehicles*, presents the amount of energy in BTU required during construction of the Project (refer to Section 3.4.3, *Construction Phasing*, for a description of the activities involved in each construction phase). The beginning and ending construction activities include mobilization and setup, lead and asbestos

abatement, and demobilization, which do not use heavy construction equipment; therefore, they result in negligible energy demands.

**Table 5.10-1**  
**TOTAL ENERGY CONSUMPTION FROM CONSTRUCTION EQUIPMENT AND VEHICLES**

Phase	Equipment	Number	Diesel Fuel (gallons)	BTU
3	Backhoe	3	1,066	148,164,687
	Concrete Saw	2	1,561	2,169,983,448
	Breaker	1	793	110,161,392
4	Loader	2	4,396	611,097,020
	Dozer	1	6,051	841,131,034
	Excavator	1	3,677	511,148,859
	Grader	1	4,696	652,727,898
	Scraper	1	10,789	1,499,733,228
	Roller	1	1,862	258,809,549
	Soil drill	1	6,768	940,738,656
5	Backhoe	1	379	52,680,778
	Roller	1	321	44,622,336
	Dozer	1	1,043	145,022,592
	Concrete Saw	1	624	86,793,379
6	Wrapping machine	1	11,815	1,642,336,819
	Generator set	1	11,815	1,642,336,819
	Crane	1	5,571	774,353,488
	Cement truck	1	958	133,162,445
	Cement pump	1	11,815	1,642,336,819
	Concrete Vibrator	1	11,815	1,642,336,819
	Trowel	1	11,815	1,642,336,819
	Man-lift	1	11,815	1,642,336,819
	Forklift	1	1,692	235,147,968
7	Dozer	1	3,652	507,579,072
	Backhoe	1	1,326	184,382,722
	Grader	1	2,834	393,887,525
	Scraper	1	6,511	905,011,430
	Roller	1	983	136,655,904
8	Backhoe	1	284	39,510,583
9	Backhoe	1	1,137	158,042,333
	Loader	1	1,137	158,042,333
	Dozer	2	6,260	870,135,552
	Roller	1	963	133,867,008
	Paver	1	1,730	240,432,192
10	Backhoe	1	1,687	234,429,460
	Concrete Saw	1	2,779	386,230,537

**Table 5.10-1 (cont.)**  
**TOTAL ENERGY CONSUMPTION FROM CONSTRUCTION EQUIPMENT AND VEHICLES**

Phase	Equipment	Number	Diesel Fuel (gallons)	BTU
11	Paver	1	432	60,108,048
	Roller	1	241	33,466,752
<b>Off-road Construction Equipment Total</b>			<b>155,096</b>	<b>21,558,281,122</b>
<b>On-road Construction Vehicles</b>			<b>145,460 VMT</b>	<b>1,515,685,637</b>
			<b>Total Construction Energy Expenditure</b>	<b>23 Billion BTU</b>

Source: HELIX 2019a

BTU= British thermal units

Energy consumption from construction equipment and off-road vehicles would be approximately 21.5 billion BTU. Construction workers, vendors, and haul trucks are estimated to generate 145,460 VMT during the construction period; this would consume approximately 1.5 billion BTU. Therefore, the total estimated amount of energy consumption required during construction would be approximately 23 billion BTU.

Construction of the Project would incorporate on-site energy conservation features. The following practices would be implemented during Project construction to reduce waste and energy consumption:

- Follow maintenance schedules to maintain equipment in optimal working order and rated energy efficiency, which would include, but not be limited to, regular replacement of filters, cleaning of compressor coils, burner tune-ups, lubrication of pumps and motors, proper vehicle maintenance, etc.;
- Reduce on-site vehicle idling; and
- In accordance with CALGreen criteria as well as state and local laws, at least 65 percent of on-site construction waste would be diverted from landfills through reuse and recycling.

The Project's construction-related energy usage would not represent a significant demand on energy resources because it is temporary in nature. Additionally, with implementation of the on-site energy conservation features, Project construction would avoid or reduce inefficient, wasteful, and unnecessary consumption of energy. Therefore, the Project's construction-phase energy impacts would be less than significant.

#### Operational Impacts

Operational energy use would consist of weekly vehicle trips for maintenance activities (consistent with activities associated with the current reservoir), as well as the electrically powered valve vault.



Both would result in negligible energy use. The Project would not involve other operational components that would require the use of energy.

### **Potential to Waste Non-renewable Energy or be Inconsistent with Adopted Plans and Policies**

With inclusion of the on-site energy conservation features outlined above, energy would not be used in excess or in a wasteful manner. As noted above, following construction, operational energy use would be restricted to the amount needed for the functional purpose of the Project, and would be negligible. The construction of new facilities and sources of energy or major improvements to local infrastructure would not be required to meet the energy demands of the Project.

The Project would be required to comply with state, county, and City energy conservation measures related to construction and operations. Other plans and policies relating to energy use, such as the CCR, SANDAG Regional Energy Strategy, the City's General Plan, and SDG&E's Long Term Procurement Plan generally focus energy conservation efforts on the long-term operational energy usage of residential and commercial land uses, which are the primary energy users in the San Diego region. Such plans and policies would not apply to the Project, and therefore impacts related to inconsistency with adopted plans and policies would be less than significant.

#### **5.10.2.3 Significance of Impacts**

Based on the analysis provided above, the Project would have less than significant impacts related to energy.

#### **5.10.2.4 Mitigation, Monitoring and Reporting**

No significant impacts would occur, and no mitigation would be required.

## 5.11 Hydrology/Water Quality

A Drainage Study has been prepared for the project by Tory R. Walker Engineering (Walker 2019). A Storm Water Quality Management Plan were prepared by IEC (2019). These studies are summarized below along with other applicable data and are included in Appendices H1 and H2.

### 5.11.1 Existing Conditions

#### Watershed and Drainage Characteristics

The project site is located within the Peñasquitos Hydrologic Unit (HU), 1 of 11 major drainage areas identified in the San Diego RWQCB Basin Plan (RWQCB 1994, as amended). The Peñasquitos HU (906.0) is a triangular area of approximately 170 square miles, and it extends from Poway on the east to Mission Bay-Del Mar along the coast. This HU is divided into a number of hydrologic areas (HAs) in the Basin Plan based on local drainage characteristics, with the project site located within the Scripps HA (906.30, Figure 5.11-1, *Project Location Within Local Hydrologic Designations*). Surface drainage in the Peñasquitos HU occurs through a number of small to moderate size streams, including Rose Canyon and San Clemente Canyon creeks in areas east of the project site. Drainage within Scripps HA (including the project site) occurs primarily as sheet flow and within a number of small, unnamed intermittent drainage courses that flow generally west to the coast. Average annual precipitation in the project site vicinity (zip code 92037) is approximately 12 inches, with much of this (nearly 83 percent) occurring during the period of November through March (Melissadata.com 2018).

The project site includes two existing reservoir structures with access roads and infrastructure, as well as areas of mostly steep and undeveloped open space. Existing on-site drainage includes sheet flow on undeveloped slopes which confluences into several small unnamed drainage courses as noted above. Two local drainage basins with a combined area of 13.5 acres are mapped within the site and adjacent areas, including Basin 100 (3.6 acres) and Basin 200 (9.9 acres). Associated flows (including minor run-on from off-site areas) move generally west to two existing outlet (Point of Compliance [POC]) sites at the west ends of the noted basins (POC-1 and POC-2 as depicted on the Existing Condition Hydrology Map in Appendix C of Walker 2019). After leaving the site, existing flows continue generally north and west for approximately 0.3 mile to the coast via existing storm drain structures. Current peak 100-year storm flows from the site total approximately 21.1 cfs, including 5.1 cfs from Basin 100 (POC-1) and 16 cfs from Basin 200 (POC-2, refer to Table 1 in Walker 2019).

The project site is characterized by steep, native ridges and slopes incised by steep-sided erosional ravines/canyons (refer to Figures 2-2, *Aerial Vicinity*, and 2-3, *Topographic Map*). On-site elevations range from approximately 220 feet AMSL at the northwestern site corner (near the existing Exchange Place Reservoir), to 650 feet AMSL in the northeastern site corner (at the proposed reservoir site).

#### Flood Hazards

The Federal Emergency Management Agency (FEMA) has mapped flood hazards within the project site and vicinity. The entire project site and adjacent areas are designated as Zone X, or areas

determined to be outside of identified 100-year floodplains (FEMA 2012a and 2012b). The closest mapped 100-year floodplains are associated with coastal areas located approximately 0.3 mile north of the site.

## **Groundwater**

The project site is not located within or adjacent to the areal extent of any mapped regional groundwater basins, with the closest such aquifer (Mission Valley Basin) located approximately 5.5 miles to the south along the San Diego River corridor (California Department of Water Resources [DWR] 2004). Subsurface exploration conducted as part of the project Geotechnical Investigation included 8 borings extending to maximum depths of 84 feet (Ninyo & Moore 2014). While static (permanent) groundwater aquifers were not encountered in these investigations, the project Geotechnical Investigation notes that groundwater may potentially be encountered at shallower depths in local ravines, and/or may occur in association with variations in conditions such as topography, geology, rainfall, and irrigation.

## **Water Quality**

### Surface Water

Surface water within the project site and vicinity consists of intermittent flows from storm events and minor storm/irrigation runoff from off-site residential areas. No known surface water quality data are available for the project site or adjacent areas, with surface storm and irrigation flows typically subject to variations in water quality due to local conditions such as runoff rates/amounts and land use. A summary of typical pollutant sources and loadings for various land use types is provided in Table 5.11-1, *Summary of Typical Pollutant Sources for Urban Storm Water Runoff*, and Table 5.11-2, *Typical Loadings for Selected Pollutants in Runoff from Various Land Uses*. Receiving waters associated with the project site are limited to small unnamed intermittent drainage courses and coastal waters as previously described. Existing sources for water quality data in downstream areas include quantitative and qualitative monitoring results, as well as CWA Section 303(d) impaired water evaluations conducted by the SWRCB and RWQCB. An overview of selected monitoring and reporting data is provided below.

**Table 5.11-1  
SUMMARY OF TYPICAL POLLUTANT SOURCES FOR URBAN STORM WATER RUNOFF**

Priority Project Categories	Sediment	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	X	X			X	X	X	X	X
Attached Residential Development	X	X			X	P <sup>1</sup>	P <sup>2</sup>	P	X
Commercial Development >one acre	P <sup>1</sup>	P <sup>1</sup>	X	P <sup>2</sup>	X	P <sup>3</sup>	X	P <sup>3</sup>	P <sup>3</sup>
Heavy Industry	X		X	X	X	X	X		
Automotive Repair Shops			X	X <sup>4,5</sup>	X		X		
Restaurants					X	X	X	X	P <sup>1</sup>
Hillside Development >5,000 square feet	X	X			X	X	X		X
Parking Lots	P <sup>1</sup>	P <sup>1</sup>	X		X	P <sup>1</sup>	X		P <sup>1</sup>
Retail Gasoline Outlets			X	X	X	X	X		
Streets, Highways & Freeways	X	P <sup>1</sup>	X	X <sup>4</sup>	X	P <sup>5</sup>	X	X	P <sup>1</sup>

Notes:

X = anticipated; P = potential

<sup>1</sup> A potential pollutant if landscaping exists onsite

<sup>2</sup> A potential pollutant if the project includes uncovered parking areas

<sup>3</sup> A potential pollutant if land use involved food or animal waste products

<sup>4</sup> Including petroleum hydrocarbons

<sup>5</sup> Including solvents

**General Pollutant Categories**

**Table 5.11-2**  
**TYPICAL LOADINGS FOR SELECTED POLLUTANTS IN RUNOFF FROM VARIOUS LAND USES**  
**(lbs/acre/year)**

Land Use	TSS	TP	TKN	NH <sub>3</sub> - N	NO <sub>2</sub> + NO <sub>3</sub> - N	BOD	COD	Pb	Zn	Cu
Commercial	1000	1.5	6.7	1.9	3.1	62	420	2.7	2.1	0.4
Parking Lot	400	0.7	5.1	2	2.9	47	270	0.8	0.8	0.04
HDR	420	1	4.2	0.8	2	27	170	0.8	0.7	0.03
MDR	190	0.5	2.5	0.5	1.4	13	72	0.2	0.2	0.14
LDR	10	0.04	0.03	0.02	0.1	N/A	N/A	0.01	0.04	0.01
Freeway	880	0.9	7.9	1.5	4.2	N/A	N/A	4.5	2.1	0.37
Industrial	860	1.3	3.8	0.2	1.3	N/A	N/A	2.4	7.3	0.5
Park	3	0.03	1.5	N/A	0.3	N/A	2	0	N/A	N/A
Construction	6000	80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Source: USEPA 1999

HDR = High Density Residential; MDR = Medium Density Residential; LDR = Low Density Residential

N/A = Not available; insufficient data to characterize; TSS = Total Suspended Solids; TP = Total Phosphorus;

TKN = Total Kjeldahl Nitrogen; NH<sub>3</sub> - N = Ammonia - Nitrogen; NO<sub>2</sub> + NO<sub>3</sub> - N = Nitrite + Nitrate - Nitrogen;

BOD = Biochemical Oxygen Demand; COD = Chemical Oxygen Demand; Pb = Lead; Zn = Zinc; Cu = Copper

As summarized below, water quality monitoring in areas downstream of the project site are limited to dry weather monitoring conducted under requirements of the federal CWA, NPDES, and the associated Municipal Storm Water Permit (refer to the discussion of Regulatory Framework below for additional information).

Dry weather monitoring has been conducted historically at a number of downstream coastal locations in association with the NPDES Municipal Permit and other requirements. The most recent (2007-2008) known data available from these sites documented that water quality objectives were most commonly exceeded for conductivity, turbidity, and indicator bacteria (including *Enterococcus*, total coliform and fecal coliform bacteria); and less commonly for pollutants including Methylene Blue Activated Substances (MBAS) such as commercial detergents (Weston Solutions, Inc. 2009).

#### Groundwater

As previously described, the project site is not located within any mapped regional groundwater basin. No known groundwater quality data are available for the project site and vicinity, with water quality characteristics of potential localized aquifers subject to variation in association with local land uses and related surface water quality. Historic water quality characterization of the closest regional aquifer (Mission Valley Basin) has identified elevated levels of magnesium, sulfate, total dissolved solids (TDS), and chloride (DWR 2004).

#### **CWA Section 303(d) Impaired Water Bodies and Total Maximum Daily Loads**

The SWRCB and RWQCBs produce bi-annual qualitative assessments of statewide and regional water quality conditions. These assessments are focused on CWA Section 303(d) impaired water listings and assignment of total maximum daily load (TMDL) requirements. A TMDL establishes the maximum amount of an impairing substance or stressor that a water body can assimilate and still meet water quality standards, and allocates that load among pollution contributors. TMDLs are quantitative tools for implementing state water quality standards, based on the relationship

between pollution sources and water quality conditions. States are required to identify and document polluted surface water bodies, with the resulting documentation referred to as the CWA Section 303(d) List of Water Quality Limited Segments, or more commonly the 303(d) list. The most current (2014/2016) approved 303(d) list identifies impairment of downstream coastal waters in the Scripps HA from indicator bacteria and trash (SWRCB 2018). A related TMDL order to address impairment by indicator bacteria was adopted in 2011 (RWQCB Resolution R9-02010-00001), while impairment related to trash is being addressed by applicable agencies/permittees through non-TMDL methods such as street sweeping, public education, and installation of trash-catching devices in storm drains (SWRCB 2018).

## **Regulatory Framework**

The Project is subject to a number of regulatory requirements associated with federal, state, and local guidelines, as summarized below.

### Federal Standards

#### *Clean Water Act/National Pollutant Discharge Elimination System Requirements*

The Project is subject to applicable elements of the CWA, including the NPDES. Specific NPDES requirements associated with the Project include conformance with the following: (1) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit, NPDES No. CAS000002, SWRCB Order 2009-0009-DWQ; as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ); (2) General Groundwater Extraction Discharges to Surface Waters Permit (Groundwater Permit; NPDES No. CAG919003, Order No. R9-2015-0013); and (3) Waste Discharge Requirements for Municipal Separate Storm Sewer Systems (MS4) Permit (Municipal Permit, NPDES No. CAS 0109266, Order No. R9-2013-0001, as amended by Order Nos. R9-2015-0001 and R9-2015-0100). In California, the USEPA has delegated authority for implementing NPDES requirements to the SWRCB, with these permits described below under state standards (and related City requirements discussed under local standards).

### State Standards

#### *NPDES Construction General Permit*

Construction activities exceeding one acre (or meeting other applicable criteria) are subject to pertinent requirements under the Construction General Permit. This permit was issued by the SWRCB, pursuant to authority delegated by the USEPA, as previously noted. Specific conformance requirements include implementing a Storm Water Pollution Prevention Plan (SWPPP), an associated Construction Site Monitoring Program (CSMP), employee training, and minimum BMPs, as well as a Rain Event Action Plan (REAP) for applicable projects (e.g., those in Risk Categories 2 or 3). Under the Construction General Permit, project sites are designated as Risk Level 1 through 3 based on site-specific criteria (e.g., sediment erosion and receiving water risk), with Risk Level 3 sites requiring the most stringent controls. Based on the site-specific risk level designation, the SWPPP and related plans/efforts identify detailed measures to prevent and control the off-site discharge of pollutants in storm water runoff. Depending on the risk level, these may include efforts such as minimizing/stabilizing disturbed areas, mandatory use of technology-based action levels, effluent and receiving water monitoring/reporting, and advanced treatment systems (ATS). Specific pollution control

measures require the use of best available technology economically achievable (BAT) and/or best conventional pollutant control technology (BCT) levels of treatment, with these requirements implemented through applicable BMPs. While site-specific measures vary with conditions such as risk level, proposed grading, and slope/soil characteristics, detailed guidance for construction-related BMPs is provided in the permit and related City standards (as outlined below), as well as additional sources including the *EPA National Menu of Best Management Practices for Storm Water Phase II – Construction* (USEPA 2018), and *Storm Water Best Management Practices Handbooks* (California Stormwater Quality Association [CASQA] 2009).

#### *NPDES Groundwater Permit*

If project-related construction activities entail the discharge of extracted groundwater into receiving waters, the applicant is required to obtain coverage under the Groundwater Permit. Conformance with this permit is generally applicable to all temporary and certain permanent groundwater discharge activities, with exceptions as noted in the permit fact sheet. Specific requirements for permit conformance include: (1) submittal of appropriate application materials and fees; (2) implementation of pertinent (depending on site-specific conditions) monitoring/testing, disposal alternative, and treatment programs; (3) provision of applicable notification to the associated local agency prior to discharging to a municipal storm drain system; (4) conformance with appropriate effluent standards (as outlined in the permit); and (5) submittal of applicable documentation (e.g., monitoring reports).

#### *NPDES Municipal Permit*

The Municipal Permit implements a regional strategy for water quality and related concerns, and mandates a watershed-based approach that often encompasses multiple jurisdictions. The overall permit goals include: (1) providing a consistent set of requirements for all co-permittees; and (2) allowing the co-permittees to focus their efforts and resources on achieving identified goals and improving water quality, rather than just completing individual actions (which may not adequately reflect identified goals). Under this approach, the co-permittees are tasked with prioritizing their individual water quality concerns, as well as providing implementation strategies and schedules to address those priorities. Municipal Permit conformance entails considerations such as receiving water limitations (e.g., Basin Plan criteria as outlined below), waste load allocations (WLAs), and numeric water quality based effluent limitations (WQBELs). Specific efforts to provide permit conformance and reduce runoff and pollutant discharges to the MEP involve methods such as: (1) using jurisdictional planning efforts (e.g., discretionary general plan approvals) to provide water quality protection; (2) requiring coordination between individual jurisdictions to provide watershed-based water quality protection; (3) implementing appropriate BMPs, including low impact development (LID) measures, to avoid, minimize, and/or mitigate effects such as increased erosion and off-site sediment transport (sedimentation), hydromodification<sup>1</sup> and the discharge of pollutants in urban runoff; and (4) using appropriate monitoring/assessment, reporting, and enforcement efforts to ensure proper implementation, documentation, and (as appropriate) modification of

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<sup>1</sup> Hydromodification is generally defined in the Municipal Permit as the change in natural watershed hydrologic processes and runoff characteristics (interception, infiltration, and overland/groundwater flow) caused by urbanization or other land use changes that result in increased stream flows and sediment transport.

permit requirements. The City has implemented a number of regulations to ensure conformance with these requirements, as outlined below under Local Standards.

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

The Porter-Cologne Water Quality Control Act established the principal legal and regulatory framework for water quality control in California. This Act is embodied in the California Water Code, which authorizes the SWRCB to implement the provisions of the federal CWA as previously described.

The State of California is divided into nine regions governed by RWQCBs, which implement and enforce provisions of the California Water Code and the CWA under the oversight of the SWRCB. The City is located within the purview of the San Diego RWQCB (Region 9). The Porter-Cologne Act also provides for the development and periodic review of basin plans that designate beneficial uses for surface waters, groundwater basins, and coastal waters, as well as establish water quality objectives for applicable waters as outlined below.

#### *Water Quality Control Plan for the San Diego Basin*

The San Diego Basin Plan establishes a number of beneficial uses and water quality objectives for surface and groundwater resources. Beneficial uses are generally defined in the Basin Plan as “the uses of water necessary for the survival or well-being of man, plus plants and wildlife.” Identified existing and potential beneficial uses are identified below for downstream surface waters, coastal waters, and groundwater within the Scripps HA (RWQCB, 1994 as amended).

- Surface Waters (Unnamed Intermittent Coastal Streams). Contact and non-contact water recreation (REC 1 and REC 2), warm freshwater habitat (WARM), and wildlife habitat (WILD).
- Coastal Waters (Pacific Ocean Shoreline). Industrial service supply (IND); navigation (NAV); REC 1 and REC 2; commercial and sport fishing (COMM); preservation of biological habitats of special significance (BIOL); WILD; rare, threatened or endangered species (RARE); marine habitat (MAR); aquaculture (AQUA); migration of aquatic organisms (MIGR); spawning, reproduction and/or early development (SPWN); and shellfish harvesting (SHELL).

Groundwater. None.

Water quality objectives identified in the Basin Plan are based on established beneficial uses, and are defined as “the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses.” These objectives may include both numerical and narrative criteria, and are incorporated into related regulatory requirements such as the NPDES permitting process described above.

#### Local Standards

##### *Drainage Design Manual*

Pursuant to SDMC Chapter 14 Article 2 Division 2, Storm Water Runoff and Drainage Regulations, drainage regulations apply to all development in the City, whether or not a permit or other approval is required.



Drainage design policies and procedures for the City are provided in the Drainage Design Manual (City 2017b), which is incorporated into the Land Development Manual as Appendix B. The Drainage Design Manual provides design guidelines for drainage and drainage-related facilities associated with development in the City, including criteria for determining watersheds, storm discharge, and applicable storm drain structure types and capacities.

#### *Storm Water Standards Manual*

The City has adopted a jurisdiction-specific Storm Water Standards Manual (City 2018b) to reflect related NPDES standards, as well as the associated Model BMP Manual for the San Diego Region (Project Clean Water 2018). The Storm Water Manual provides direction for associated regulatory compliance, including identification of construction and post-construction storm water requirements for Standard Projects and Priority Development Projects. Specifically, the manual identifies regulatory requirements and provides detailed performance standards and monitoring/maintenance efforts for: (1) construction BMPs; (2) overall storm water management design; (3) site design (LID) and source control BMPs applicable to all projects; (4) pollutant (or treatment) control and hydromodification management BMPs applicable to Priority Development Projects; (5) operation and maintenance requirements for applicable BMPs; and (6) specific direction and guidance to provide conformance with City and related NPDES storm water standards.

#### *Grading Ordinance*

The City Grading Ordinance (SDMC Section 142.0101 et seq.) incorporates a number of requirements related to hydrology and water quality, including BMPs necessary to control storm water pollution from sources such as erosion/sedimentation and construction materials during project construction and operation. Specifically, these include elements related to slope design, erosion/sediment control, revegetation requirements, and material handling/control.

#### *General Plan*

The City General Plan (2008a) provides a number of goals and policies related to hydrology and water quality concerns in the Public Facilities, Services, and Safety Element, as well as the Conservation Element, as summarized below.

Public Facilities, Services, and Safety Element. This element includes a number of goals and policies related to the provision of adequate public facilities and services for existing and proposed development. For storm water, these involve efforts to provide appropriately designed and sized infrastructure and ensure adequate conveyance capacity, protect water quality, and provide conformance with applicable regulatory standards (such as the NPDES).

Conservation Element. The Conservation Element provides a number of goals and policies related to preserving and protecting watersheds and natural drainage features, minimizing runoff and related pollutant generation during and after construction activities, and protecting drinking water resources.

## 5.11.2 Impact 1: Impervious Surfaces and Runoff

*Issue 1: Would the project result in an increase in impervious surfaces and associated increased runoff?*

### 5.11.2.1 Impact Thresholds

The City Significance Determination Thresholds (2016a) identify potentially significant impacts related to impervious surfaces and runoff if a project would:

- Impose flood hazards on other properties or development, or result in substantial changes to stream flow velocities or quantities; or
- Result in decreased aquifer recharge or result in extraction from an aquifer resulting in a net deficit in the aquifer volume or reduction in the local groundwater table.

### 5.11.2.2 Impact Analysis

As outlined in Chapter 3.0, *Project Description*, and the project Drainage Study (Walker 2019), proposed development would entail removing a number of existing paved or hard surface facilities, including the Exchange Place and La Jolla View reservoirs, the Exchange Place Reservoir Pump Station, and portions of the existing La Jolla View Reservoir access road. In addition, the proposed new La Jolla View Reservoir and a number of related structures (e.g., pipelines) would be located underground, and access to the proposed reservoir site would be provided by the remaining portion of the existing (albeit reconstructed) reservoir access road, with an associated paved parking area. Based on the described conditions, the Project would result in a net decrease in the overall area of impervious surfaces within the site. This decrease, along with proposed retention/restoration of native habitat in portions of the site not proposed for permanent structures (including soil conditioning to retain infiltration capacity in restoration areas), would result in a net reduction of flow velocities/quantities both within and from the site. Specifically, the total amount of 100-year storm peak flow leaving the site would decrease slightly from the current level of 25.0 cfs, to approximately 24.9 cfs (Walker 2019).

Based on the described pre- and post-development flow conditions, the project Drainage Study concludes, "The total overall peak flowrate will not increase from pre- to post-project condition; therefore, runoff from the proposed project will not exceed the capacity of the downstream storm drain system." Accordingly, the proposed project would not increase the rate and amount of runoff leaving the site, with no associated adverse effects related to flood hazards on other properties or development (i.e., from inadequate storm drain capacity), erosion/sedimentation, or hydromodification in on- or off-site receiving waters. In addition, as described above in Section 5.11.1, the project site is not within or adjacent to any mapped 100-year floodplains, with no associated on- or off-site impacts to result from the Project.

Due to the previously described reduction in on-site impervious areas and proposed habitat retention/restoration efforts, the Project would not reduce associated infiltration capacity or aquifer recharge potential. As a result, no adverse effects to aquifer volumes or groundwater table levels would result from the Project.

### 5.11.2.3 Significance of Impacts

Based on the proposed design, impervious surfaces within the site and associated 100-year storm runoff levels would be slightly reduced from current conditions. Accordingly, potential impacts from project implementation related to runoff rates/amounts, associated storm drain capacity, flooding, erosion/sedimentation, hydromodification, and infiltration/groundwater recharge capacity would be less than significant (with additional discussion of potential erosion/sedimentation effects provided below in Sections 5.11.3 and 5.11.4).

### 5.11.2.4 Mitigation, Monitoring and Reporting

Because potential project-related impacts associated with runoff rates/amounts, storm drain system capacity, flooding, hydromodification, impervious surfaces, and infiltration/groundwater recharge would be less than significant, no mitigation measures are required.

## 5.11.3 Impact 2: Potential for Drainage Alteration

*Issue 2: Would the Project result in a substantial alteration to on- and off-site drainage patterns due to changes in runoff flow rates or volumes?*

### 5.11.3.1 Impact Thresholds

The City Significance Determination Thresholds (2016a) identify potentially significant impacts related to drainage alteration if a project would:

- Grade, clear, or grub more than 1.0 acre of land, especially into slopes over a 25 percent grade and drain into a sensitive water body or stream, causing uncontrolled runoff that results in erosion and subsequent sedimentation of downstream water bodies; or
- Modify existing drainage patterns such that environmental resources, including biological communities or archaeological sites, would be adversely affected.

### 5.11.3.2 Impact Analysis

As described in Section 5.11.1, existing drainage within the project site occurs primarily as sheet flow that confluences in several small intermittent drainages. These flows move generally west through the site to two outlet points (POC-1 and POC-2), and then continue north and west through existing storm drain facilities for approximately 0.3 mile to the coast. While project construction would result in some localized short-term modifications to the described existing on-site drainage patterns and directions from grading/excavation, the overall existing drainage patterns and directions would be retained during project implementation. After construction of proposed facilities, the project site would be predominantly restored to pre-development grades and topographic conditions, with the exception of the reconstructed reservoir access road and parking area. Specifically, this would entail diverting drainage from a small (0.5 acre) area that currently flows northeast, with these diverted flows to move west through the site to the existing/proposed outlet points as noted above for existing drainage. As described in Section 5.11.2.2, however, overall post-development peak flows from the site (including flows from the described diversion) would be slightly reduced from existing conditions, due to the factors including the reduction of on-site impervious areas. As a result,

long-term drainage patterns/directions and flows would be essentially the same as current conditions, with flows from developed areas and restored slopes to drain into local intermittent streams, move generally west to the existing outlet points, and continue north and west to the coast as previously described.

Proposed drainage structures related to the project would include a series of swales and/or gutters along the proposed reservoir access road, and an overflow structure for the proposed reservoir. Both of these features would discharge into local drainages as noted above, with use of the overflow structure anticipated to be limited to minor and infrequent discharges (IEC 2019). Based on the described conditions, the overall post-development drainage patterns and directions both within and from the project site would largely mimic existing conditions (with a slight reduction of runoff rates and amounts as noted), and off-site flows would continue to drain generally north and west to the coast (Walker 2019). Accordingly, overall post-development on- and off-site drainage patterns/directions and peak flows would not be substantially altered from implementation of the Project.

Based on the pre- and post-development drainage/flow conditions described above and in Section 5.11.1, existing drainage patterns/directions would be predominantly retained and peak flows within and from the site would be slightly reduced from current levels. As a result, no substantial effects related to “uncontrolled runoff” or environmental resources (including biological communities or archaeological sites) would result. Due to the nature of proposed construction activities and the generally steep on-site topographic conditions, however, project implementation would result in potential effects related to erosion and sedimentation, particularly on existing/proposed slopes. As noted in Section 5.11.1 and described below in Section 5.11.4, potential erosion/sedimentation impacts would be addressed through mandatory conformance with applicable elements of the City storm water program and related NPDES standards. Specifically, this would entail conformance with associated City regulatory codes and the NPDES Construction General Permit, including implementation of an approved SWPPP, related plans, and appropriate BMPs to address erosion and sedimentation. Additionally, as described in Section 5.12, *Geology and Soils*, all proposed manufactured slopes would be subject to regulatory standards and related remedial measures to ensure slope stability, including efforts such as limiting slopes to appropriate heights and grades, locating cut slopes in competent bedrock material, using engineered fill and stabilization features (e.g., buttresses or retaining structures) on fill slopes, providing appropriate surface treatments (e.g., backrolling/grooming) and landscaping, implementing pertinent geotechnical recommendations, and monitoring slope construction to verify site-specific conditions/recommendations and/or implement additional remedial measures as appropriate. Based on these requirements, associated potential project effects related to erosion/sedimentation and slope instability would be less than significant, with additional discussion provided in Sections 5.11.4 and 5.12.

### **5.11.3.3 Significance of Impacts**

The project design would retain the current overall drainage patterns, and runoff leaving the site would be slightly reduced from existing levels. Based on these conditions and required project conformance with regulatory standards for erosion/sedimentation and slope stability, potential impacts from project implementation related to drainage alteration would be less than significant.

### 5.11.3.4 Mitigation, Monitoring and Reporting

Because potential project-related impacts associated with drainage alteration would be less than significant, no mitigation measures are required.

### 5.11.4 Impact 3: Potential for Pollutant Discharge and Water Quality

*Issue 3: Would the project result in an increase in pollutant discharge to receiving waters during or following construction, or discharge identified pollutants to an already impaired water body?*

*Issue 4: What short-term and long-term effects would the project have on local and regional water quality, and what types of pre- and post-construction BMPs would be incorporated into the project to preclude impacts to regional and local water quality?*

#### 5.11.4.1 Impact Thresholds

The City Significance Determination Thresholds (2016a) note that compliance with applicable City (and related) water quality standards is assured through permit conditions provided by LDR Engineering. Adherence to the City storm water standards is thus considered adequate to preclude surface water quality impacts, unless substantial evidence supports a fair argument that a significant impact will occur. Because the Project does not involve activities that could directly affect groundwater quality (e.g., underground fuel storage tanks or septic systems), potential impacts to groundwater quality are limited to the percolation of project-related surface runoff and associated pollutants (e.g., in pervious areas). Accordingly, conformance with the City storm water standards is the applicable threshold for both surface and groundwater water resources.

#### 5.11.4.2 Impact Analysis

Potential project-related pollutant discharge and water quality impacts are associated with both short-term construction activities and long-term operation and maintenance, as described below.

##### Short-term Construction Impacts

Potential pollutant discharge/water quality impacts related to project construction include erosion/sedimentation, the use/storage and potential discharge of construction-related hazardous materials (e.g., fuels, etc.), generation of debris from demolition activities, and disposal of extracted groundwater (if required), as described below.

##### Erosion and Sedimentation

Project-related excavation, grading, and construction activities could result in potentially significant erosion and sedimentation effects, particularly on steeper slopes. Specifically, project activities would involve the removal of surface stabilizing features such as pavement and vegetation, excavation of existing compacted materials from cut areas, redeposition of excavated (and/or imported) material as fill in development areas, and potential erosion from disposal of extracted groundwater (if required). Project-related erosion could result in the influx of sediment into

downstream receiving waters, with associated water quality effects such as turbidity and transport of other pollutants that tend to adhere to sediment particles (e.g., hydrocarbons). As noted above under the discussion of Regulatory Framework in Section 5.11.1, however, no impairment of downstream receiving waters is identified for sediment or associated pollutants (with such impairment limited to indicator bacteria and trash).

While graded, excavated, and filled areas associated with construction activities would be stabilized through efforts such as compaction and installation of hardscape and vegetation, erosion potential would be higher in the short-term than for existing conditions. Proposed development areas would be especially susceptible to erosion between the beginning of grading/construction and the installation of structures/pavement or establishment of permanent vegetation cover. The Project has been identified as a High Priority construction site (Risk Category 2 or 3) in the assessment of storm water quality requirements (IEC 2019) and would be subject to associated requirements as outlined below. Erosion and sedimentation are not considered to be significant long-term concerns for the Project, as developed areas would be stabilized through installation of hardscape or vegetation, and manufactured slopes would be subject to mandatory stabilization efforts as noted above and described in Section 5.12.

While no sediment-related impairment is identified for downstream receiving waters, project-related erosion and sedimentation could potentially affect downstream water quality and associated wildlife habitats. These potential impacts would be addressed through conformance with City storm water standards and the related NPDES Construction General Permit, as described above in Section 5.11.1 under the discussion of Regulatory Framework. This would include implementing an authorized SWPPP for proposed construction, including (but not limited to) erosion and sedimentation BMPs. While individual project BMPs would be determined during the SWPPP process based on site-specific characteristics (soils, slopes, etc.), they would include standard industry measures and guidelines from the City Storm Water Manual and NPDES Construction General Permit, as well as the additional sources identified in Section 5.11.1. Typical erosion and sediment control BMPs that may be required in the project SWPPP include: (1) seasonal grading restrictions during the rainy season; (2) preparation and implementation of a CSMP and a REAP to provide enhanced erosion and sediment control measures prior to predicted storm events; (3) use of erosion control/stabilizing measures such as geotextiles, mats, fiber rolls, or hydroseeding/soil binders; (4) use of sediment controls to protect the site perimeter and prevent off-site sediment transport, including measures such as inlet protection, silt fencing, fiber rolls, gravel bags, temporary sediment basins, street sweeping, stabilized construction access points and sediment stockpiles, and use of properly fitted covers for sediment transport vehicles; (5) utilization of temporary drainage controls for manufactured slopes, such as berms (or other structures) to divert surface flows away from slopes; (6) compliance with local dust control measures; (7) appropriate BMP performance monitoring and as-needed maintenance; and (8) implementation of additional BMPs as necessary to ensure adequate erosion/sediment control and regulatory conformance. As previously described, all proposed manufactured slopes would also be subject to mandatory stabilization efforts pursuant to geotechnical recommendations and associated regulatory standards.

#### Construction-related Hazardous Materials

Project construction would involve the on-site use and/or storage of hazardous materials such as fuels, lubricants, solvents, concrete, paint, and portable septic system wastes. The accidental discharge of such materials during construction could potentially result in significant impacts if

these pollutants reach downstream receiving waters, particularly materials such as petroleum compounds that are potentially toxic to aquatic species in low concentrations, and septic system wastes (due to impairment of downstream waters by indicator bacteria). Implementation of a SWPPP would be required under City and NPDES guidelines as previously described, and would include detailed measures to avoid or minimize potential impacts related to the use and potential discharge of construction-related hazardous materials.

As noted above under the discussion of erosion and sedimentation, detailed BMPs would be determined as part of the NPDES/SWPPP process based on project-specific parameters, although they are likely to include standard industry measures and guidelines from the previously identified sources. Typical BMPs associated with construction-related hazardous materials that may be required in the project SWPPP include the following: (1) minimizing and properly locating (e.g., away from drainages/storm drains) hazardous material use/storage areas; (2) providing appropriate covers/enclosures, secondary containment (e.g., berms), monitoring/maintenance, and inventory control (e.g., delivery logs/labeling) for hazardous material use/storage areas; (3) restricting paving operations during wet weather and providing appropriate sediment control downstream of paving activities; (4) utilizing properly designed and contained washout areas for materials including concrete and paint; (5) properly maintaining all construction equipment and vehicles, and providing appropriate containment for associated fueling and maintenance operations; (6) providing training for applicable construction employees on the proper use, handling, storage, disposal, and notification/cleanup procedures for construction-related hazardous materials; (7) storing appropriate types and quantities of containment and cleanup materials on site; (8) implementing appropriate solid waste containment, disposal, and recycling efforts; and (9) properly locating, maintaining, and containing portable wastewater facilities.

#### Demolition-related Debris Generation

Project implementation would involve the demolition of existing on-site facilities including structures and pavement. These activities would generate construction debris, potentially including particulates (e.g., from pavement removal), concrete, asphalt, glass, metal, paint, insulation, and wood. The introduction of demolition-related debris into local drainages or storm drain systems could result in downstream water quality impacts, potentially including pollutants contributing to identified downstream water quality impairments (i.e., trash). Project construction would be subject to a number of regulatory controls related to demolition, including City storm water standards and related NPDES/SWPPP requirements as previously described. While detailed BMPs would be determined as part of the NPDES/SWPPP process based on project-specific parameters, they are likely to include the following types of standard industry measures and guidelines from the previously noted sources: (1) recycle appropriate (i.e., non-hazardous) construction debris for on- or off-site use whenever feasible; (2) properly contain and dispose of construction debris to avoid contact with storm water; (3) use dust-control measures such as watering to reduce particulate generation for pertinent locations/activities (e.g., concrete removal); and (4) implement appropriate erosion prevention and sediment control measures downstream of all demolition activities.

#### Disposal of Extracted Groundwater

While shallow permanent groundwater is not expected to occur in the project site and vicinity, construction dewatering may be required during construction in association with potential shallow groundwater occurrences in local ravines, and/or in association with variations in local conditions

such as topography, geology, rainfall and irrigation (refer to Section 5.11.1). Disposal of groundwater extracted during construction activities into local drainages and/or storm drain facilities could potentially generate significant water quality impacts through erosion/sedimentation or the possible occurrence of pollutants in local aquifers. Project construction would require conformance with NPDES Groundwater Permit criteria prior to disposal of extracted groundwater. While specific BMPs to address potential water quality concerns from disposal of extracted groundwater would be determined based on site-specific parameters, they would likely include the types of standard measures outlined under the discussion of Regulatory Framework in Section 5.11.1.

### **Long-term Operation and Maintenance Impacts**

The Project would generally not include activities or facilities with a high potential for long-term generation of urban pollutants, such as wastewater treatment/conveyance structures, commercial automotive or food service outlets, industrial uses (e.g., chemical/material loading and storage), trash storage/disposal, or chemical pesticide/fertilizer applications. Urban pollutants may potentially be generated/discharged on site, however, through activities such as routine facility maintenance (e.g., use of lubricants, paints, and sealants) and associated worker access and activity (e.g., automotive-related petroleum/coolant leaks and trash generation). Urban pollutants typically accumulate in areas such as roads, parking areas, and drainage facilities, and are picked up in runoff during storm events. While peak storm water flows within and from the project site would be slightly less than current levels (refer to Section 5.11.2), such flows could potentially result in long-term on- and off-site transport of pollutants and associated downstream water quality effects. Based on analysis in the project assessment of storm water quality requirements (IEC 2019), the Project is identified as a Priority Development Project. Specifically, the Project would entail efforts such as creation of over 5,000 square feet new impervious surfaces, including grading of a natural slope that is 25 percent or greater. The Project's drainage management areas are classified as self-mitigating and, as previously noted, the proposed condition peak design flow would be less than the existing condition peak flow at the points of compliance. As a result, the Project would require the implementation of applicable site design/LID and source control BMPs, but would not be required to implement pollutant (structural) and hydromodification control BMPs (IEC 2019). A summary of applicable site design/LID and source control BMPs is provided below, based on direction in the City Storm Water Standards Manual (City 2018b) and related NPDES Municipal Permit standards.

#### Site Design/LID BMPs

Site design/LID BMPs are intended to avoid, minimize, and/or control post-development runoff, erosion potential, and pollutant generation to the MEP by mimicking the natural hydrologic regime. The LID process employs design practices and techniques to effectively capture, filter, store, evaporate, detain, and infiltrate runoff close to its source. Based on the proposed design and related requirements in the City Storm Water Standards Manual, site design/LID measures that are proposed or potentially applicable to the Project include: (1) minimizing impervious surface area (with the Project proposing a net reduction of on-site impervious surfaces as previously described); (2) maintaining natural drainage/hydrologic features; (3) conserving natural areas, soil, and vegetation; (4) minimizing soil compaction and collecting/reapplying native topsoil during habitat restoration efforts; (5) using native/drought-tolerant species for habitat restoration/landscaping efforts; (6) directing flows from developed (impervious) sites into vegetated areas; and (7) providing an energy dissipation structure at the proposed reservoir overflow outlet. All of the proposed site design/LID BMPs would help reduce long-term pollutant generation by minimizing runoff rates and



amounts, retaining permeable/vegetated areas, increasing on-site filtering, and reducing erosion/sedimentation potential.

#### Source Control BMPs

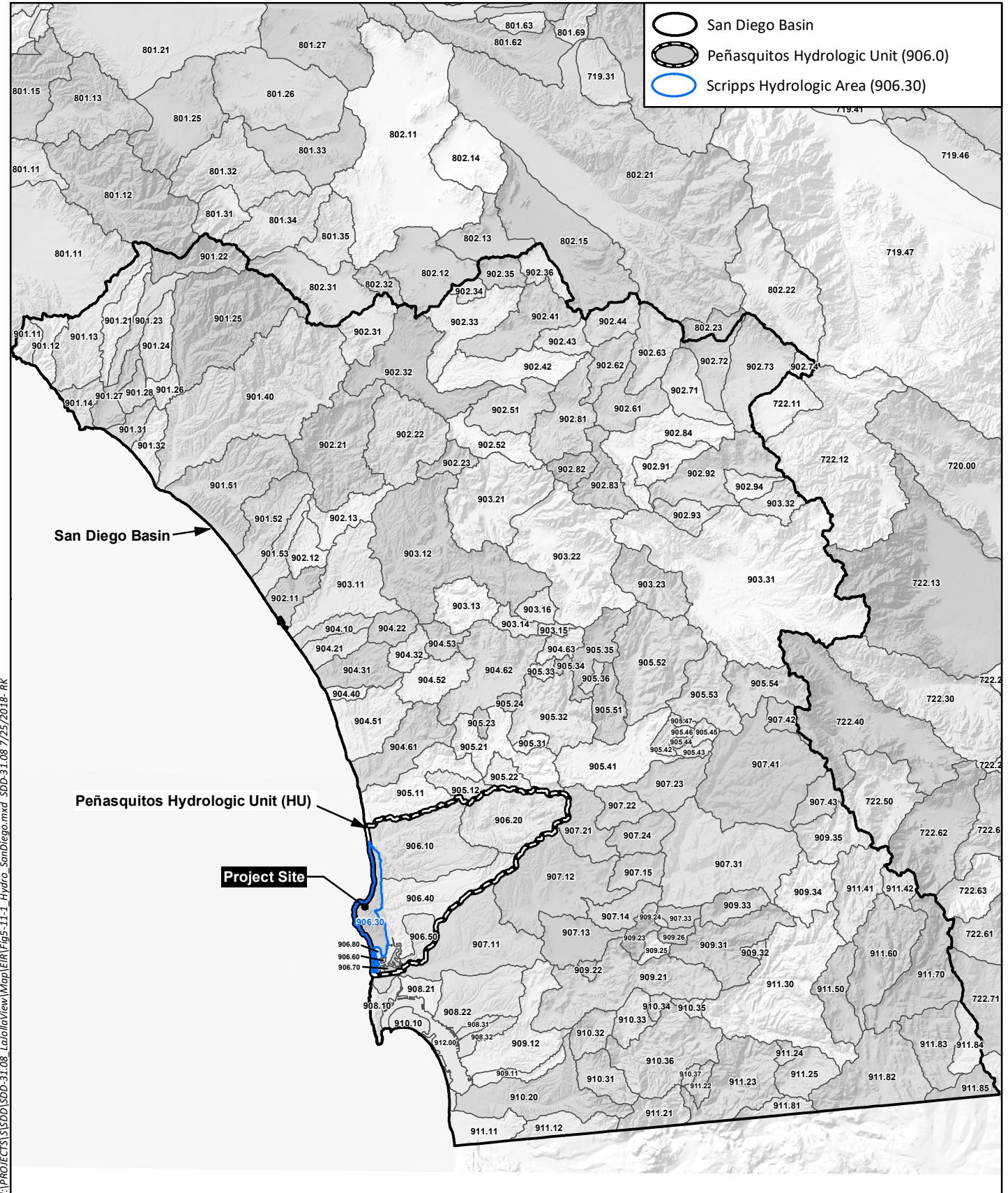
Source control BMPs are intended to avoid or minimize the introduction of pollutants into storm drains and natural drainages to the MEP by reducing on-site pollutant generation and off-site pollutant transport. Specific source control BMPs proposed or potentially applicable to the Project are based on the proposed design and related requirements in the City Storm Water Standards Manual, and include: (1) using habitat restoration/landscaping irrigation system facilities such as meters, pressure reducers, and flow/moisture sensors to minimize water use and maximize efficiency; and (2) avoiding/minimizing the use of chemical pesticides/fertilizers in habitat restoration/landscaping areas. The noted source control BMPs would help to improve long-term water quality within and downstream from the project site by avoiding or minimizing pollutant generation and exposure to storm flows at the source.

#### **5.11.4.3 Significance of Impacts**

Based on the implementation of the project design elements, including construction and post-construction BMPs and required conformance with City storm water standards and associated requirements (including the NPDES Construction General, Municipal and Groundwater permits), potential construction and long-term project-related pollutant discharge and water quality impacts would be less than significant.

#### **5.11.4.4 Mitigation, Monitoring and Reporting**

Because potential project-related impacts associated with pollutant discharge and water quality would be less than significant, no mitigation measures are required.



## 5.12 Geology and Soils

A Geotechnical Evaluation was prepared for the Project by Ninyo & Moore (2014). This investigation encompassed the entire project site and relevant off-site areas, and includes applicable information from a previous geotechnical investigation at the existing La Jolla View Reservoir site (Law-Crandall 2001). The results of the 2014 project Geotechnical Evaluation are summarized below along with other pertinent information, with the complete report included as Appendix I of this EIR.

### 5.12.1 Existing Conditions

#### 5.12.1.1 Environmental Setting

##### Geologic Setting

###### Geology/Topography

The project site is located within the coastal section of the Peninsular Ranges Geomorphic Province (Province), which extends approximately 900 miles from the Los Angeles Basin to the southern tip of Baja California, and varies in width from approximately 30 to 100 miles. The Province is characterized by rugged mountains typically underlain by Jurassic (approximately 144 to 206 million years old) metavolcanic and metasedimentary rocks, and Cretaceous (approximately 65 to 144 million years old) igneous rocks of the Southern California Batholith (a large igneous intrusive body). The coastal Province area in San Diego County encompasses a series of stair-stepped marine terraces that increase in age from west to east, and typically include an underlying sequence of relatively undisturbed and non-conformable (i.e., not in direct chronologic sequence) upper Cretaceous through Pleistocene (between approximately 11,000 and 2 million years old) marine and non-marine sedimentary strata. These deposits have been dissected by west-flowing drainages that produced the characteristic canyon and mesa topography present today in western San Diego County, and resulted in the deposition of surficial materials such as alluvium/colluvium and topsoil.

Surficial and geologic units observed or anticipated to occur within and adjacent to the project site include: (1) historic fill deposits placed during previous development; (2) Quaternary-age (less than approximately 2 million years old) topsoil/colluvium and Very Old Paralic Deposits<sup>1</sup> (formerly designated as the Lindavista Formation); (3) the Tertiary-age (between approximately 2 and 65 million years old) Ardath Shale and Mount Soledad Formation; and (4) the Cretaceous-age Cabrillo Formation. Additional description of on-site surficial and formational deposits is provided below under the discussion of Stratigraphy.

Topographically, the project site is characterized by native ridges and slopes incised by steep-sided erosional ravines/canyons. Specifically, this includes a large east-west trending ravine located north of Country Club Drive and extending within/adjacent to portions of the Project site, and a north-south trending ravine located east of Encelia Drive and mostly off-site (refer to EIR Figures 2-2, *Aerial Vicinity*, and 2-3, *Topographic Map*). On-site elevations range from approximately 220 feet AMSL at the northwestern site corner (near the existing Exchange Place Reservoir), to 650 feet AMSL in the

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<sup>1</sup> Paralic deposits are generally defined to include interfingering marine and non-marine deposits laid down on the landward side of a coast, or in shallow water subject to marine invasions.

northeastern site corner (at the proposed reservoir site). Project site drainage occurs primarily as sheet flow on existing ridges that confluences into a series of drainage courses (including the noted ravine north of Country Club Drive), before continuing generally west and north off-site for approximately 0.3 mile to the coast.

### Stratigraphy

The previously noted geologic and surficial units observed or anticipated to occur within the project site are described below in order of increasing age, with geologic formations depicted on Figure 5.12-1, *Geologic Map*.

Historic Fill Deposits (Not Mapped). Fill associated with previous site development such as reservoirs, roads, and pipelines was observed in all but one of the eight on-site exploratory borings conducted during project geotechnical investigation, and is anticipated to be present in most or all previously developed areas (Ninyo & Moore 2014). These deposits range in depth from approximately 1 foot at the proposed reservoir site to 24 feet at the existing Exchange Place Reservoir. On-site fill materials are generally composed of sandy clay, silty to clayey sand, gravelly clay, and clayey to sandy gravel, with abundant gravel and/or cobbles. All existing on-site fill deposits are assumed in the Project Geotechnical Evaluation to be undocumented (i.e., fill not known to conform to current engineering standards for criteria such as composition and placement methodology).

Quaternary Topsoil/Colluvium<sup>2</sup> (Not Mapped). These deposits were observed locally during site investigation and are anticipated to occur at variable depths along ridges and slopes throughout the Project site and adjacent areas. Observed materials range from sandy clay extending to depths of approximately 2 feet at the proposed reservoir site, to clayey gravel up to 10 feet deep at Exploratory Boring B-5 (near the existing Muirlands Pump Station, refer to EIR Figure 3-1, *Site Plan*, and Figure 3c in Appendix I).

Quaternary Very Old Paralic Deposits (QVOP<sub>8</sub> and QVOP<sub>11</sub> on Figure 5.12-1). Pleistocene-age Very Old Paralic Deposits are mapped near the proposed reservoir site and in portions of the associated pipeline alignment. These materials consist primarily of well-cemented silty sandstone with numerous gravel, cobble, and sandy conglomerate deposits. The paralic deposits unconformably overly the older strata described below.

Tertiary Ardath Shale (Ta on Figure 5.12-1). The Eocene-age (between approximately 34 and 56 million years old) Ardath Shale is mapped within the western portion of the proposed pipeline alignment. This unit consists generally of finely-bedded and moderately-cemented clayey siltstone, with lesser amounts of well-cemented fine-grained sandstone and well-cemented concretions/concretionary layers. The Ardath Shale is conformably underlain by the Mount Soledad Formation as described below.

Tertiary Mount Soledad Formation (Tmsc on Figure 5.12-1). The Mount Soledad Formation is Eocene in age, and is mapped in the central portion of the proposed pipeline alignment. As observed in Exploratory Boring B-5, this unit consists of weakly cemented sandy and clayey siltstone, silty

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<sup>2</sup> Colluvial materials generally consist of loose, unconsolidated deposits that are transported by sheetwash and/or gravity and typically occur along the flanks and toes of larger slopes.

sandstone and conglomerate, and localized well cemented concretions/concretionary layers. The Mount Soledad Formation conformably underlies the Ardath Shale as noted above, and unconformably overlies the Cabrillo Formation.

Cretaceous Cabrillo Formation (Kc on Figure 5.12-1). This formation is mapped in areas near the eastern and western ends of the proposed pipeline alignment, and was observed in exploratory borings B-1 through B-3 near the existing and proposed La Jolla View Reservoir sites (refer to Figures 3a and 3b in Appendix I). On-site occurrences of the Cabrillo Formation generally consist of weakly to well-cemented sandstone and moderately cemented cobble conglomerate, with less frequent siltstone and claystone beds.

### Groundwater

Groundwater was not encountered in any of the noted eight on-site exploratory borings, which extended to depths of between approximately 15.5 and 84 feet. Based on local elevations and aquifer conditions, the Project Geotechnical Evaluation states that static groundwater levels are likely more than 85 feet below the proposed reservoir site, but may be encountered at shallower depths in local ravines. In addition, groundwater seepage may be encountered at shallower elevations, and local fluctuations in aquifer levels may occur in association with variations in conditions such as topography, geology, rainfall, and irrigation (Ninyo & Moore 2014).

### **Geologic Hazards**

Based on previous/current investigations and review of published and other available information, including the City Seismic Safety Study (City 2008b), the Project Geotechnical Evaluation provides an overview of potential geologic hazards within the site and vicinity. Specifically, Map Sheet 29 of the City Seismic Safety Study identifies the following hazard categories within the site: (1) Category 27, slide-prone units, including the Otay/Sweetwater formations and others; (2) Category 51, level mesas underlain by terrace deposits and bedrock with nominal risk; and (3) Category 53, level or sloping terrain with unfavorable geologic structure and low to moderate risk (refer to Figure 7 in Appendix I). The Seismic Safety Study also identifies two fault traces that cross the proposed pipeline alignment, including the Country Club Fault in the central portion of the alignment, and an unnamed fault near the eastern end of the pipeline corridor (just west of the proposed reservoir site). Both of these faults are designated as “potentially active, inactive, presumed inactive, or activity unknown” in the Seismic Safety Study. Additional discussion of these faults is provided below, along with other potential seismic and non-seismic hazards identified for the site and vicinity in the Project Geotechnical Evaluation.

### Faulting and Seismicity Hazards

The project site is located within a broad, seismically active region characterized by a series of northwest-trending faults associated with the San Andreas Fault System (Figure 5.12-2, *Regional Fault Map*). No active faults or associated California Geological Survey (CGS) Earthquake Fault Zones are mapped or known to occur within or adjacent to the Project site (Ninyo & Moore 2014). The closest known active structure is the Rose Canyon Fault, approximately 0.4 mile to the northeast, with the Country Club and unnamed fault traces identified above within the proposed pipeline corridor designated as potentially active (Ninyo & Moore 2014). Active faults are defined as those exhibiting historic seismicity or displacement of Holocene (less than approximately 11,000 years old) materials,

while potentially active faults have no historic seismicity and displace Pleistocene but not Holocene strata. The described CGS fault zone designations are generally intended to “[r]egulate development near active faults so as to mitigate the hazard of surface fault rupture” (CGS 2007). The closest CGS Fault Rupture Hazard Zone designations to the Project site are located along on-shore segments of the Rose Canyon Fault, as previously described. A number of additional major active faults are located within approximately 60 miles of the site, as shown below in Table 5.12-1, *Summary of Regional Fault Locations and Earthquake Magnitudes*.

**Table 5.12-1**  
**SUMMARY OF REGIONAL FAULT LOCATIONS AND EARTHQUAKE MAGNITUDES**

<b>Fault Name</b>	<b>Distance from Site (miles)</b>	<b>Direction from Site</b>	<b>Maximum Earthquake Magnitude</b>
Rose Canyon	0.4	NE	7.2
Coronado Bank	1.3	W	7.6
Newport-Inglewood (Offshore)	24	NW	7.1
Elsinore (Temecula Segment)	37	N	6.8
Elsinore (Julian Segment)	39	ENE	7.1
Earthquake Valley	46	ENE	6.5
Palos Verdes	49	NW	7.3
Elsinore (Glen Ivy Segment)	54	N	6.8
Elsinore (Coyote Mountain)	54	E	6.8
San Joaquin Hills	57	NW	6.6
San Jacinto (Coyote Creek Segment)	60	E	6.8

Source: Ninyo & Moore (2014); CGS (2010)

W=West; NW=Northwest; NE=Northeast; ENE = East-Northeast

**Fault Rupture.** Based on technical analysis in the Project Geotechnical Evaluation, along with the fact that no known active faults or CGS Earthquake Fault Zones are located within or adjacent to the Project site, the potential for seismic-related ground rupture hazards is identified as low. The Geotechnical Evaluation also notes that surface rupture and related effects such as lurching or cracking are possible in association with the two noted potentially active faults, although such effects are “...not considered likely...” (Ninyo & Moore 2014).

**Ground Acceleration (Ground Motion).** Seismic-related ground motion can affect the integrity of surface and subsurface facilities such as structures, foundations, and pipelines, either directly from vibration-related damage to rigid structures, or indirectly through associated hazards including liquefaction (as described below). The project Geotechnical Evaluation concludes that the potential for strong ground motion during the design life of the proposed project facilities is considered high, and “...should be considered in the project design.” Accordingly, a maximum peak ground acceleration (PGA) design value of 0.34g is identified (where g equals the acceleration due to gravity), and the report recommends that seismic design parameters for proposed structures be evaluated in accordance with current CBC/International Building Code (IBC) guidelines and related City standards.

**Liquefaction and Seismically Induced Settlement.** Liquefaction and seismically induced settlement are most commonly caused by seismic ground motion. Liquefaction typically occurs in areas with cohesionless and granular (low clay/silt content) soils (or silt/clay soils with low plasticity), relative densities of less than approximately 70 percent, and groundwater within 50 feet of the surface. The occurrence of liquefaction under the described conditions results in a rapid pore-water pressure



increase and a corresponding loss of shear strength, with affected soils behaving as a viscous liquid. Surface manifestations from these events can include effects such as a loss of bearing capacity for structures/foundations, seismically induced settlement, differential settlement (different degrees of settlement over relatively short distances), and lateral spreading (horizontal displacement on sloped surfaces as a result of underlying liquefaction). While seismically induced settlement can occur whether or not liquefaction potential exists, the Project Geotechnical Evaluation concludes that potential liquefaction, seismically induced settlement, and related hazards are not considered design considerations for the Project due to the dense nature of underlying formational materials and the anticipated lack of shallow groundwater (Ninyo & Moore 2014).

Landslides. The occurrence of landslides and other types of slope failures (e.g., rockfalls and mudslides) is influenced by a number of factors including slope grade, geologic and soil characteristics, moisture levels, and vegetation cover. Landslides can be triggered by one or more potentially destabilizing conditions or events, such as gravity, fires, precipitation, grading, and seismic activity. Numerous landslide deposits have been mapped in the project site vicinity, although none is located within or immediately adjacent to the site (refer to Figure 5.12-1). Mapped landslide deposits in the project vicinity are mostly interpreted as shallow earth flow type failures, although areas north of the site also include some deeper translational failures (i.e., landslides occurring along surfaces of weakness such as faults, joints, or bedding planes). No deep-seated landslides or related features were observed to underlie the proposed reservoir site. A number of clay seams were observed within intact portions of the Cabrillo Formation at the proposed reservoir site, although these structures were interpreted as bedding-parallel shear zones and not indicative of recent landsliding (Ninyo & Moore 2014).

A potential landslide deposit was also observed at the existing La Jolla View Reservoir during previous geotechnical investigation (Law-Crandall 2001), although no evidence of deep-seated landsliding was observed in this area during the Project Geotechnical Evaluation (Ninyo & Moore 2014).

#### *Non-seismic Hazards*

Erosion and Sedimentation. As previously described, the project site is located in an area of primarily steep terrain. As a result, potential hazards related to erosion and sediment transport (sedimentation) within and from the project site are considered generally high.

Expansive Soils. Expansive (or shrink-swell) behavior is attributable to the water-holding capacity of clay minerals, and can adversely affect the integrity of facilities such as pavement or structure foundations. Based on the results of laboratory testing conducted for samples collected from Exploratory Boring B-2 at the proposed reservoir site, the associated materials are assigned an expansion index rating of 129, which represents a high potential for soil expansion (Ninyo & Moore 2014).

Corrosive Soils. Surficial and underlying materials can exhibit corrosive properties related to factors such as pH, chloride, or soluble sulfate levels, and resistivity values (i.e., the ability to restrict, or resist, electric current). Long-term exposure to corrosive soils can result in effects related to deterioration and eventual failure of concrete (from sulfate) and metal (from pH, chloride, and resistivity) structures, including foundations, reinforcing steel, and subsurface pipelines or other utilities. Based on the results of laboratory testing conducted during the Project Geotechnical

Evaluation, on-site materials exhibit potential corrosion hazards associated with chloride content and electrical resistivity (Ninyo & Moore 2014).

Shallow Groundwater. As previously described, the permanent groundwater table is generally anticipated to occur at depths of 85 feet or more below the surface at the project site, but may be encountered at shallower depths in local ravines and/or in association with variations in conditions such as topography, geology, rainfall, and irrigation. While the presence of shallow groundwater is not a geologic or geotechnical hazard per se, it can contribute to other potential hazards (e.g., liquefaction) as outlined above, and may necessitate temporary dewatering to accommodate development-related grading and excavation.

### **5.12.1.2 Regulatory Framework**

The following discussion identifies regulatory and industry standards related to geology and soils issues that are applicable to the Project.

#### **State Standards**

##### California Seismic Hazards Mapping Act

The California Seismic Hazards Mapping Act (PRC Division 2, Chapter 7.8, Section 2690 et seq.) provides a statewide seismic hazard mapping and technical advisory program to assist local governments in protecting public health and safety relative to seismic hazards. The act provides direction and funding for the State Geologist to compile seismic hazard maps and to make those maps available to local governments. The Act, along with related standards in the Seismic Hazards Mapping Regulations (CCR Title 14, Division 2, Chapter 8, Article 10, Section 3270 et seq.), also directs local governments to require the completion and review of appropriate geotechnical studies prior to approving development projects. These requirements are implemented on a local level through means such as general plan directives and regulatory ordinances (with applicable City standards outlined below).

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

The California Alquist-Priolo Act (PRC Section 2621 et seq.) is primarily intended to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones (previously called Special Studies Zones and Fault-Rupture Hazard Zones) around the surface traces of active faults, and to distribute maps of these zones to all affected cities, counties, and state agencies. The Act also requires completion of a geologic investigation prior to project approval, to demonstrate that applicable structures will not be constructed across active faults and/or that appropriate setbacks from such faults (generally 50 feet) are included in the Project design.

##### California Building Code

The CBC (CCR Title 24, Part 2) encompasses a number of requirements related to geologic issues. Specifically, these include general provisions (Chapter 1); structural design, including soil and seismic loading (Chapters 16/16A); structural tests and special inspections, including seismic resistance (Chapters 17/17A); soils and foundations (Chapters 18/18A); concrete (Chapters 19/19A); masonry



(Chapters 21/21A); wood, including consideration of seismic design categories (Chapter 23); construction safeguards (Chapter 33); and grading, including excavation, fill, drainage, and erosion control criteria (Appendix K). The CBC encompasses standards from other applicable sources, including the IBC (as outlined below) and ASTM International (formerly the American Society for Testing and Materials), with appropriate amendments and modifications to reflect site-specific conditions and requirements in California.

## **City Standards**

### City of San Diego Seismic Safety Study

The previously referenced Seismic Safety Study includes a series of maps and related text identifying potential geologic hazards throughout the City. These materials provide a guide to determine relative risks and identify areas prone to hazards including active fault zones, liquefaction, and landslides/slope stability that require appropriate levels of geotechnical investigation prior to discretionary approvals. Specific requirements related to the nature and level of required geotechnical investigations are outlined in Article 5, Division 18, Section 145.1803 of the SDMC; and Appendix D of the City Land Development Manual.

### City of San Diego General Plan Policies

The Public Facilities, Services and Safety Element of the City General Plan (2008a) identifies a number of applicable policies related to seismic, geologic, and structural considerations. Specifically, Policies PF-Q.1 and PF-Q.2 include measures regarding conformance with state laws related to seismic and geologic hazards, conducting/reviewing geotechnical investigations, and maintaining structural integrity with respect to geologic hazards.

### Additional City of San Diego Requirements

In addition to the regulatory standards listed above, City requirements related to geologic and geotechnical issues include obtaining a grading permit (per Article 9, Division 6, Section 129.0601 et seq. of the SDMC), and conformance with applicable elements of the City Storm Water Standards Manual and related documents (per Article 3, Division 3, Section 43.0301 et seq. of the SDMC), with storm water standards discussed in more detail in EIR Section 5.11, *Hydrology/Water Quality*.

## **Industry Standards**

### International Building Code

The IBC (which encompasses the former Uniform Building Code) is produced by the International Code Council (formerly the International Conference of Building Officials) to provide standard specifications for engineering and construction activities, including measures to address geologic and soil concerns. Specifically, these measures encompass issues such as seismic loading (e.g., classifying seismic zones and faults), ground motion, engineered fill specifications (e.g., composition, compaction, moisture content, and placement methodology), expansive soil characteristics, and pavement design. The referenced guidelines, while not comprising formal regulatory requirements per se, are widely accepted by regulatory authorities and are routinely included in related standards such as municipal grading codes. The IBC guidelines are regularly

updated to reflect current industry standards and practices, including criteria such as the American Society of Civil Engineers (ASCE) and ASTM International.

## 5.12.2 Impact 1: Potential Geologic Instability

*Issue 1: Would the Project be located on a geological unit or soil that is unstable as a result of the project, and potentially result in on-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse?*

### 5.12.2.1 Impact Threshold

Based on the City Significance Determination Thresholds (2016a), impacts related to geology and soils would be significant if a project would be located on a geological unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in on-site or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse.

### 5.12.2.2 Impact Analysis

The project Geotechnical Evaluation concludes that “Based on our review of the referenced background data, subsurface exploration, and laboratory testing...the proposed reservoir replacement project is feasible from a geotechnical standpoint provided the recommendations presented in this report are incorporated into the design and construction of the project.” This conclusion assumes conformance with applicable regulatory/industry guidelines, as well as review/confirmation and/or update of technical recommendations after final plans are available for geotechnical assessment. In addition, further geotechnical review/evaluation of certain areas would be required during site preparation/construction, including landslide conditions at the existing La Jolla View Reservoir, and the additional existing and proposed reservoir sites. All proposed grading and construction would require conformance with the recommendations provided in the Project Geotechnical Evaluation (Ninyo & Moore 2014), including: (1) conducting a pre-construction conference between the project geotechnical and civil engineers, agency representatives, and contractors; (2) completing applicable field/laboratory investigations and construction monitoring by an engineering geologist to provide design and construction recommendations for proposed excavation/grading activities, jack-and-bore pits/microtunneling, engineered fill, structures (including seismic loading parameters), foundations/footings, pavement, manufactured slopes, and drainage/landscaping; (3) review of site grading/excavation and construction operations in the field to ensure conformance with applicable requirements/recommendations and/or provide modified criteria as appropriate; (4) observation/testing of all engineered fills to ensure proper composition and placement methodology (e.g., compaction and moisture content); and (5) observation/testing of the proposed cut slopes and soil nail wall/shotcrete cover at the proposed reservoir site to ensure stability. The results and recommendations of the Project Geotechnical Evaluation, along with additional investigation/regulatory requirements and standard remedial measures to address identified concerns, are described in the following impact analyses and are requirements of project development. With implementation of the recommendations summarized below and provided in the Project Geotechnical Evaluation, as well as compliance with applicable elements of the CBC/IBC, City requirements, and standard engineering measures, potential impacts related to geologic stability would be less than significant.

## Landslides/Slope Instability

As previously described, several mapped landslide deposits are present in the project vicinity, with most interpreted as shallow earth flow type failures and some deeper translational failures occurring in areas north of the site. While no deep-seated landslides or related features were observed to underlie the project site or proposed facilities, the Project Geotechnical Evaluation notes that some potential exists for shallow block failures to occur during proposed reservoir construction due to the steep nature of proposed temporary cut slopes and the fractured nature of the underlying Cabrillo Formation. In addition, while a number of clay seams were observed within intact portions of the Cabrillo Formation, these structures were not interpreted as landslide deposits as previously noted. The project Geotechnical Evaluation also identifies related potential slope instability hazards associated with proposed manufactured slopes, and includes stability analyses for proposed cut and fill slopes through the use of a two-dimensional stability analysis program (refer to Appendix C of the Project Geotechnical Evaluation in EIR Appendix I for detailed slope stability assessments). The results of these analyses indicate that proposed cut and fill slopes would be globally stable with implementation of associated recommendations, including the following:

- Limiting slope heights and grades to appropriate dimensions, including maximum slope grades of 2:1 (horizontal to vertical) for all permanent manufactured slopes.
- Using proper materials, placement methodology, and surface treatments for manufactured slopes, such as removal of unsuitable surface materials, locating cut slopes in competent bedrock deposits, use of properly engineered fill, using keys and benching for fills placed on slopes with grades steeper than 5:1, implementing proper surface treatments such as backrolling/grooming to stabilize slope surfaces and remove loose materials, and providing appropriate landscaping and drainage controls.
- Implementing geotechnical recommendations for the proposed soil nail retaining wall and associated shotcrete cover on steep temporary cut slopes at the proposed reservoir site, including use of appropriate materials, placement methodology, and soil nail design (e.g., dimensions, locations, and spacing); precluding fill placement or surcharging (i.e., loading from activities such as soil or material stockpiles) above the soil nail wall; providing proper drainage behind and beneath the shotcrete cover; and conducting applicable geotechnical observation and testing of the soil nails and related materials/facilities during construction to ensure proper performance and stability.
- Conducting geotechnical observation of all manufactured slopes to verify site-specific conditions/recommendations and/or implement additional remedial measures as appropriate. Specifically, geotechnical observations/evaluations related to landslide potential/slope instability would be conducted during earthwork at the existing La Jolla View Reservoir, as well as at the additional existing and proposed reservoir sites. If previously unobserved or unanticipated landslide/slope instability hazards are noted during such investigations, appropriate standard industry remedial measures would be implemented to ensure adequate levels of slope stability, potentially including efforts such as removal of unsuitable deposits and replacement with engineered fill, use of reduced slope grades/heights and/or setbacks, implementation of enhanced surface treatments/drainage control, and/or placement of structural facilities to ensure stability (e.g., benching and buttressing).

An additional related concern involves the stability of trenches and/or pits used for pipeline installation and associated safety effects for construction workers. Trench and pit excavations typically involve vertical or near-vertical walls, and can exhibit instability and the potential for failure related to loose or unstable soil and geologic materials. Such instability can be exacerbated through effects such as the potential occurrence of jointing and fracturing in local bedrock, or groundwater seepage. The project Geotechnical Evaluation identifies a number of recommendations to address potential trench/pit instability, including conformance with applicable OSHA requirements involving efforts such as slope limitations and shoring requirements. Specific recommendations include: (1) limiting slopes to maximum grades of 1.5:1 in fill/colluvial materials and 1:1 in formational materials; (2) using appropriate shoring and bracing types/designs to stabilize excavations, including trench boxes in applicable locations/conditions; (3) precluding surcharge loads and excess vibration (e.g., from heavy equipment operations) near/adjacent to excavations; and (4) implementing drainage control features such as sand bags or gravel along the base of seepage zones.

Based on implementation of the described recommendations in the Project Geotechnical Evaluation, conformance with pertinent regulatory requirements (e.g., CBC/IBC, City, and OSHA standards/codes), and the use of standard remedial measures as noted to address additional potential landslide/instability hazards if identified during excavation/grading activities, associated potential impacts from development of the Project would be less than significant.

### **Cut/Fill Transitions**

The project Geotechnical Evaluation notes that the proposed reservoir structure "...should not straddle a cut/fill transition...", to avoid associated potential instability concerns. If, during reservoir construction, such a cut/fill transition condition is created beneath the reservoir, the Geotechnical Evaluation notes that one of the following two recommendations can be implemented to address associated concerns: (1) overexcavation of the reservoir pad area to a depth of two feet below the bottom footing elevation or one-third of the largest area of fill thickness (whichever is greater), and placement of engineered fill within the overexcavated area; or (2) use of a controlled low strength material (CLSM)<sup>3</sup> to replace the fill portion of the cut/fill transition. Implementation of one of the noted recommended measures as described would result in less-than-significant impacts related to cut/fill instability at the proposed reservoir site.

### **Liquefaction and Seismically Induced Settlement**

As previously noted, the Project Geotechnical Evaluation concludes that potential liquefaction/seismically induced settlement and related hazards are not considered design considerations for the Project based on the dense nature of underlying formational materials and the anticipated lack of shallow groundwater. The report also states, however, that shallow groundwater could potentially occur in local ravines and in association with variations in conditions such as topography, geology, rainfall, and irrigation. Accordingly, while liquefaction and related hazards are not expected to affect the Project as described, if potential conditions suitable for liquefaction and related effects are observed during project construction, applicable standard remedial measures would be implemented as necessary to address these hazards. Specifically, this may include efforts such as removal of unsuitable soils and replacement with engineered fill per applicable regulatory/industry

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<sup>3</sup> CLSM generally consists of a liquid, self-consolidating, and self-compacting cementitious material used as an alternative to compacted fill.

standards (e.g., IBC/CBC), and/or use of additional surface/subsurface drainage controls in appropriate areas. Based on the low potential for liquefaction and related effects at the Project site, as well as the availability of standard remedial measures to address such conditions if identified during project implementation, associated potential impacts would be less than significant.

### **Subsidence/Settlement and Collapse**

Potential hazards related to subsidence/settlement and collapse are typically associated with conditions such as large-scale groundwater (or other fluid) withdrawal and loading related to placement of larger surface structures. Potential groundwater withdrawal associated with the Project would be limited to minor construction dewatering (refer to Section 5.11 of this EIR), with no associated subsidence or collapse hazards anticipated. The project Geotechnical Evaluation provides the following observations regarding potential project-related settlement:

- Minor ground surface settlements may occur from the pipe jacking operations;
- Proposed facilities, designed and constructed as recommended herein, will undergo total settlement on the order of 1 inch; and
- Differential settlement on the order of 0.5 inch over a horizontal span of 40 feet should be expected.

While the noted levels of settlement would not be expected to result in related hazards, potential settlement concerns, if identified during geotechnical construction monitoring/evaluation, would be addressed through conformance with applicable geotechnical recommendations (e.g., foundation design) and implementation of remedial grading measures such as the use of properly compacted engineered fill. Based on the noted considerations, the dense nature of underlying formational materials, and the fact that proposed grading/construction would conform with associated applicable geotechnical recommendations and regulatory requirements, potential impacts related to subsidence/settlement and collapse would be less than significant.

### **Expansive Soils**

As noted above, laboratory testing of materials at the proposed reservoir site identified a high potential for soil expansion. As a result, proposed development at this site (and potentially other areas) may be subject to associated impacts. As previously described, however, project development would be required to conform to applicable regulatory/industry and code standards, including requirements related to expansive soil hazards. Specifically, this would involve implementation of associated recommendations in the Project Geotechnical Evaluation, as well as pertinent elements of the CBC/IBC and related City criteria, including standard remedial efforts such as: (1) removal/replacement or (if applicable) mixing of unsuitable materials with engineered and non-expansive fill; (2) capping expansive materials with non-expansive engineered fill in pertinent areas; and (3) use of appropriate foundation and/or footing design per site-specific geotechnical recommendations. Based on the required conformance with noted recommendations and regulatory/industry standards, as well as the availability of standard remedial measures to further address expansive soil hazards if necessary, associated potential impacts from implementation of the Project would be less than significant.

## **Corrosive Soils**

As previously described, the Project Geotechnical Evaluation identified the on-site presence of corrosive soils related to chloride content and electrical resistivity, with associated potential impacts to metal structures. A number of standard remedial measures are available to address potential corrosive soil hazards, including: (1) removal of unsuitable (corrosive) deposits and replacement with non-corrosive fill; (2) use of corrosion-resistant construction materials (e.g., coated or non-metallic facilities); and (3) installation of cathodic protection devices (e.g., use of a more easily corroded "sacrificial metal" to serve as an anode and draw current away from the structure to be protected) per established regulatory/industry standards (e.g., CBC/IBC). In addition, the Project Geotechnical Evaluation recommends that imported fill should be non-corrosive in accordance with Caltrans and American Concrete Institute guidelines, and that all proposed fill materials should be subject to geotechnical evaluation/testing prior to filling or importing. Based on the described recommendations and the availability of standard remedial measures to address potential soil corrosive effects, associated potential impacts from implementation of the Project would be less than significant.

## **Oversize Material**

Proposed excavation activities are anticipated to generate oversized material from formational deposits. Improper use of oversize materials in fill can result in effects such as differential compaction and related hazards to surface and subsurface structures. The project Geotechnical Evaluation identifies a number of standard industry recommendations to address these potential effects, including removal of oversize materials to conform with maximum particle size restrictions for fill materials, and inspection of fill by the Project geotechnical engineer. Conformance with these recommendations would avoid or reduce potential impacts related to oversize materials below a level of significance.

## **Shallow Groundwater**

The presence of shallow groundwater would not constitute a geologic or geotechnical instability per se, but can contribute to related concerns such as liquefaction (as discussed above), and/or necessitate temporary dewatering to accommodate development-related grading and excavation. If such dewatering is required during development of the Project, it would be subject to associated requirements under the appropriate NPDES Groundwater Permit (as discussed in EIR Section 5.11). Based on required conformance with associated regulatory standards, potential impacts related to the presence of shallow groundwater would be less than significant.

## **Surface/Subsurface Drainage**

Improper surface and/or subsurface drainage can result in associated hazards from conditions such as surface ponding, soil saturation (and increased liquefaction potential), erosion, and/or undermining of structures/foundations. The Geotechnical Evaluation provides a number of recommendations related to surface and subsurface drainage control, including: (1) directing surface drainage away from structure foundations and slopes at appropriate gradients and distances; (2) use of drainage control structures such as swales, slope drains, and brow ditches to convey runoff to appropriate outlets; and (3) implementation of liner coring and an appropriately designed subdrain system to intercept and convey potential seepage at the existing Exchange Place

Reservoir (and potentially other locations) proposed for removal (Ninyo & Moore 2014). Conformance with these recommendations would avoid or reduce potential impacts related to surface/subsurface drainage below a level of significance.

### **5.12.2.3 Significance of Impact**

Potential impacts related to geologic instability from implementation of the Project would be avoided or reduced below a level of significance through incorporation of required site-specific recommendations from the Project Geotechnical Evaluation, implementation of associated design/construction recommendations (including recommendations based on construction monitoring/testing), and mandatory conformance with applicable regulatory/industry standards and codes, including the CBC/IBC, OSHA, and pertinent City criteria.

### **5.12.2.4 Mitigation, Monitoring and Reporting**

As no significant impact would occur, no mitigation measures would be required.

## **5.12.3 Impact 2: Potential for Erosion and Sedimentation**

*Issue 2: Would the Project result in a substantial increase in wind or water erosion of soils, either on or off the site?*

### **5.12.3.1 Impact Threshold**

Based on the City Significance Determination Thresholds (2016a), impacts related to geology and soils would be significant if a project would result in a substantial increase in wind or water erosion of soils.

### **5.12.3.2 Impact Analysis**

As previously described, the potential for erosion and sedimentation within the Project site is generally high. Potential erosion and sedimentation impacts would be temporarily increased during proposed construction, through activities such as excavation, grading, and removal of surface stabilizing features (e.g., vegetation and pavement). Extensive or prolonged erosion can result in effects such as damaging or destabilizing slopes, soil loss, and deposition of eroded material in roadways or drainage structures. In addition, the off-site transport of sediment can potentially result in effects to downstream receiving water quality, such as increased turbidity and the provision of a transport mechanism for other contaminants that tend to adhere to sediment particles (e.g., hydrocarbons). Additional discussion of potential water quality effects related to erosion and sedimentation is provided in Section 5.11 of this EIR.

Developed areas would be most susceptible to erosion between the beginning of grading/construction and the installation of structures/pavement and establishment of permanent cover in revegetated areas. Erosion and sedimentation are not considered to be significant long-term concerns at the Project site, as developed areas would be stabilized through installation of structures/hardscape and revegetation.

Short-term erosion and sedimentation impacts would be addressed through conformance with applicable elements of the City storm water program and related NPDES standards. Specifically, this would entail conformance with associated City regulatory codes as outlined above in Section 5.12.1.2 (and in EIR Section 5.11), as well as the NPDES Construction General Permit. Pursuant to the discussion of construction-related water quality concerns in Section 5.11, this would entail implementing an approved SWPPP and related plans and BMPs, including appropriate measures to address erosion and sedimentation. Based on implementation of appropriate erosion and sediment control BMPs as part of, and in conformance with, an approved SWPPP and related City and NPDES requirements, associated potential erosion and sedimentation impacts from implementation of the Project would be less than significant.

### **5.12.3.3 Significance of Impact**

Potential impacts related to erosion and sedimentation from implementation of the Project would be avoided or reduced below a level of significance through mandatory conformance with applicable regulatory/industry standard and codes, including applicable requirements under the City Storm Water Program and NPDES as outlined in EIR Section 5.11.

### **5.12.3.4 Mitigation, Monitoring and Reporting**

As no significant impact would occur, no mitigation measures would be required.

## **5.12.4 Impact 3: Potential for Geologic Hazards**

*Issue 3: Would the Project expose people or structures to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?*

### **5.12.4.1 Impact Threshold**

Based on the City Significance Determination Thresholds (2016a), impacts related to geology and soils would be significant if a project would result in the exposure of people or property to geologic hazards such as ground shaking, fault rupture, landslides, mudslides, ground failure, or similar hazards.

### **5.12.4.2 Impact Analysis**

Potential impacts associated with landslides/slope instability, liquefaction, and related ground failure effects (e.g., settlement and lateral spreading) are addressed above under Issue 1, with analysis of potential fault rupture and ground shaking (ground motion) hazards provided below.

#### **Fault/Ground Rupture**

As previously described, the potential for seismic-related ground rupture hazards is considered low due to the fact that no known active faults or CGS Fault Rupture Hazard Zones are located within or adjacent to the Project site. Additionally, the Project Geotechnical Evaluation notes that potential surface rupture and related effects from the described potentially active faults located within and adjacent to the site are possible although "...not considered likely..." (Ninyo & Moore 2014). Based on



the described conditions, potential impacts to the Project from seismic-related surface fault rupture hazards would be less than significant.

### **Ground Shaking (Ground Motion)**

The project Geotechnical Evaluation identifies a high potential for proposed project facilities to experience strong ground motion, and recommends a PGA design value of 0.34g. The Geotechnical Evaluation identifies a number of associated recommendations to address these concerns, however, including: (1) conformance with applicable regulatory criteria, including CBC/IBC seismic design criteria and related City standards; (2) appropriate site preparation efforts, such as clearing/grubbing, removal of buried structures, and removal/replacement of unsuitable materials with properly engineered fill; (3) implementation of geotechnical monitoring and remedial grading as applicable; and (4) appropriate design and construction of structures, foundations, trenches/pits, manufactured slopes, retaining walls, pavement, and drainage facilities (with detailed recommendations provided in Appendix I). Based on conformance with these recommendations and related regulatory standards as part of the Project design requirements, potential impacts related to seismic ground motion from proposed development would be less than significant.

#### **5.12.4.3 Significance of Impacts**

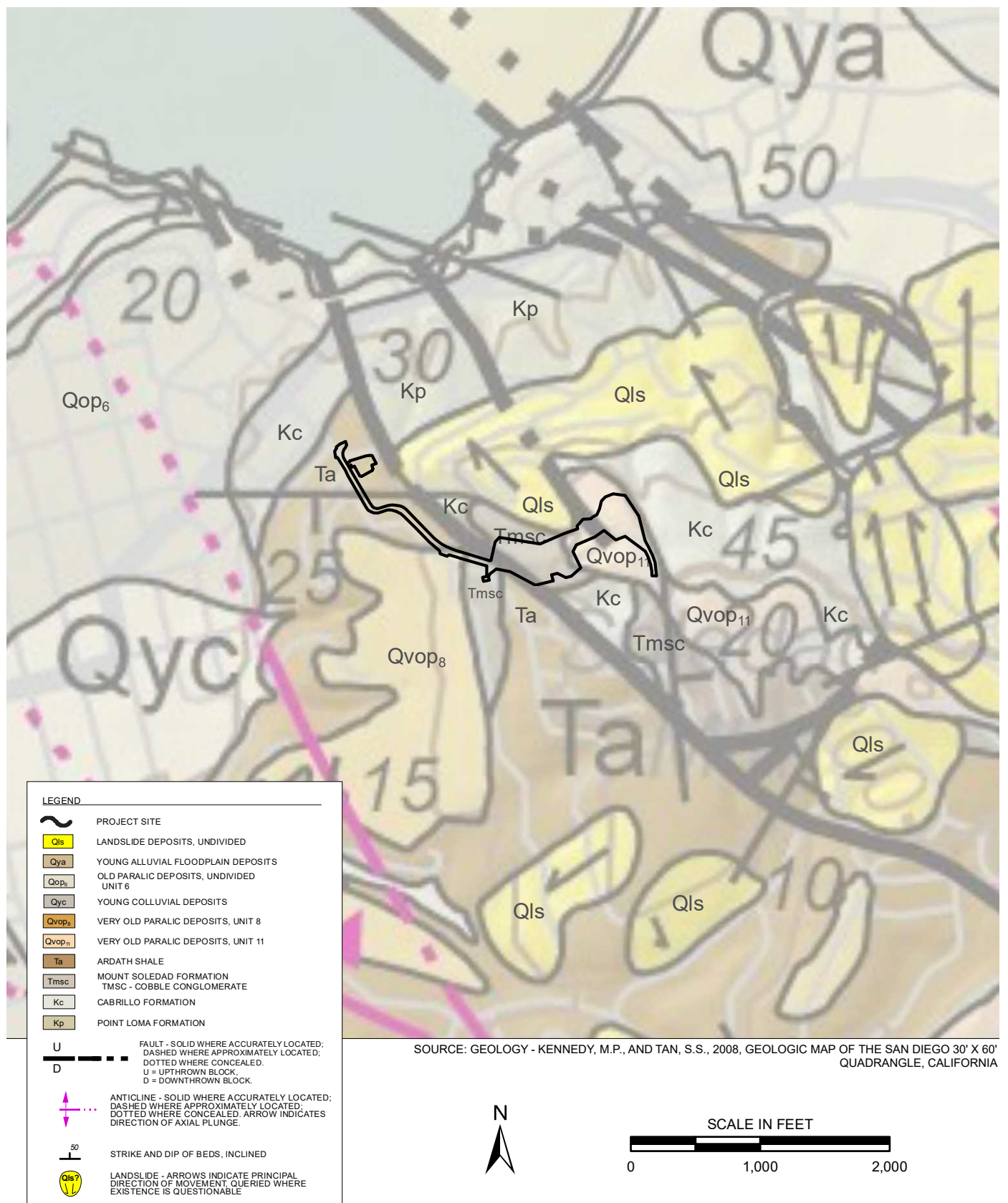
Implementation of project design features, including site-specific recommendations in the Project Geotechnical Evaluation and mandatory conformance with applicable regulatory standards (e.g., CBC/IBC criteria), would reduce potential project-related impacts from earthquake fault rupture and ground motion hazards below a level of significance.

#### **5.12.4.4 Mitigation, Monitoring and Reporting**

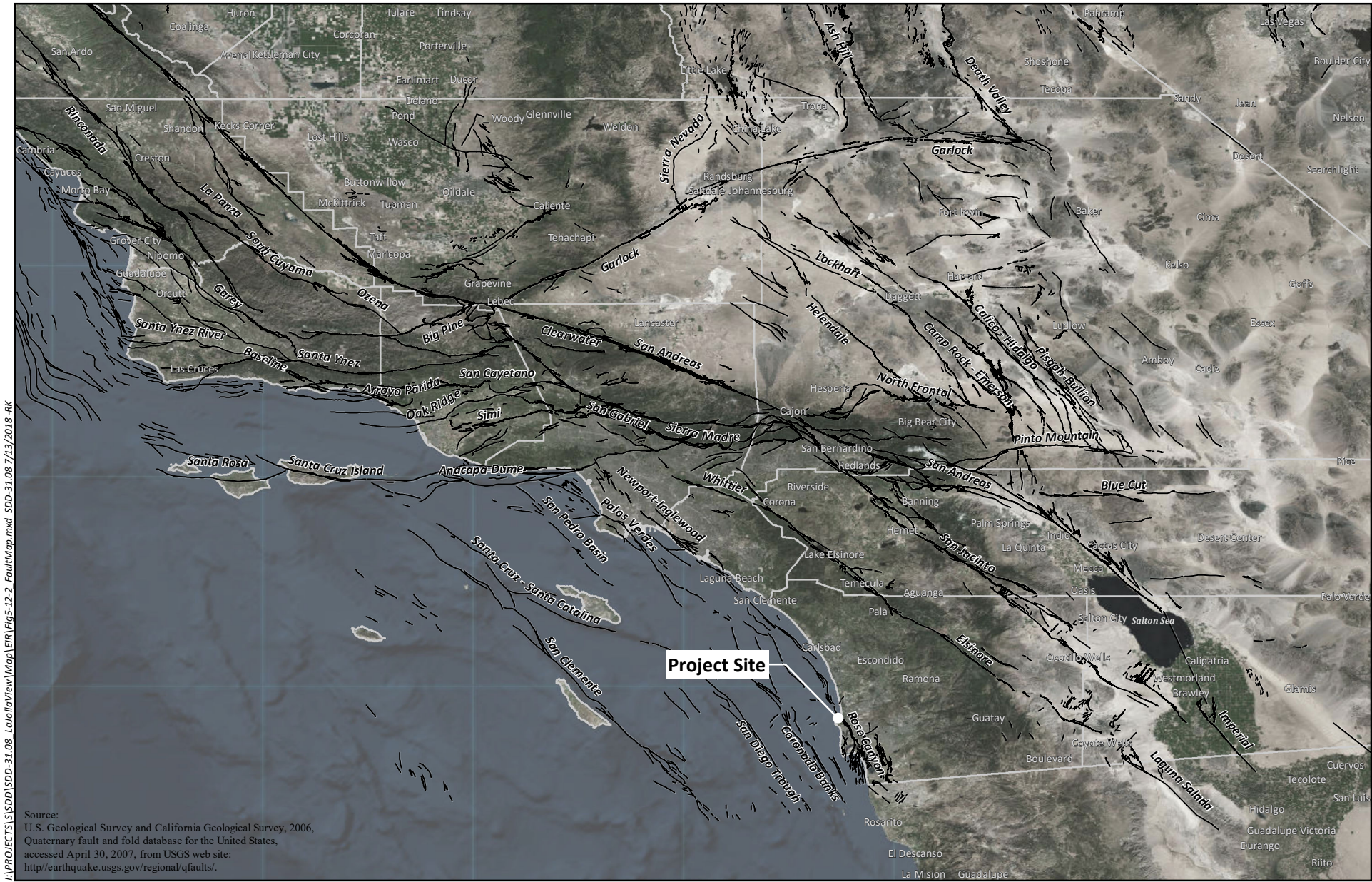
Because identified potential impacts would be less than significant, no mitigation is required.

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Source:  
U.S. Geological Survey and California Geological Survey, 2006,  
Quaternary fault and fold database for the United States,  
accessed April 30, 2007, from USGS web site:  
<http://earthquake.usgs.gov/regional/qfaults/>.

Source: Base Map Layers (SanGIS, 2018)

## **5.13 Health and Safety**

The analysis in this section evaluates the potential for impacts related to human health and public safety associated with the Project.

### **5.13.1 Existing Conditions**

#### **5.13.1.1 On-site Conditions**

The existing and proposed La Jolla View Reservoir sites are within La Jolla Heights Natural Park and contain native vegetation. The existing Exchange Place Reservoir site is located in a residential area and contains reservoir development and associated ornamental landscaping.

A review of state agency databases for hazardous materials and waste facilities was conducted in July 2018 to determine if there are potentially hazardous conditions on or near the project site. Specifically, the Department of Toxic Substances Control (DTSC) EnviroStor and the SWRCB GeoTracker websites were reviewed to determine the presence of sites that involve hazardous materials or sites that require cleanup. The project site was not listed in the searched databases. One nearby property was listed as an inactive Formerly Used Defense Site (FUDS); however, the site is not on the National Priorities List (NPL) and no potential contaminants of concern have been identified (DTSC 2018). No other hazardous materials sites were mapped within 0.25 mile of the project site (DTSC 2018, SWRCB 2018).

#### **5.13.1.2 Emergency Response and Evacuation Plans**

##### **Emergency Response Plans**

The City is a participating jurisdiction in the San Diego County Multi-Jurisdictional Hazard Mitigation Plan, a countywide plan to identify risks and minimize damage from natural and man-made disasters (County 2017). The primary goals of the plan include efforts to promote and provide compliance with applicable regulatory requirements (including through the promulgation/enhancement of local requirements), increase public awareness and understanding of hazard-related issues, and foster inter-jurisdictional coordination.

The San Diego Office of Homeland Security (SD-OHS) oversees the City Homeland Security, Disaster Preparedness, Emergency Management, and Recovery/Mitigation Programs. The primary focus of this effort is to ensure comprehensive emergency preparedness, training, response, recovery, and mitigation services for disaster-related effects. The SD-OHS also maintains the City Emergency Operations Center (EOC) and an alternate EOC in a ready-to-activate status, ensures that assigned staff are fully trained and capable of carrying out their responsibilities during activations, and manages the EOC during responses to multi-department and citywide emergencies to support incident response activities and maintain citywide response capabilities (County 2014).

##### **Emergency Evacuation Plans**

The City is also a participating agency in the County's Unified San Diego County Emergency Services Organization and County of San Diego Operational Area Emergency Operations Plan (County 2014),

which addresses emergency issues including evacuation. Major hazards in the project area that would potentially require an evacuation include earthquake, tsunami, wildfire/structure fire, and terrorism (Annex Q, County 2014). In the event of an evacuation effort, primary evacuation routes would be major ground transportation corridors such as I-5 and SR 52.

### **5.13.1.3 Wildfire Hazards**

The project site exhibits characteristics that are typically associated with potential wildfire risk zones, including steep slopes, limited precipitation, and plenty of available fuel (i.e., vegetation). Areas within the project site are mapped as a “Very High Fire Hazard Severity Zone” (VHFHSZ) by the San Diego Fire-Rescue Department (SDFD; 2009). The VHFHSZ classification is intended to identify lands where measures are necessary that will retard the rate of fire spread and reduce the intensity of uncontrolled fire. Such measures include vegetation management, such as selective pruning and trimming, and implementation of building standards developed to minimize loss of life, resources, and property.

### **5.13.1.4 Regulatory Framework**

#### **Federal**

##### Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act of 1975 (HMTA) is the principal federal law regulating the transportation of hazardous materials, as amended and codified under Title 49 of the CFR. The purpose of the act is to provide adequate protection against the risks to life and property inherent in the transportation of hazardous material by improving the regulatory and enforcement authority of the Secretary of Transportation. The HMTA includes procedures and policies, material designations, packaging requirements, and operational rules related to the transport of hazardous materials. The HMTA is enforced by use of compliance orders, civil penalties, and injunctive relief, and preempts state and local governmental requirements that are inconsistent with the statute, unless that requirement affords an equal or greater level of protection to the public than the HMTA requirement.

##### Resource Conservation and Recovery Act of 1976

Federal hazardous waste laws are largely promulgated under the Resource Conservation and Recovery Act (RCRA) (CFR Title 40, Part 260), as amended by the Hazardous and Solid Waste Amendments of 1984 (which are primarily intended to prevent releases from large underground storage tanks). These laws provide for the “cradle to grave” regulation of hazardous wastes. Under RCRA, any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed of. The USEPA has the primary responsibility for implementing RCRA, although individual states can obtain authorization to implement some or all RCRA provisions.

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

The 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, provides federal authority to respond directly to releases or



threatened releases of hazardous substances that may endanger public health or the environment. Federal actions related to CERCLA are limited to sites on the 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 the hazardous material release, and the potential to affect people or environmental resources. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) in 1986 as outlined below.

#### Superfund Amendments and Reauthorization Act

The SARA is primarily intended to address the emergency management of accidental releases, and to establish state and local emergency planning committees responsible for collecting hazardous material inventory, handling, and transportation data. Specifically, under Title III of SARA, a nationwide emergency planning and response program established reporting requirements for businesses that store, handle, or produce significant quantities of hazardous or acutely toxic substances as defined under federal laws. Title III of SARA also requires each state to implement a comprehensive system to inform federal authorities, local agencies, and the public when significant quantities of hazardous or acutely toxic substances are stored or handled at a facility. This data is made available to the community at large under the “right-to-know” provision, with SARA also requiring annual reporting of continuous emissions and accidental releases of specified compounds.

### **State**

#### California Code of Regulations

Most state and federal regulations and requirements that apply to generators of hazardous waste are codified in the CCR Title 22, Division 4.5. Title 22 contains detailed compliance requirements for hazardous waste generation, transportation, treatment, storage, and disposal facilities. Because California is a fully authorized state under RCRA, most RCRA regulations are integrated into Title 22. CalEPA/DTSC regulates hazardous waste more stringently than the USEPA through Title 22, which does not include as many exemptions or exclusions as the equivalent federal regulations. Similar to the California Health and Safety Code (CHSC; as outlined below), Title 22 also regulates a wider range of waste types and waste management activities than RCRA. The state has compiled a number of additional regulations from various CCR titles related to hazardous materials, wastes, and toxics into CCR Title 26 (Toxics), and provides additional related guidance in Titles 23 (Waters) and 27 (Environmental Protection), although California hazardous waste regulations are still commonly referred to as Title 22.

Title 24 of the CCR provides a number of requirements related to fire safety, including applicable elements of Part 2, the CBC; Part 2.5, the California Residential Code (CRC); and Part 9, the California Fire Code (CFC). Section R327 of the CRC includes measures to identify Fire Hazard Severity Zones and assign agency responsibility (i.e., Federal, State, and Local Responsibility Areas [FRAs, SRAs, and LRAs, respectively], refer to the discussion below under California Department of Forestry and Fire Protection), and provides fire-related standards for building design, materials, and treatments.

#### California Health and Safety Code

The CalEPA/DTSC has established rules governing the use of hazardous materials and the management of hazardous wastes. CHSC Section 25531, et seq., incorporates the requirements of

SARA and the CAA as they pertain to hazardous materials. Under the California Accidental Release Prevention Program (CalARP, CHSC Section 25531 to 25545.3), 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), and potential on- and off-site consequences of release and emergency response provisions.

Under CHSC Sections 25500-25532, businesses handling or storing certain amounts of hazardous materials are required to prepare a Hazardous Materials Business Emergency Plan (HMBEP), which includes an inventory of hazardous materials stored on site (above specified quantities), an emergency response plan, and an employee training program. HMBEPs are also required to include 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 and must be prepared prior to facility operation (with updates and amendments required for appropriate circumstances such as changes in business location, ownership, or operations).

Pursuant to CHSC Chapter 6.11, CalEPA established the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program), which consolidated a number of existing state programs related to hazards and hazardous materials. The Unified Program also allows the designation of Certified Unified Program Agencies (CUPAs) to implement associated state regulations within their jurisdiction. For businesses within the City, applicable hazardous materials plans (such as RMPs and HMBEPs) are submitted to and approved by the County Department of Environmental Health (DEH)/Hazardous Materials Division (HMD), which is the local CUPA as outlined below under County requirements.

Division 12 (Fires and Fire Protection) of the CHSC provides a number of standards related to fire protection methods, including requirements for the management of vegetation comprising a potential fire hazard under Part 5, Chapters 1 through 3.

#### Investigation and Cleanup of Contaminated Sites

The oversight of hazardous materials release sites often involves several different agencies that may have overlapping authority and jurisdiction. The DTSC and RWQCBs are the primary state agencies responsible for issues pertaining to hazardous material release sites. Investigation and remediation activities that would involve potential disturbance or release of hazardous materials must comply with applicable federal, state, and local hazardous materials laws and regulations. DTSC has developed standards for the investigation of sites where hazardous materials contamination has been identified or could exist based on current or past uses. These regulations would be applied during grading activities if, for example, previously unknown underground tanks or other potential contaminant sources were uncovered.



### California Occupational Safety and Health Administration Permissible Exposure Limits

#### *Asbestos*

The federal government began to regulate asbestos in the 1970s due to increasing evidence of the negative health effects of asbestos exposure. Asbestos exposure can cause damage to the respiratory system and can result in serious diseases such as mesothelioma and cancer. Asbestos is regulated by the California Occupational Safety and Health Administration (Cal-OSHA) under Title 8 CCR, Section 5208, which defines the permissible exposure limit at 0.1 fibers per cubic centimeter (f/cc) of air (time-weighted average over 8 hours) for asbestos work in all industries, including construction, shipyards, and asbestos abatement. The excursion limit is set at 1.0 f/cc as averaged over a sampling period of 30 minutes. Establishment and implementation of a written compliance program is required for work that would result in employee exposure to asbestos in excess of these limits. The compliance program must include measures, such as high-efficiency particulate air filters, special ventilation systems, protective clothing, and respirators, to reduce employee exposure to asbestos to below permissible limits.

#### *Lead*

Lead has historically been used as a key ingredient in coins, cosmetics, fuels, household items, and paint; however, it has been phased out over the last century due to known negative health effects. For example, both short- and long-term exposure to lead has been linked with various types of brain damage, behavioral problems, and renal issues. In addition to reductions in the use of lead overall, potential work-related exposure to lead is regulated by Cal-OSHA under Title 8 CCR, Section 1532.1, *Construction Safety Orders [for] Lead*. The permissible exposure limit for lead is 50 micrograms per cubic meter of air ( $\mu\text{g}/\text{m}^3$ ), averaged over an 8-hour period. If initial monitoring results indicate employee exposure to lead at or above the limit, development and implementation of a written compliance program is required. The compliance program must detail engineering controls and work operations that will reduce employee exposure to lead to below the permissible exposure limit.

### Hazardous Materials Transportation

The California Highway Patrol (CHP) and Caltrans are the state agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies. These agencies also govern permitting for hazardous materials transportation within the state.

### California Department of Forestry and Fire Protection - State Responsibility Areas System

Legislative mandates passed in 1981 (SB 81) and 1982 (SB 1916) require the California Department of Forestry and Fire Protection (CAL FIRE) to develop and implement a system to rank fire hazards in California. Areas are rated as moderate, high, or very high based primarily on the assessment of different fuel types. CAL FIRE also identifies responsibility areas for fire protection, including FRAs, SRAs, and LRAs. The project site is under City jurisdiction and is, therefore, within an LRA.

## **Local**

### County Standards

As noted above under state guidelines, the County DEH/HMD is the local CUPA, and has jurisdiction over hazardous materials plans in the City. The County DEH/HMD also requires businesses that handle reportable quantities of hazardous materials, hazardous wastes, or extremely hazardous substances to submit an HMBP, which includes detailed information on the storage of regulated substances. The County DEH/HMD provides guidelines for the preparation and implementation of HMBPs, including direction on submittal requirements, covered materials, inspections, and compliance.

The DEH/HMD is also the administering agency for the San Diego County Operational Area Hazardous Materials Area Plan (County 2011). This Plan identifies the system and procedures used within the County to address hazardous materials emergencies and provides guidelines for topics such as transportation (including international crossings/inspections), industry/agency coordination, planning, training, public safety, and emergency response/evacuation.

The County Office of Emergency Services (OES) and Unified Disaster Council administer the San Diego County Multi-Jurisdictional Hazard Mitigation Plan. This Plan is generally intended to promote and provide a multi-jurisdictional approach to compliance with applicable regulatory requirements. The OES also administers the County of San Diego Operational Area Emergency Operations Plan (County 2014), which provides guidance for responding to major emergencies and disasters.

### City Standards

#### *Hazardous Materials*

The SDFD implements the City Hazardous Materials Program, which requires applicable uses/ processes related to hazardous materials to provide disclosure through submittal of a Hazardous Material Information Form and acquisition of an associated permit. The Hazardous Materials Program also includes guidelines and requirements for topics such as education, code enforcement, and safe business practices related to hazardous processes and the use/storage of hazardous materials.

The City's Local Enforcement Agency (LEA) enforces state minimum standards on public and private solid waste services within the City, including waste collection/disposal, illegal solid waste dumping, and hazardous solid waste sites requiring remediation. The City's Environmental Services Department (ESD) carries out federal, state, and local waste management requirements.

The SDMC includes general hazardous materials regulations in Chapter 4 (Health and Sanitation), Sections 42.0801, 42.0901 (et seq.); and Chapter 5 (Public Safety, Morals and Welfare), Section 54.0701; as well as regulations regarding specific hazardous materials such as explosives (Chapter 5, Section 55.3301).

Chapter 14 (General Regulations) of the SDMC also includes requirements pertaining to fire hazard concerns, such as brush management (Section 142.0412), adequate fire flow

(Section 144.0240), and construction materials for development near open space (Section 145.0701 et seq.).

#### *Traffic Control Plan*

A Public Right-of-Way Permit for Traffic Control and implementation of an approved traffic control plan are required for all public improvement projects, construction projects, and other work which encroaches into the public right-of-way including the sidewalk area (SDMC Section 129.0702). The traffic control plan must conform to the latest edition of City of San Diego Standard Drawings, Appendix A; The Manual of Uniform Traffic Control Devices and the California Supplement; and Standard Specifications for Public Works Construction, including Regional Supplement Amendments and City of San Diego Supplement Amendments.

### **5.13.2 Impact 1: Hazardous Materials**

*Issue 1: Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

*Issue 2: Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or environment?*

#### **5.13.2.1 Impact Thresholds**

Based on the City Significance Determination Thresholds (2016a), impacts related to human health/public safety could be significant if the Project would:

- 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, creates a significant hazard to the public or environment;
- Result in hazardous emissions or handle acutely hazardous materials, substances, or waste within a quarter-mile of an existing or proposed school; or
- Expose people to toxic substances, such as pesticides and herbicides, some of which have long-lasting ability, applied to the soil during previous agricultural uses.

#### **5.13.2.2 Impact Analysis**

##### **Listed Hazardous Materials Sites**

Based on the review of hazardous materials databases, there are no listed hazardous materials sites within the project area. If potential environmental concerns (e.g., subsurface structures, chemical odors, stained soil, underground storage tanks) are encountered during grading and/or subsurface excavation, the areas of concern would be assessed by a qualified professional and appropriate actions would be performed in accordance with applicable laws and regulations.

## **Demolition-related Hazards**

Samples from the exterior and interior of the existing reservoirs were taken to determine the presence of asbestos or lead materials. Chrysotile, or white asbestos, was detected in the gasket of the La Jolla View Reservoir and in the interior coating of the Exchange Place Reservoir.

Lead-containing materials were detected in the roofing of the La Jolla View Reservoir and in various components of the Exchange Place Reservoir. Results from the asbestos and lead testing are summarized in the Abatement Specifications for Asbestos and Abatement Specifications for Lead Containing Materials, prepared for the Project. These Abatement Specifications establish compliance plans for the safe removal and disposal of asbestos and lead by the Abatement Contractor during demolition of the existing reservoirs. General requirements in the Abatement Specifications include pre-construction safety meetings for all abatement personnel; implementation of an approved Abatement Work Plan that includes procedures to comply with all applicable regulations, detailed drawings of work areas, a written plan for sequencing abatement work, and methods to assure the safety of occupants and visitors to the site; construction monitoring; a Contingency and Spill Plan; and required notifications to Cal-OSHA. The Abatement Specifications also describe required equipment and procedures to protect workers from asbestos/lead contamination and other workplace hazards.

## **Use and Storage of Hazardous Materials and Wastes**

The project site is located within a developed area generally comprised of residential uses. There are no existing or proposed schools within one-quarter mile of the project site.

Project construction may involve the on-site use and/or storage of hazardous materials/wastes such as fuels, lubricants, solvents, concrete, paint, and portable septic system wastes. The location of material storage and construction staging areas would be dictated by the Project SWPPP. The SWPPP would include such measures as regular maintenance of construction equipment, as well as storage criteria for oil, gasoline, and other potential contaminants that commonly occur during construction activities. Based on compliance with such regulatory requirements, potential impacts from construction-related hazardous materials would be effectively avoided or addressed.

Operation of the Project would involve remote monitoring and control using SCADA equipment with periodic worker trips to the reservoir site for maintenance and repairs. No impacts associated with hazardous materials are anticipated during operation of the Project.

### **5.13.2.3 Significance of Impacts**

As discussed above, there are no listed hazardous materials sites on the project site or in the vicinity that could pose a threat to human health or safety. Potential impacts related to handling and storage of hazardous materials and associated health hazards from implementation of the Project would be avoided through mandatory conformance with applicable regulatory/industry standard and codes. Materials potentially containing asbestos and lead would be handled according to the Abatement Specifications (City 2016c) and would not cause a threat to public health. Accordingly, impacts related to health hazards would be less than significant.

### **5.13.2.4 Mitigation, Monitoring and Reporting**

Impacts would be less than significant; therefore, no mitigation is required.

## **5.13.3 Impact 2: Fire Hazard**

*Issue 3: Would the Project expose people or structures to a significant risk of loss, injury, or death involving fire?*

### **5.13.3.1 Impact Threshold**

Based on the City Significance Determination Thresholds (2016a), impacts related to wildfire hazards would be significant if a project would expose people or structures to significant risk of loss, injury, or death involving wildland fires.

### **5.13.3.2 Impact Analysis**

While the project site is designated as a VHFHSZ by the SDFD, the Project does not propose habitable structures that could expose people to a significant risk of loss, injury, or death involving wildland fires. The presence of people at the project site would be limited to periodic maintenance and security checks by City staff, consistent with current activities. A portion of the site that would be graded for the temporary access road and subsequently restored with native habitat would be located within the 100-foot Brush Management Zone of adjacent homes. Within this area, habitat restoration would occur via a modified southern maritime chaparral plant palette that is appropriate to brush management. The Project would not increase the risk of wildfire. Implementation of the Project would increase fire and emergency water storage for the La Jolla community.

There would be some increased potential for wildland fires during project construction activities. This would be minimized through conformance with standard construction specifications, including measures to minimize the potential for fire as well as having appropriate equipment available to suppress fires. Impacts associated with the exposure of people or structures to significant risk of loss, injury, or death would be less than significant.

### **5.13.3.3 Significance of Impact**

Potential impacts related to wildfire hazards from implementation of the proposed Project would be less than significant, based on required compliance with applicable State and City standards associated with fire hazards and prevention.

### **5.13.3.4 Mitigation, Monitoring and Reporting**

Impacts would be less than significant; therefore, no mitigation is required.

### **5.13.4 Impact 3: Emergency Response or Evacuation**

*Issue 4: Would the Project impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?*

#### **5.13.4.1 Impact Threshold**

Based on the City Significance Determination Thresholds (2016a), a project would result in a significant impact if it would interfere with an adopted emergency response plan or emergency evacuation plan.

#### **5.13.4.2 Impact Analysis**

Construction of the Project would require temporary lane closures on Country Club Drive that could temporarily disrupt travel along the roadway within the construction zone. Emergency access to all surrounding properties, however, would be maintained throughout the construction period. In addition, a required traffic control plan would be prepared and implemented during project construction. With implementation of these plans, the Project would not impede access to publicly or privately-owned land and would not interfere with emergency response during construction. Therefore, no significant public safety impacts related to emergency services would occur during construction.

Primary evacuation routes consist of the major interstates, highways, and prime arterials within the City. For the project site, these could include travelling east to I-5 south, north to I-5 north, or east to SR 52. A San Diego Emergency Plan, including an Evacuation Annex, is in place to provide for the effective mobilization of all the resources of San Diego. The Project would not impair implementation of, or physically interfere with, the San Diego Emergency Plan.

#### **5.13.4.3 Significance of Impact**

Potential impacts related to impairment of or interference with adopted emergency response and evacuation plans from implementation of the Project would be less than significant, based on required implementation of a traffic control plan during the construction period.

#### **5.13.4.4 Mitigation, Monitoring and Reporting**

Impacts would be less than significant; therefore, no mitigation is required.

## 5.14 Utilities and Service Systems

This section describes the potential waste generation impacts that may result from the Project. A Waste Management Plan (WMP) was prepared by HELIX (2018c) to identify the quantity of solid waste that would be generated by the Project and measures to reduce potential impacts related to management of such waste. The WMP is included as Appendix J of this EIR.

### 5.14.1 Existing Conditions

#### 5.14.1.1 Environmental Setting

##### **Solid Waste Management**

Solid waste management in the project area is provided by the City ESD and private collectors. The City provides refuse collection for residences that: (1) are located on dedicated public streets; (2) provide adequate safe space and access for storage and collection; and (3) comply with regulations set forth in the Municipal Code and Waste Management Guidelines. Other customers pay for service by private hauling companies that are franchised by the City.

Refuse collected from the area is generally taken to the Miramar Landfill, located just north of SR 52, between I-805 and SR 163. According to the Solid Waste Information System (SWIS) database maintained by the California Department of Resources Recycling and Recovery (CalRecycle), the Miramar Landfill had a remaining capacity of approximately 15,527,878 cy of solid waste as of June 30, 2014. Based on the remaining capacity and disposal rates, the Miramar Landfill is expected to close August 31, 2025 (CalRecycle 2018); however, the amount of waste managed at the landfill is expected to decrease while the amount of composting and recycling will increase over time as the City strives to achieve the target 75 percent diversion rate identified in the City's Zero Waste Plan as well as AB 341 and AB 1826 (City 2015b).

#### 5.14.1.2 Regulatory Framework

The Project would be required to comply with a number of state and local regulations related to solid waste generation. These regulations are summarized below.

##### **State**

##### Integrated Waste Management Act

The State of California Integrated Waste Management Act (IWMA) of 1989 [California AB 939], which is administered by CalRecycle, requires counties to develop an Integrated WMP (IWMP) that describes local waste diversion and disposal conditions, and lays out realistic programs to achieve the waste diversion goals. IWMPs compile Source Reduction and Recycling Elements (SRREs) that are required to be prepared by each local government, including cities. SRREs analyze the local waste stream to determine where to focus diversion efforts and provide a framework to meet waste reduction mandates. The goal of the solid waste management efforts is not to increase recycling, but to decrease the amount of waste entering landfills. AB 939 required all cities and counties to divert a minimum 50 percent of all solid waste from landfill disposal. In 2011, the State legislature enacted

AB 341 (PRC Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 also requires the provision of recycling service to commercial and residential facilities that generate 4 cy or more of solid waste per week.

### AB 1826

In October 2014, Governor Brown signed AB 1826, Chesbro (Chapter 727, Statutes of 2014), which requires businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family residential dwellings that consist of five or more units.

## **Local**

### Zero Waste Plan

The City's Zero Waste Plan, a component of the City's CAP, was approved and adopted by City Council on July 13, 2015. The Zero Waste Plan lays out strategies to be implemented by the City to accomplish the following goals:

- Target 75 percent diversion by 2020, 90 percent diversion by 2035, and "zero waste" by 2040 by identifying potential diversion strategies for future action;
- Demonstrate continuous improvement towards a goal of zero waste to landfills;
- Emphasize education by renewing City public information efforts;
- Promote local policies and ordinances as well as legislation at the state level that encourage manufacturers, consumers, and waste producers to be responsible for waste;
- Investigate appropriate new technologies; and
- Re-emphasize market development at the local and state level.

The City's ESD estimates that compliance with existing City codes and ordinances alone (including the Refuse and Recyclable Materials Storage Regulations [Municipal Code Chapter 14, Article 2, Division 8], Recycling Ordinance [Municipal Code Chapter 6, Article 6, Division 7], and the C&D Debris Deposit Ordinance [Municipal Code Chapter 6, Article 6, Division 6]) would achieve only an approximate 40 percent diversion rate, which is substantially below the current 75 percent diversion level targeted by the state and the goals of the City's Zero Waste Plan.

### City of San Diego Construction and Demolition Debris Deposit Ordinance

On July 1, 2008, the City's C&D Debris Deposit Ordinance went into effect. An amendment to the ordinance and revisions to the associated C&D deposit schedule were approved by the City Council on December 10, 2013 (effective January 1, 2014) and on April 19, 2016 (effective June 22, 2016). The C&D Debris Deposit Ordinance is designed to keep C&D materials out of local landfills and ensure



that materials are diverted from disposal by creating an economic incentive through the collection of deposits that are returned, in whole or in part, upon proof of the amount of C&D debris a project applicant has diverted from landfill disposal. The ordinance requires that the majority of construction, demolition and remodeling projects requiring building, combination, and demolition permits pay a refundable C&D Debris Recycling Deposit and divert at least 65 percent of their debris by recycling, reusing, or donating usable materials.

## **5.14.2 Impact 1: Solid Waste Management**

*Issue 1: Would the Project result in a need for new systems or require substantial alterations to existing systems with regard to solid waste disposal, the construction of which would create physical impacts?*

### **5.14.2.1 Impact Thresholds**

According to the City's Significance Determination Thresholds (2016a), impacts related to solid waste disposal may be significant if a project would construct, demolish, and/or renovate 1,000,000 square feet or more of building space, which would generate approximately 1,500 tons or more of waste. For projects over this threshold, a significant direct solid waste impact would result if compliance with City ordinances and the project WMP fails to reduce the impacts of such projects to below a level of significance and/or if a WMP for the project is not prepared and conceptually approved by the ESD prior to distribution of the draft environmental document for public review.

### **5.14.2.2 Impact Analysis**

While the Project would not include construction, demolition, or renovation of 1,000,000 square feet or more, it would generate more than 1,500 tons of solid waste materials during demolition and construction; therefore, the Project would exceed the City's threshold for direct solid waste impacts. Pursuant to the City's Significance Determination Thresholds, a WMP was prepared to identify waste reduction, recycling, and waste diversion measures (WDMs).

The purpose of a WMP is to identify the potential waste generated by the Project during demolition, construction, and operation, and to identify measures to reduce potential impacts associated with management of such waste. The Project WMP addresses the grading and construction phase, as well as the post-construction/operational phase of the Project and identifies the types and projected amount of waste that would be generated, disposed of, salvaged, and recycled, as applicable. The WMP describes the project measures and design features that would reduce the amount of waste generated and how waste reduction and waste diversion/recycling goals would be achieved. The following discussion of potential solid waste generation resulting from implementation of the Project and related WDMs is based on the WMP (Appendix J).

### **Pre-construction Demolition, Clearing/Grubbing, and Grading**

Prior to initiation of the Project's construction activities, site preparation would require clearing/grubbing, grading, and demolition of the existing structures. Clearing and grubbing would require removal of existing vegetation. The existing structures, including two reservoirs, a pump station, pipelines, fencing, and an access road, would be demolished.

Materials generated during pre-construction demolition, clearing/grubbing, and grading that are designated for recycling would be source separated on site during these activities. The City's 2018 *Certified Construction & Demolition Recycling Facility Directory*, updated quarterly, states the diversion rate for these materials shall be 100 percent, except mixed C&D debris, which achieves a maximum 90 percent diversion rate at the EDCO CDI Recycling and Buy Back Center (City 2018a).

The volume of estimated solid waste resulting from existing structure demolition is 251 tons. Demolition of the existing hardscapes, such as the access road and paved areas, is expected to produce 78 tons of asphalt waste. Clearing and grubbing would remove approximately 8,361 tons of vegetation debris. Grading would result in excavation of 28,600 tons of earth material. In all, pre-construction activities would generate 37,290 tons of waste. It is estimated that approximately 36 tons of debris generated during demolition, including treated wood, certain types of mixed debris, and trash, would not be recyclable and would be disposed of at the West Miramar Sanitary Landfill. The remaining 37,254 tons solid waste resulting from existing structure demolition would be diverted to an appropriate facility on the City's 2018 Certified Construction & Demolition Recycling Facility Directory or the Miramar Greenery/Landfill facility, for a total diversion rate of 99.9 percent.

### **Construction Waste Management**

Materials proposed for project construction that would potentially generate waste include concrete, metal, industrial plastics (e.g., PVC), and asphalt. To estimate the quantity of waste generated during construction, the volume of each construction material to be used was calculated, then multiplied by 10 percent, which is considered a conservative method to account for waste generated during the construction process. To account for excess reservoir and pipeline construction materials that might be too damaged or mixed to be source separated into clean materials, it is assumed that 20 percent of each construction material would qualify as "mixed debris." It is also assumed that eight percent of each material would qualify as "trash," to account for miscellaneous, non-recyclable materials such as corrugated cardboard packaging and industrial plastic wraps and fasteners that would be generated during construction.

The volume of estimated solid waste resulting from construction of the project is 310.5 tons. It is estimated that approximately 23 tons of mixed debris and trash would not be recyclable and would be disposed of at the West Miramar Sanitary Landfill. The remaining 287.5 tons of solid waste generated during construction activities would be diverted to an appropriate facility on the City's 2018 Certified Construction & Demolition Recycling Facility Directory or the Miramar Greenery/Landfill facility, for a total diversion rate of 93 percent.

In order to further minimize waste, the Project would utilize recycled content construction materials, where feasible. Given the preliminary nature of the project plans, a minimum target of five percent is anticipated, with verification of purchase of materials equating to this target to be provided prior to or during the pre-construction meeting. A goal of 10 percent or more has also been set.

All C&D-generated waste would be subject to compliance with the source separation and diversion requirements contained in the WMP to divert, recycle, and/or re-use these materials to the maximum degree possible. The required measures during construction include source-separating waste on site and implementing measures such as detailed material estimates, material purchasing requirements, and use of post-consumer content products. Implementation of these measures

would be conditions of project approval and would be implemented by the project-designated Solid Waste Management Coordinator and verified by ESD staff.

### **Operational Waste Management**

Operation of the Project would not include components that would have the potential to generate significant long-term waste. Maintenance activities associated with the reservoir would involve weekly visits to the site for routine valve, structure, and equipment inspection. Site visits for revegetation maintenance and monitoring would occur on an as-needed basis for five years and would include activities such as replacing unhealthy or dead plants, providing supplemental water to plants, addressing erosion control needs, and weeding undesirable non-native plant species. Revegetation maintenance and monitoring would be temporary and would generate a negligible amount of waste compared to waste generated during project demolition and construction. Diversion, reduction, and recycling measures for operational waste are therefore not necessary or required.

#### **5.14.2.3 Significance of Impacts**

The Project would generate solid waste during pre-construction demolition, clearing/grubbing, grading, and construction. The Project would not exceed 1,000,000 square feet of building space; however, it would exceed the threshold of 1,500 tons of solid waste materials generated. The Project would, therefore, be considered to have a direct impact on solid waste facilities. While all projects are required to comply with the City's waste management ordinances, potential direct impacts are addressed by implementation of the project-specific WMP (Appendix J). The WMP conditions will be included in the Project's conditions of approval. With implementation of the project WMP, impacts would be less than significant.

#### **5.14.2.4 Mitigation, Monitoring and Reporting**

As impacts would be less than significant, no mitigation measures would be required.

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## 6.0 CUMULATIVE IMPACTS

Section 15130 of the CEQA Guidelines requires that an EIR address cumulative impacts of a project when its incremental effect would be cumulatively considerable. Cumulatively considerable means that the incremental effects of an individual project would be considerable when viewed in connection with the effects of past, current, or probable future projects.

According to Section 15130 of the State CEQA Guidelines, the discussion of cumulative effects "... need not provide as great a detail as is provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness." The evaluation of cumulative impacts is to be based on either: "(A) a list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) a summary of projections contained in an adopted 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 effect. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency."

The basis and geographic area for the analysis of cumulative impacts is dependent on the nature of the issue and the project. In some cases, regional planning addresses cumulative impacts, while in other cases, the analysis takes into consideration more localized effects.

La Jolla is a primarily residential community that is virtually built-out, with approximately 99 percent of the land designated for development having already been developed. Review of proposed and approved projects in the vicinity of the project area revealed numerous projects, the vast majority of which consist of individual home remodeling or replacement. This is consistent with the fact that City traffic volumes over a 10-year period (2005 to 2015) indicated that growth in traffic counts (which typically correlate with overall development) in this area have averaged an increase of 0.52 percent per year. Projects of this nature typically result in minimal impacts and require little or no environmental review. There are no large development projects proposed in the vicinity that would result in considerable cumulative impacts.

The La Jolla Country Club Reservoir and Pump Station Project proposes to replace an existing 500,000-gallon reservoir with a new reservoir with a capacity of 880,000 gallons, as well as adding three new pumps to the pump station. It is located approximately 0.2 mile southeast of the Project; therefore, there would be a potential for cumulative construction impacts to arise if the two projects were constructed within the same timeframe. Construction of the La Jolla Country Club Reservoir and Pump Station Project, however, is currently underway and will be completed prior to initiation of construction activities for the La Jolla View Reservoir Project. Other major water infrastructure improvement projects in the vicinity would not occur until after completion of the Project.

Based on the absence of identifiable individual projects that would have the potential to result in substantial cumulative impacts in conjunction with the Project, this cumulative impacts analysis is based on a summary of anticipated growth in the area.

## 6.1 Land Use

The geographic scope for the land use cumulative analysis consists of the La Jolla Community Plan area. Land uses and development patterns are typically established in local land use planning documents specific to individual communities but can have implications on surrounding areas.

Cumulative projects within the La Jolla Community Plan area would be required to comply with the General Plan and Community Plan. Projects that are not consistent with existing land use designations would require implementation of a Community Plan Amendment (CPA) and/or General Plan Amendment (GPA), as applicable. Projects that require a GPA and/or CPA are required to demonstrate conformance with pertinent goals, policies, and recommendations. As the community is almost entirely built out with single-family residential uses, however, projects requiring a GPA or CPA, particularly in proximity to the project site, are not proposed or reasonably foreseeable.

The Project would be consistent with the majority of the goals and objectives of the General Plan and La Jolla Community Plan. Inconsistencies would, however, occur with regard to noise impacts during nighttime construction activities. These impacts would result from the unique circumstances of the Project, and would not combine with the impacts of other projects to result in a significant cumulative impact related to consistency with applicable planning documents. Therefore, the Project would not result in a cumulatively considerable contribution to a land use compatibility impact.

## 6.2 Visual Quality/Neighborhood Character

The geographic scope for the analysis of impacts to visual quality and neighborhood character is the La Jolla Community Plan area, primarily focused on La Jolla Heights Natural Park and the surrounding residential neighborhoods. The area is largely characterized by single-family residential development, with La Jolla Heights Natural Park and the La Jolla Country Club comprising open space elements. Due to the largely built out nature of the community, changes in visual character are anticipated to be minimal. Infill construction of single-family homes has, however, tended to be larger in size than the traditional development in some neighborhoods.

As described in detail in Section 5.2, *Visual Quality/Neighborhood Character*, the Project would not block a designated view, or result in substantial view blockage from a public viewing area or to a public resource identified as significant in the La Jolla Community Plan. Although construction of the Project would temporarily alter existing views toward the site, implementation of the Project would not represent a substantial permanent departure from existing public views in the long term. Overall, given intervening topography, vegetation, and development that restricts views to the site, in addition to the minimizing effect of the proposed revegetation and backfilling of the existing and proposed reservoir locations and pipeline alignment, changes to views from local area roadways would be less than significant. The Project proposes no permanent visual elements that would create a negative aesthetic, and no features associated with the Project would be out of scale or incompatible with the surrounding environment. It also would not result in adverse impacts to daytime or nighttime views from lighting or glare.

In summary, visual effects related to the Project would be temporary in nature, with minimal concurrent impacts anticipated from proposed or reasonably foreseeable projects. With recontouring and restoration/revegetation of the site, long-term visual impacts from the Project

would be negligible. Therefore, the Project would not result in a cumulatively considerable contribution to a significant cumulative visual quality or neighborhood character impact.

## 6.3 Noise

The geographic scope for this analysis is the area immediately surrounding the project site and area roadways that would be used by project construction vehicles. Generally, noise impacts are limited to the area directly surrounding the noise generator, as noise attenuates with distance and only has the potential to combine with other noise sources in the immediate vicinity.

Construction associated with other projects in the vicinity would result in temporary, localized increases in noise. These activities would be required to comply with the City's Noise Ordinance. Additionally, given that the majority of proposed projects are single-family residential remodels or replacements, the volume and duration of associated construction noise would be limited. While the Project would result in significant noise impacts, it would be unlikely that construction of adjacent development would occur simultaneously with the project construction activities within distances close enough to the same NSLUs to result in cumulative noise impacts. As shown in Table 5.3-3, noise levels associated with project traffic on surrounding roadways combined with other traffic noise would not exceed the applicable thresholds. Therefore, cumulatively significant construction noise and vibration impacts would not occur.

New development would result in incremental increases in ambient noise levels due to additional stationary equipment (e.g., HVAC systems) and traffic-related noise. The Project, however, would not result in increased operational noise. Therefore, the Project would not contribute to cumulative operational noise and vibration impacts.

Although significant on an individual basis, Project-related noise is not anticipated to result in a cumulatively considerable contribution to a significant cumulative noise impact.

## 6.4 Transportation/Circulation

The geographic scope for the traffic cumulative analysis includes the principal roadways in the project vicinity, including Exchange Place, Country Club Drive, La Jolla Parkway, Brodiaea Way, Torrey Pines Road, and Romero Drive. The traffic analysis presented in Section 5.4, *Transportation/Circulation*, includes an evaluation of impacts. As detailed in that section, project operational activities would generate a minimal amount of VMT. Potential temporary impacts related to traffic hazards or interference with alternative transportation facilities during construction would be minimal and, due to the nature of other potential projects in the vicinity, are not anticipated to combine with the effects of other projects. Therefore, combined with other reasonably foreseeable development, the Project's contribution to cumulative traffic conditions would not be cumulatively considerable.

## 6.5 Biological Resources

The study area for cumulative biological resource impacts is difficult to determine given the extent of the affected biological resources in the region. Therefore, for the purposes of analysis, this

discussion is based on the MSCP, which covers sensitive biological resources located within the City as well as portions of the County of San Diego and other cities. The USFWS, CDFW, City, and other local jurisdictions joined together in the late 1990s to develop the MSCP to ensure habitat and species viability throughout the region, while still permitting some level of continued development. Preserve areas identified under the MSCP are designated as MHPA. This program is specifically intended to address cumulative impacts to sensitive upland habitats and MSCP-covered species.

As discussed in Section 5.5, *Biological Resources*, the Project would result in impacts to southern maritime chaparral and coastal sage scrub, which are considered sensitive vegetation communities. Impacts to these communities would occur in accordance with the requirements of the MSCP. All individual coast barrel cactus within the impact area would be collected, salvaged, and then replanted as part of the project restoration effort. Although protocol surveys for coastal California gnatcatcher were negative, they are more than two years old. Therefore, due to the site's potentially suitable habitat within the MHPA, mitigation has been included to ensure that significant temporary noise impacts do not occur. Similarly, required measures to protect birds that may be nesting during construction are identified. Additionally, the Project would result in impacts to drainages that are potentially under the jurisdiction of the USACE and CDFW, but not considered City wetlands. In accordance with state and federal "no net loss" policies, the Project will be required to establish/re-establish jurisdictional habitat.

The Project, as well as potential cumulative projects, are subject to comprehensive regulations specifically developed to avoid or minimize potential cumulative impacts to sensitive biological resources. As a result, the Project would not result in a cumulatively considerable contribution to a significant cumulative biological impact.

## 6.6 Cultural Resources

As with biological resources, defining a study area for historical resources is difficult given the extent of historical (e.g., pre-historic) resources in the region. However, cumulative impacts within the City are expected to be limited by the fact that the Project as well as cumulative projects will be required to comply with City mitigation measures (i.e., archaeological monitoring and data recovery programs) applied to projects which could impact significant historical resources. These mitigation measures require significant information associated with these sites to be recorded before impacts may occur.

The existing reservoirs were determined not to comprise important historic resources, and no archaeological resources were encountered on the project site. There is, however, potential for archaeological resources, TCRs, and/or human remains to be inadvertently encountered during project grading activities. Therefore, in accordance with City standards, archaeological/tribal monitoring would be required during grading activities, with recovery or protection as appropriate for any identified resources. Tribal outreach has resulted in concurrence that the study program and proposed mitigation for the site are adequate and no need for additional consultation was identified. Thus, the project is not expected to contribute to cumulative impacts to historic and tribal resources within the region. With the application of similar cultural resources/tribal assessment, consultation, and monitoring requirements to the other cumulative projects as well, the potential for cumulative impacts would be minimized. As a result, the Project would not result in a cumulatively considerable contribution to a significant cumulative cultural resource impact.



## 6.7 Paleontological Resources

The geographic scope for analysis of potential paleontological resource impacts generally consists of the coastal plain of San Diego county, where paleontological resources similar to those that could occur on the project site have the potential to occur. Cumulative projects that require substantial excavation have the potential to result in disturbance to paleontological resources. These projects would be subject to state and local regulations requiring the recovery and curation of paleontological resources. As such, significant paleontological resource impacts resulting from future development would be mitigated on a project-by-project basis.

The Project has the potential to result in disturbance of paleontological resources during excavation activities. On-site monitoring during grading and submittal of a monitoring results report is required, along with fossil recovery and curation. With implementation of the required paleontological mitigation program, the Project would not result in a cumulatively considerable contribution to paleontological resource impacts.

## 6.8 Air Quality

The geographic scope for the analysis of cumulative air quality impacts is the SDAB. It is appropriate to consider the entire air basin as air emissions can travel substantial distances and are not confined by jurisdictional boundaries; rather, they are influenced by large-scale climatic and topographical features. While some air quality emissions can be localized, such as a CO hotspot, the overall consideration of cumulative air quality is typically more regional. By its very nature, air pollution is largely a cumulative impact.

The SDAB is a federal and/or state nonattainment area for PM<sub>10</sub>, PM<sub>2.5</sub>, and ozone. The nonattainment status of regional pollutants is a result of past and present development within the SDAB, and this regional impact is cumulative rather than attributable to any one source. Cumulative projects in the La Jolla area and throughout the air basin would generate construction and operational air pollutant emissions that could contribute to air quality impacts. The thresholds of significance are relevant to whether a project's individual emissions would result in a cumulatively considerable incremental contribution to the existing cumulative air quality conditions. These thresholds are designed to identify those projects that would result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards. If a project's emissions would be less than those threshold levels, the project would not be expected to result in a considerable incremental contribution to the significant cumulative impact.

The Project and the other projects in the SDAB would contribute particulates and the ozone precursors VOC and NO<sub>x</sub> to the area during short-term construction. As described in Section 5.4, *Air Quality*, emissions during project construction would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Construction emissions would be less than the significance thresholds (as shown in Table 5.8-5). Therefore, the Project's construction emissions would not be cumulatively considerable, and the impact would be less than significant. Long-term emissions would be negligible. Emissions would be consistent with assumptions in the RAQS and SIP, and no exceedances of the CO standard or substantial generation

of TACs would occur. Thus, the Project would not result in a cumulatively considerable contribution to a significant cumulative air quality impact.

## 6.9 Greenhouse Gas Emissions

The geographic scope of consideration for GHG emissions is global, as such emissions contribute, on a cumulative basis, to global climate change. By nature, GHG impacts are cumulative as they are the result of combined worldwide emissions over many years, and additional development would incrementally contribute to this cumulative impact. The discussion presented in Section 5.9, *Greenhouse Gas Emissions*, also serves as the Project's cumulative impact analysis.

As detailed in that section, a number of plans, policies, and regulations have been adopted for the purpose of reducing cumulative GHG emissions. The City's CAP outlines the measures for the City to achieve its share of state GHG reductions. The Project would be consistent with Step 1 and would not conflict with Step 2 of the CAP Consistency Checklist. Therefore, the Project would be consistent with the City's CAP, and would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. As a result, the Project would not result in a cumulatively considerable contribution to cumulatively significant impacts related to GHG emissions.

## 6.10 Energy

The geographic scope for consideration of cumulative energy impacts is the San Diego region as a whole. Development throughout the region influences the demand for energy supply and can drive the location and need for new or additional energy production and transmission infrastructure. Energy service providers and their distribution systems generally cover large areas and are not necessarily associated with or restricted to specific governmental jurisdictions. Generally, most typical development or redevelopment projects do not independently create substantial impacts on energy production or infrastructure. Rather, the demand for energy is influenced by regionwide development. Thus, many planning documents that forecast energy demand and determine adequate supply and appropriate infrastructure needs and strategies are also on regional scales.

While development projects would result in the demand for additional energy, they also would be subject to federal, state, and local energy conservation and/or alternative energy policies, such as those within the Conservation Element of the City's General Plan. This minimizes the potential for unnecessary or wasteful energy use associated with cumulative development or the demand for energy beyond that accounted for in regional supply forecasts and production.

Implementation of the Project would result in the consumption of energy associated with project construction, for operation of heavy equipment and worker vehicles. The Project's construction-related energy usage would not represent a significant demand on energy resources because it is temporary in nature. Additionally, with implementation of the on-site energy conservation features, project construction would avoid or reduce inefficient, wasteful, and unnecessary consumption of energy. Operational energy use would consist of weekly vehicle trips for maintenance activities (consistent with activities associated with the current reservoir), as well as the electrically powered valve vault. Both would result in negligible energy use. The Project would not alter the amount of water consumed in the region and, therefore, would not change the amount

of energy required for delivery of water to the region. Therefore, the Project would not result in a cumulatively considerable contribution to a significant cumulative impact on energy resources.

## 6.11 Hydrology and Water Quality

The geographic scope for analysis of impacts related to hydrology and water quality is the Peñasquitos HU, 1 of 11 major drainage areas identified in the RWQCB Basin Plan. Lands and water bodies within the watershed are part of an interrelated hydrologic system, such that modifications to a portion of a watershed or water pollution produced by development in one location may result in hydrology and water quality impacts that affect other water bodies in the watershed.

To the extent that other projects would be developing/operating at the same time as the Project, related construction and operation activities would contribute to potential cumulative hydrology and water quality impacts associated with runoff generation, flooding hazards, drainage alteration, hydromodification, and water quality concerns. As described in Section 5.11, *Hydrology and Water Quality*, implementation of the Project (as well as cumulative projects) would require conformance with a number of regulatory requirements related to hydrology and water quality, including applicable elements of the CWA, NPDES, City storm water standards, Porter-Cologne Water Quality Control Act, FEMA floodplain standards, and RWQCB Basin Plan. Based on such conformance, including implementation of related project design measures, potential project-level hydrology and water quality impacts would be effectively avoided or reduced below a level of significance.

The described regulatory requirements constitute a regional effort to implement hydrology and water quality protections through a watershed-based program designed to meet applicable criteria such as Basin Plan Beneficial Uses and Water Quality Objectives. To this end, these standards require the implementation of efforts to reduce runoff/contaminant discharges and related effects to the MEP, with the NPDES Municipal Permit identifying the specific goals of limiting or prohibiting storm water and non-storm water discharges, and promoting attainment of water quality objectives necessary to support designated beneficial uses. The City has implemented requirements to meet these goals (and other applicable regulatory criteria) in the form of the associated storm water standards outlined in Section 5.11.1.2, as well as related education, planning, and enforcement procedures. The described regional/watershed-based approach required for hydrology and water quality issues in existing regulatory standards, as well as the fact that conformance with these requirements would be required for all projects within the cumulative projects area (including the Project), would minimize the potential for cumulative hydrology/water quality impacts. Therefore, the Project would not result in a cumulatively considerable contribution to a significant cumulative impact on hydrology and water quality.

## 6.12 Geology and Soils

The geographic scope for this analysis is the La Jolla area and immediately surrounding lands. Geology and soil features can be very specific to certain locations and sites, but can also have broad-reaching elements, such as faults and underlying bedrock formations. However, potential geologic or soil hazards resulting from development are generally localized to the site and immediate surrounding lands rather than a broad-reaching area. In this way, potential cumulative impacts resulting from seismic and geologic hazards would be minimized on a site-by-site basis to the extent that standard construction methods and code requirements provide. Throughout the La

Jolla area, cumulative projects would also be susceptible to similar geologic hazards. The specific geologic condition of each individual project site, soil type, and project excavation requirements would dictate the severity of the potential geologic risks.

As described in Section 5.12, *Geology and Soils*, all potential site-specific geotechnical impacts would be avoided or reduced below a level of significance through conformance with geotechnical recommendations and established regulatory standards. Specifically, with the exception of erosion/sedimentation (as discussed below), potential geology and soils effects are inherently restricted to the areas proposed for development and would not contribute to cumulative impacts associated with other planned or proposed development. That is, issues including ground rupture, ground acceleration, liquefaction and related effects, landslides/slope stability, expansive/corrosive soils, subsidence/shrinkage, settlement, and shallow groundwater would involve effects to (and not from) the site and/or are specific to on-site conditions. Accordingly, addressing these potential hazards for the Project would involve using measures to conform to existing requirements and/or site-specific design and construction. Because of the site-specific nature of these potential hazards and the measures to address them, as well as the fact that cumulative projects would also be subject to the noted standards, associated potential cumulative impacts related to the identified geology and soils issues would be less than significant.

During construction of the Project, graded areas would be exposed to potential erosion and sedimentation impacts. Project-related erosion and sedimentation could contribute to associated cumulative effects in concert with other existing and future development in the project vicinity. Project implementation, however, would include a number of avoidance and minimization measures related to erosion and sedimentation impacts, including the types of BMPs described in Section 5.11. These (or other appropriate) measures in the Project SWPPP would ensure conformance with applicable federal (NPDES), state and local regulatory standards related to erosion and sedimentation and would reduce project-related contribution to cumulative impacts involving construction-generated erosion and sedimentation to below cumulatively significant levels.

As described in Section 5.11, erosion and sedimentation are not considered to be significant long-term concerns at the project site, as developed areas would be stabilized through installation of associated structures/hardscape and vegetation. As cumulative projects would exhibit similar long-term conditions, the Project would not result in a cumulatively considerable contribution to long-term erosion and sedimentation.

Overall, cumulative projects would be subject to the same regulations and engineering practices as the Project, such as the City's grading ordinance, storm water regulation and associated BMPs, as well as CBC requirements. Potential cumulative impacts related to geology and soils would be less than significant.

## 6.13 Health and Safety

The geographic context for the analysis of cumulative impacts relative to the transport, use and disposal of hazardous materials, and associated accidental releases, encompasses the roadways and freeways used by vehicles transporting hazardous materials to and from the construction site, and the project sites that involve the use or disposal of hazardous materials. As the La Jolla community is primarily residential in nature, the extent of associated generation or disposal of

hazardous materials is anticipated to be limited. Similar to the Project, any cumulative projects entailing the use of hazardous materials would be required to comply with applicable federal, state, and local regulations related to the transportation, storage, use, and disposal of hazardous materials. Therefore, the Project would not result in a cumulatively considerable contribution to a significant cumulative impact related to the transport, use, and disposal of hazardous materials and accidental releases.

The geographic context for the analysis of cumulative impacts relative to wildfire hazards and evacuation and emergency response plans is the area around the Project site within the La Jolla community. As described in Section 5.13.4.2, the project site is located within a designated VHFHSZ. The Project, however, does not propose habitable structures that could expose people to a significant risk of loss, injury, or death involving wildland fires. Rather, implementation of the Project would increase fire flow and emergency water storage for the La Jolla community. It also would employ appropriate measures to minimize the risk of wildfires during construction. Cumulative projects would be subject to applicable state and City regulatory requirements related to fire hazards and prevention. Additionally, projects within the City's jurisdiction that are in the public right-of-way are required to implement a traffic control plan and to maintain emergency access. Based on the described regulatory requirements, the Project would not result in a cumulatively considerable contribution to a significant cumulative impact related to fire hazards or emergency response.

## **6.14 Utilities and Service Systems**

The geographic scope for public utilities cumulative analysis is the San Diego region. Public utilities can be specific to jurisdictions; however, landfills serve the region, across multiple jurisdictions. The state and local governments have adopted a number of regulations intended to reduce solid waste disposal, which would minimize the need for new landfill facilities. Additionally, large projects within the City are required to provide a specific analysis of solid waste generation, and to minimize associated landfill disposal.

Based on the size of the Project, preparation and implementation of a WMP was required to address potential cumulative impacts related to solid waste generation. Other projects with potential to result in cumulative impacts would be subject to the same requirements, thus reducing potential cumulative impacts. Due to its nature as a potable water service facility, the Project would not result in increased demand for other utilities or service systems.

The Project would not result in a need for new off-site waste disposal systems or infrastructure, or require substantial alterations to existing systems or infrastructure. The Project also would not induce population growth in the surrounding area, which would result in further increased waste disposal. Therefore, the Project would not result in a cumulatively considerable contribution to solid waste disposal or other significant cumulative public utilities impacts.

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## **7.0 OTHER CEQA SECTIONS**

This chapter addresses the issues of Effects Found Not to be Significant, Growth Inducement, and Significant Effects Which Cannot be Avoided if the Project is Implemented.

### **7.1 Effects Found Not to Be Significant**

Based upon initial environmental review, the City has determined that the Project would not have the potential to cause significant impacts associated with the following issue areas:

- Agriculture and Forestry Resources
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Water, Wastewater, and Stormwater Utilities

#### **7.1.1 Agriculture and Forestry Resources**

The City's CEQA Significance Determination Thresholds (City 2016a) state that a significant impact on agricultural resources may result from a project which involves the conversion of areas designated as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance by the California Department of Conservation (CDC) to non-agricultural use. The project area consists entirely of Urban and Built-up Land, as mapped by the CDC (CDC 2016). The project area consists of residential development and an open space park that is owned and operated by the City's Parks and Recreation Department. Though undeveloped, the open space park is low in acreage and surrounded by development. Additionally, the open space park is primarily vegetated with southern maritime chaparral habitat, a sensitive natural community. The site has not been used for agriculture or forestry; is not zoned or designated for such uses; and does not have the potential to support these uses. As such, implementation of the Project would not result in the conversion of agricultural or forestry resources.

#### **7.1.2 Mineral Resources**

The City's CEQA Significance Determination Thresholds (City 2016a) indicate that impacts to mineral resources are considered significant in areas designated as Mineral Resource Zone (MRZ-) 2 (resource present) by the CGS. The project area does not include mapped MRZ-2 designations. Mapped mineral resource designations on the project site include MRZ-1 (resource not present) and MRZ-3 (resource potentially present) (CGS 2011). Additionally, the project area is unavailable for mining operations due to existing development and designated natural open space. As such, the Project would not impact the availability of mineral resources.

#### **7.1.3 Population and Housing**

Implementation of the Project would not induce substantial population growth because the Project does not include physical or regulatory changes that would remove a restriction to or encourage

population growth in an area, including new commercial or industrial facilities; residential development; conversion of homes to commercial or multi-family use; or regulatory changes such as general plan amendments, specific plan amendments, or zone reclassifications. While the Project would involve improvements to infrastructure to increase water storage capacity, the purpose of these improvements is to accommodate existing and projected water demand based on current projections and to help meet fire flow requirements.

The Project would not displace existing housing or substantial numbers of people because the Project impact footprint does not contain residential uses. Thus, the Project would not require the construction of replacement housing elsewhere to address such displacement, and no related impacts would occur.

#### **7.1.4 Public Services**

Appendix G of the CEQA Guidelines asks whether a project would result in substantial adverse physical impacts from the construction or alteration of governmental facilities needed to maintain acceptable service ratios, response times, or other performance objectives for public services such as police protection, fire and safety, libraries, and schools. The Project would not result in an increase in population that could affect demand for public services. Thus, no impacts related to the physical effects of constructing or altering public facilities would occur.

#### **7.1.5 Recreation**

Implementation of the Project would not generate an increase in demand on existing public or private parks or other recreational facilities that would either result in or accelerate physical deterioration of these facilities, nor would it include construction of new recreational facilities or expansion of existing recreational facilities. It should also be noted that, although there is evidence of dispersed recreational activity in La Jolla Heights Natural Park, the park is designated for the purpose of protecting natural open space and public access is not authorized. The Project would not preclude the continuation of existing uses, with the exception of restriction of access to the project site during construction. Accordingly, no impact related to recreation would occur.

#### **7.1.6 Water, Wastewater, and Stormwater Utilities**

The Project does not involve the construction of habitable structures that could generate increased demands on water and wastewater services. The proposed reservoir has been designed in response to existing and projected water demand and would not result in the construction or expansion of new water or wastewater treatment facilities or expansion of existing facilities. Similarly, the Project would not result in the construction or expansion of storm drainage facilities, as impacts related to drainage would be minimal (refer to Section 5.11, *Hydrology/Water Quality*, for additional details). Impacts associated with water, wastewater, and stormwater utilities would be less than significant.



## **7.2 Growth Inducement**

### **7.2.1 Introduction**

CEQA requires that environmental documents analyze the potential for a project to induce direct or indirect population growth, economic development and additional housing construction (PRC Section 21100; CEQA Guidelines Section 15126.2[d]). This includes projects that remove obstacles to growth by accommodating additional population or construction, such as expansion of major public service facilities. The CEQA Guidelines (Section 15126.2[d]) state: "It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

### **7.2.2 Short-term Effects**

During construction of the Project, demand for various construction trade skills and labor would increase. It is anticipated that this demand would be met by the local labor force and would not require importation of a substantial number of workers that could cause an increased demand for temporary or permanent housing in this area.

### **7.2.3 Long-term Effects**

The Project would not directly contribute to long-term growth as no housing or commercial development is proposed. The Project involves replacement of existing water storage and conveyance facilities and would not require the extension or expansion of public roadways, public services, utilities, or infrastructure into areas currently without service. The Project would include expansion of existing water storage to provide for adequate fire flows and emergency storage, as well as accommodate projected demand through 2030. As the La Jolla community is largely built out, the anticipated growth in demand in the Project's service area that would be accommodated is minimal. This growth is determined through the land use planning and approval process, with public infrastructure sized to accommodate the anticipated growth. The Project would not provide excess capacity that could be used to serve additional, unplanned growth. As a result, the Project would not be growth inducing, but rather would accommodate existing and planned water demands.

## **7.3 Significant Environmental Effects Which Cannot Be Avoided If the Project Is Implemented**

Section 16126.2(b) of the CEQA Guidelines requires an EIR to identify significant environmental effects that cannot be avoided if a project is implemented. As discussed in Chapter 5.0, *Environmental Analysis*, implementation of the Project would result in significant impacts to noise, biological resources, cultural resources, land use, and paleontological resources. The Project would result in significant and unmitigable land use and noise impacts related to extended construction hours that would be necessary for continuous concrete pours. All other impacts would be reduced to below a level of significance through the identified mitigation.

## 7.4 Significant Irreversible Environmental Changes

Section 15126(c) of the State CEQA Guidelines requires an evaluation of significant irreversible environmental changes which would occur should a project be implemented. Irreversible environmental changes typically fall into three categories: (1) primary impacts, such as the use of nonrenewable resources (i.e., biological habitat, agricultural land, mineral deposits, water bodies, energy resources and cultural resources); (2) secondary impacts, such as road improvements which provide access to previously inaccessible areas; and (3) environmental accidents potentially associated with the project. Section 15126.2(c) of the State CEQA Guidelines states that irretrievable commitments of resources should be evaluated to assure that current consumption of such resources is justified.

As described in Section 7.1, the Project would not result in impacts to agricultural land or mineral deposits. Significant impacts would occur to sensitive biological resources, including natural drainages. Upon completion, however, the majority of the site would be returned to natural contours and restored/revegetated. In addition, mitigation would be provided for the impacts that would occur. Paleontological and cultural resources could be disturbed during project grading, but would be salvaged, as necessary, and resources encountered (if any) would be recovered in accordance with City standards, as described in Section 5.6, *Historical and Tribal Resources*, and Section 5.7, *Paleontological Resources*. Impacts to paleontological and cultural resources would not be a reversible change to those resources.

The Project would entail the commitment of energy and non-renewable resources, such as energy derived from fossil fuels, construction materials (e.g., concrete, asphalt, sand and gravel, petrochemicals, steel), potable water, and labor during the construction phases. The Project includes sustainability elements to minimize its consumption of energy and non-renewable resources, as described in Section 5.10, *Energy*, and in Chapter 3.0, *Project Description*, and associated impacts would be less than significant. Nevertheless, use of these resources on any level would have an incremental effect on the regional consumption of these commodities, and therefore result in long-term, irretrievable losses of non-renewable resources, such as fuel and construction materials.

The Project would not involve road or highway improvements that would provide access to previously inaccessible areas. Further, no major environmental accidents or hazards are anticipated to occur as a result of project implementation, as discussed in Section 5.13, *Health and Safety*.

## **8.0 PROJECT ALTERNATIVES**

### **8.1 Introduction**

Section 15126.6(a) of the CEQA Guidelines requires that EIRs describe "...a reasonable range of alternatives to a project, or the location of a project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." Section 15126.6(f) of the CEQA Guidelines further states that "the range of alternatives in an EIR is governed by the 'rule of reason' that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice." The State CEQA Guidelines provide several factors that should be considered with regard to the feasibility of an alternative. Those factors include: (1) site suitability; (2) economic viability; (3) availability of infrastructure; (4) general plan consistency; (5) other plans or regulatory limitations; (6) jurisdictional boundaries; and (7) whether the project applicant can reasonably acquire, control, or otherwise have access to the alternative site (if an off-site alternative is evaluated).

### **8.2 Summary of Project Objectives and Significant Effects**

In accordance with CEQA Guidelines Section 15126.6(a), the project alternatives are assessed relative to their ability to (1) meet the basic objectives of the Project and (2) avoid or substantially lessen the significant effects of the Project.

#### **8.2.1 Project Objectives**

As described in Section 3.2, *Project Goals and Objectives*, the following are the primary goals and objectives of the Project:

1. Replace water storage facilities that are beyond their useful lives with a modern water storage system that meets current City Facility Design Guidelines and Standards to provide reliable water supply as well as reduce maintenance and energy costs;
2. Provide water storage at an elevation appropriate to support the southern portion of the North City 610 Pressure Zone;
3. Provide water storage sufficient to meet La Jolla community water demands as well as fire storage and emergency storage requirements;
4. Provide a system that allows for appropriate water cycling to maintain water quality and avoid or minimize the need for supplemental chlorine treatment;
5. Construct an underground water storage facility that returns the ground to existing contours to the extent feasible, in accordance with the Memorandum of Understanding between the City Public Utilities Department and Parks and Recreation Department; and

6. Replace conveyance pipelines that are beyond their useful life with new pipelines that are sized for current water conveyance needs.

## 8.2.2 Significant Impacts of the Proposed Project

Based on the evaluations in Chapter 5.0, *Environmental Analysis*, the Project was determined to result in significant or potentially significant impacts related to the environmental resources areas discussed below.

The Project would result in significant and unmitigable impacts related to conformance to environmental goals and objectives of applicable local land use plans, specifically in association with noise impacts during nighttime construction activities. These impacts are considered significant and unmitigable.

Project construction activities would result in noise impacts. For the majority of activities, noise would be in compliance with the City's Noise Ordinance, or would be reduced to compliance levels through use of appropriate noise barriers. Pouring of concrete for portions of the reservoir, however, would occur continuously (up to approximately 18 hours per day) for a maximum of 20 days. These extended construction hours would result in significant and unmitigable noise impacts.

With regard to biological resources, the Project would result in impacts to southern maritime chaparral, Diegan coastal sage scrub, coast barrel cactus, and jurisdictional drainages, as well as potential impacts to coastal California gnatcatcher and nesting birds. These impacts would be reduced to below a level of significance through the identified mitigation requirements.

Project grading activities have the potential to result in disturbance of currently unknown archaeological resources, TCRs, human remains, and/or paleontological resources. These impacts would be reduced to below a level of significance through implementation of required monitoring and evaluation programs.

## 8.3 Alternatives Considered But Rejected

Section 15126.6(c) of the CEQA Guidelines requires that an EIR identify alternatives that were considered and rejected as infeasible, and briefly explain the reasons for their rejection.

As described in detail in Section 3.1, *Project Need*, the existing La Jolla View Reservoir is in poor condition and requires replacement. Planning for the Project has been underway intermittently since at least 2000, including preparation of planning studies, which included review of alternatives, in 2001 and 2010. Additional evaluation of potential alternatives was undertaken in response to comments received during the EIR scoping period in 2018. The discussion of alternatives that were considered but rejected during this process is grouped by topic, several of which include multiple sub-alternatives.

### 8.3.1 Replacement or Refurbishment at Current Reservoir Site

The City considered whether replacement or refurbishment of the reservoir at its current location would be appropriate. Refurbishment of the existing reservoir is not considered feasible because the tank is not adequately sized to meet current water demands and standards (refer to Section 8.3.4, *Smaller Reservoir Size*, for additional details regarding size requirements).

As described in detail in Section 3.1, changes to the water system since the La Jolla View Reservoir was originally constructed in 1949 have resulted in the reservoir being at an elevation that is too low to effectively serve its purpose. Because its spill elevation is 85 feet below the static hydraulic grade line for the area, its water is rarely used, except during peak summer conditions when Muirlands Pump Station is operated at full capacity. Therefore, the reservoir typically sits full, which has resulted in water quality problems. As a result, the City has determined that a new facility at a higher elevation is needed (City 2010).

Additionally, a Report of Geologic Reconnaissance and Limited Geotechnical Evaluation (Law-Crandall 2001) indicated that the following geotechnical concerns may be associated with the existing site:

- Located on a possible landslide;
- Susceptible to collapse of the overstep and poorly retained uphill slope;
- Susceptible to instability of the filled pad west of the reservoir; and
- In close proximity to the potentially active Country Club Fault.

As the existing reservoir is located above several residential properties, the City was concerned about potential risks associated with retaining the reservoir at its current location. Therefore, based on these considerations, as well as the need for the reservoir to be located at a higher elevation to provide appropriate hydraulics, the City determined that refurbishment or replacement of a reservoir at the current site was infeasible.

### 8.3.2 Alternative Reservoir Sites

In order to serve its purpose, a reservoir must be located in the applicable service area. In addition, to maximize reliability as well as minimize energy and maintenance needs, it is desirable for a reservoir to feed its service area via gravity flow (i.e., water flowing downhill). An elevation that is too low would require pumping, which would reduce reliability and increase energy demand and maintenance needs. Conversely, an elevation that is too high would require additional pumping and associated energy costs to raise the water to that elevation and would result in excessive pressure that would require pressure reduction elsewhere in the downstream system.

The La Jolla View Service Area is defined as the southwest corner of the North City 610 Zone and all adjacent pressure zones that receive water from the 610 Zone via the Muirlands Pump Station (refer to Figure 3-1, *La Jolla View Reservoir Service Area*). The southern part of the North City 610 Zone is separated from the rest of the 610 Zone and its main source of water (the Miramar Water Treatment Plant) by more than 7 miles. The La Jolla View Reservoir is the only reservoir in the North City 610 Zone. Of the other reservoir sites in the vicinity, the Country Club Reservoir serves the 925 Zone,

and the Exchange Place Reservoir site is much lower, at an elevation of approximately 300 feet AMSL.

Modeling was conducted to determine the preferred hydraulic grade line for the reservoir. It was determined that the high surface water elevation should be 590 feet AMSL, to serve its key functions of regulating system pressure in the service area and serving as a forebay to the Muirlands Pump Station. Based on modeling for maintenance of water quality, the ideal water depth was determined to be 40 feet; therefore, the necessary floor elevation of the reservoir was determined to be 550 feet AMSL.

Based on the fact that the service area is almost entirely built out, the search for sites at an appropriate elevation was focused on La Jolla Heights Natural Park, which encompasses the existing La Jolla View Reservoir and Muirlands Pump Station. A MOU executed between the Public Utilities Department (formerly Water Department) and Parks and Recreation Department required that the reservoir be buried underground. An appropriate site, therefore, would have an existing ground surface elevation slightly above the desired 590 feet AMSL high surface water elevation.

A Report of Geologic Reconnaissance and Limited Geotechnical Evaluation (Law-Crandall 2001) was prepared to evaluate geotechnical considerations at potential alternative sites identified in the 2001 Design Report (Figure 8-1, *2001 Alternatives*). Alternative Site #1, located northwest of the currently proposed site, was noted as being on the boundary of an area mapped as “most susceptible to landsliding;” a potentially active unnamed fault also was mapped as trending through the site. Alternative Site #2 and adjacent slopes, located southwest of the currently proposed site, were considered potentially underlain by an ancient landslide; a potentially active unnamed fault was also noted as trending to within approximately 10 feet of the site. Alternative Site #3, located a short distance northwest of the currently proposed site, was noted as being within about 20 feet of a possible landslide and about 250 feet east of an area mapped as “most susceptible to landsliding;” a potentially active unnamed fault was also mapped about 130 feet southwest of the site. Probable and possible landslides also were noted extensively throughout the vicinity, limiting the selection of potentially feasible sites.

Appropriate elevations for siting of the reservoir also are available elsewhere within the park, to the northeast. This area is, however, located east of a large ravine. Construction of a reservoir in this location would result in increased grading and associated impacts, given the need for the associated pipeline to connect the proposed reservoir to the Muirlands Pump Station to the southwest. Creation of appropriate temporary and permanent access to this location also would result in increased impacts.

In summary, the selection of potentially appropriate reservoir sites is limited by the need to provide a reservoir at an appropriate hydraulic grade within the La Jolla View Service Area, as well as the extent of existing development within the service area. Other sites within La Jolla Heights Natural Park were considered but rejected based on geotechnical concerns as well as increased environmental impacts associated with construction. No feasible alternate reservoir sites that would reduce environmental impacts were identified.

### **8.3.3 Alternative Pipeline Alignments and Construction Techniques**

In response to concerns regarding potential impacts to sensitive biological resources as well as traffic flow, a variety of alternative alignments and construction techniques were considered for the proposed pipeline component of the project.

#### **8.3.3.1 Alternative Alignment through La Jolla Heights Natural Park**

The pipeline that would extend from the reservoir must connect to the Muirlands Pump Station, to which the La Jolla View Reservoir would serve as a forebay. Additionally, it is desired that the route traverse downhill, allowing water to flow by gravity. This would avoid the need for pumping, with associated increased energy demands and maintenance requirements. Thus, the pipeline must extend southwest from the reservoir, through La Jolla Heights Natural Park. Longer routes between these two fixed points would result in increased environmental impacts.

#### **8.3.3.2 Alternative Construction Technique through La Jolla Heights Natural Park**

The potential to construct the eastern portion of the pipeline through La Jolla Heights Natural Park also was evaluated. This construction technique would nonetheless require excavation of sending and receiving pits, and the permanent impacts of the project would be the same as for the Project. To insert the pipeline into a trenchless pit, the pipe would have to extend away from the entry point, which could result in traffic and other temporary impacts. Other potential concerns related to feasibility included geotechnical unknowns/considerations, equipment logistics, and potential complications with this methodology given the necessary diameter of the pipeline.

#### **8.3.3.3 Alternative Alignment Along Country Club Drive**

The proposed new water main in Country Club Drive would replace an existing water main in that roadway. Replacement of the pipeline in its current alignment would provide for appropriate connectivity to surrounding water infrastructure and avoid the need to acquire private property. Relocation outside of the roadway would result in the same or greater environmental impacts as the current alignment. Although construction of the pipeline in this roadway would result in inconvenience for area residents, associated impacts would remain below the CEQA significance thresholds; therefore, construction outside of the roadway would not avoid or reduce a CEQA-significant traffic impact.

#### **8.3.3.4 Alternative Construction Technique Along Country Club Drive**

As an alternative to installing the 30-inch pipeline using open trench construction, the potential to use trenchless construction for pipe installation along the narrow section of Country Club Drive between Soledad Avenue and a point roughly 100 feet southeast of La Jolla Knoll was evaluated. There are various trenchless technologies available with the specific choice highly dependent on factors including pipe diameter and length, elevation of tunneling pits, subsurface soil and

groundwater conditions, the presence of settlement-sensitive utilities, and available space for staging of equipment and materials necessary for trenchless construction.

This approximately 600-foot long section of 30-inch pipeline must interconnect with existing pipelines at two locations: existing 30-inch and 8-inch pipes at Soledad Avenue and existing 20-inch pipe at Pepita Way). At these locations, the existing pipes are located at a depth of approximately 5 feet below grade. The new pipe segment constructed using a trenchless method would be situated much deeper because of maximum slope requirements for the trenchless method considered and to avoid conflict with existing sewer, telephone, cable and natural gas utilities. Thirty-inch diameter pipe risers extending to depths of 20, 30, and 60 feet are estimated to connect to the shallower pipe segments. It should be noted that the eight-inch distribution main along the westernmost approximately 780 feet of Country Club Drive would still need to be installed via conventional open trench construction.

Given the existing space, elevation, and geotechnical factors involved, the trenchless construction method utilizing microtunneling with a tunnel boring machine (MTBM) is considered technically possible although it would be highly disruptive with required lane or possibly street closures. With high risks associated with the known site constraints, further field investigations would be needed to confirm technical suitability. This method generally involves the following:

- Excavation of jacking and receiving shafts at each end of the tunneling operation, which must be large enough to receive the MTBM, the jacking frame, and segments of pipe casing, and which must be shored for shaft stability. A minimum jacking shaft diameter is 16 feet. The MTBM and casing pipe are estimated to be 42 inches in diameter, sized to have the 30-inch carrier pipe installed inside.
- At the bottom of the jacking shaft, a jacking frame is installed to receive the MTBM and applies the force necessary to advance the MTBM during tunneling.
- As the MTBM is advanced by the jacking frame, casing pipe is installed between the jacking frame and the MTBM, and the tunneling operation proceeds in increments.
- A bentonite slurry is pumped to the face of the MTBM during tunneling to stabilize the tunnel from collapse, remove cuttings from the face of the MTBM, and reduce the friction created during jacking of the pipe casing.
- Following casing installation, the 30-inch carrier pipe is installed with grouting of the annular space.

MTBM installations are typically deep to avoid existing utilities and to reduce the risk of damage caused by settlement or collapse of weak tunnel overburden. As the tunnel depth increases, the settlement influence area also increases. With an approximate five percent maximum slope for the tunnel, the jacking shaft would be approximately 60 feet deep at the southeast end of the 30-inch pipeline alignment. Excavation of the minimum 16-foot diameter shaft would itself be a complex undertaking, and this method would require an off-street location for the jacking shaft.



Using the MTBM method, the major elements of construction would involve:

- Three shafts at the respective connection points to the shallow pipeline:
  1. An approximately 16-foot diameter by 60-foot deep shaft for MTBM launching and jacking at Country Club Drive about 350 feet southeast of Pepita Way.
  2. A 12-foot by 16-foot by 20-foot deep shaft for MTBM retrieval at Soledad Avenue and Exchange Place.
  3. A third shaft would be required to connect the 30" water main to the existing water main at Country Club Drive and Pepita Way. This shaft would be excavated after completion of the tunneling operation and would be approximately 12 feet square by 30 feet deep.
- Equipment at the main staging area would include closed loop slurry system to transport and clean excavated spoils, lubrication system to lubricate the exterior of the pipe during installation, guidance system to provide line and grade control, electrical supply and distribution system to power equipment, crane to hoist pipe sections into the jacking shaft, and trucks and loaders to transport spoils off site. The operations are managed by an operator in an above-ground control container adjacent to the jacking shaft. The estimated area required for this work is 40,000 square feet and the only suitable area would be on the golf course adjacent to Country Club Drive.
- The equipment would generate vibration which would likely be felt in adjacent homes.
- Noise levels from shaft excavation operations and electrical generators for the bentonite slurry processing plant would be comparable to noise levels from conventional excavation equipment.
- Truck traffic to remove the excavated soil from the tunnel and the shafts (estimated at approximately 1,000 cubic yards) and to backfill the shafts (estimated at approximately 850 cy).
- The construction operation would span an estimated three months because of the depth and volume of the jacking shaft excavation. Jacking operations are estimated to span 12 hours a day minimum for up to one month during the critical tunneling phase.
- At the northwesterly receiving shaft near Country Club Drive and Soledad Way, lane closure and possibly street closure would be required for shaft excavation and retrieval of the MTBM.
- The jacking and receiving shafts would be too large to cover safely with steel plates during non-construction hours and the shaft areas must be fenced off during non-construction hours, necessitating a 24-hour per day closure of at least one lane.

Given the complexities and duration of construction involved with the excavation of deep shafts, settlement risk to existing utilities and dwelling structures, noise and vibration, and the anticipated

traffic impacts, the use of the MTBM trenchless construction method, although technically possible, is expected to cause impacts which exceed the level of impact created by open trench construction.

### **8.3.3.5 Summary**

There are no alternative pipeline alignments or construction techniques available that would feasibly meet water system requirements and minimize significant environmental impacts.

## **8.3.4 Smaller Reservoir Size**

The proposed reservoir must serve several needs, including existing and future water demands (referred to as operating storage), as well as fire flow storage and emergency storage requirements. The combination of these needs was used to determine the required capacity for the reservoir. The necessary size of the reservoir has been updated as applicable throughout the planning process. For example, the 2001 Design Report identified a need for a 5.66-MG reservoir; this has been reduced to 3.11 MG based on updated calculations.

Water service demand is determined through the 2030 Max-Day Demand Water Model, which predicts what the highest demand day will be in 2030, based on population growth projections for the area. The operating storage need is then determined based on the volume of storage necessary to allow a reservoir to operate at a uniform rate throughout the day while meeting variable water demands. The industry standard turnover rate is 20 percent per day, or complete turnover every five days, in order to maintain water quality. Based on the Ultimate Maximum Day Demand of 3.58 MG for the service area, the operating storage volume for the La Jolla View Reservoir should be 0.72 MG.

The required fire flow storage volume reflects the minimum amount of water to be stored for firefighting purposes. Because the reservoir serves an area primarily composed of single-family residences, the fire flow demand is 2,000 gallons per minute (gpm), which is the lowest of the City's fire flow rates. The storage need is calculated based on providing flows at this rate for five hours. Based on these calculations, the fire storage volume should be 0.60 MG.

Per the City's CIP Facility Design Guidelines Section 2.9.1, the criterion for emergency storage is 12 hours of storage in the event that one critical water source is out of service under Max-Day Demand conditions. Based on the Max-Day Demand of 3.58 MG, the emergency storage volume should be 1.79 MG.

The total storage demand needed for the reservoir is based on the combination of these factors, for a total storage need of 3.11 MG. Because this sizing reflects the minimum criteria for the three critical storage functions, construction of a smaller reservoir would not meet the City's needs and is rejected as not meeting the basic objectives of the Project.

## **8.3.5 Limited Construction Hours**

Because the Project would result in significant and unmitigable temporary noise impacts associated with extended concrete pouring hours, an evaluation of potential methods to avoid the need for construction outside of daytime hours was conducted.

A steel reservoir would avoid the need for concrete pouring. It could not be buried, however, because steel cannot withstand the earth load against the side of the tank, and the tank would be subject to corrosion. Therefore, a steel tank could not meet the MOU requirements that the reservoir be buried.

Alternatives associated with concrete pouring also were examined. The Project is designed such that the floor slab would be poured in two half-sections. This configuration was intended to minimize joints and allow for a continuous slab around the inlet and outlet piping. An option of changing the floor to have three sections was evaluated. This would require a concrete pour period of about 10 hours, or approximately 12 total hours of construction per day on three separate days. This option would double the length of construction joints on the floor. Although structural design changes and additional reinforcement could be implemented, this option would result in reduced structural integrity of the tank.

Another option of four floor sections would require a concrete pour period of about 8 hours, or approximately 10 total hours of construction per day on four separate days. This option also would double the length of construction joints on the floor; it also would make it more difficult to waterproof the outlet sump area. Although structural and piping design changes and additional reinforcement could be implemented, this option would result in reduced structural integrity of the tank.

Because these options would reduce the structural integrity of the proposed reservoir, they were rejected from further consideration as being infeasible.

### **8.3.6 Alternative Temporary Access**

In response to the NOP, members of the public identified potential alternate routes for construction access.

One identified alternate route would extend to the southeast of the project site, traversing Upper Hillside Drive to Via Casa Alta. This route is currently closed to the public via a locked gate. Potential removal of this gate would be beyond the purview of the Project. Nonetheless, because there is potential that the gate may be removed in the future independent of the Project, the potential to use this route for construction access was evaluated. The width of these roadway lanes narrows to 9 feet (the same width as a haul truck) for a distance of approximately 1,000 feet. This would result in a potential safety conflict with residential traffic, which would require flaggers. The roads also include very tight turns that would be difficult for haul trucks to safely navigate. Additionally, Via Capri, which would provide the shortest connection to I-5/SR 52, prohibits circulation of trucks over 5 tons. Therefore, trucks would need to travel down La Jolla Scenic Drive South and Soledad Mountain Road to Garnet Avenue. This would substantially increase the number of residents that are disrupted by increased traffic and noise. In summary, this alternative was rejected because it would not provide a feasible route for project haul trucks, and its use for haul truck traffic (even if feasible) would result in increased environmental impacts. In the event that this access route is opened to the public, however, it would provide an alternate means of ingress/egress to members of the community who would be affected by construction traffic.

The other suggested alternate access would involve connecting Fairway Road or Country Club Drive, which extend south from the project site, to Nautilus Street. The distance between the southern

terminus of Country Club Drive and Nautilus Street is approximately 750 feet, and there are three homes within or immediately adjacent to the alignment between the two. The distance from the southern terminus of Fairway Road to Nautilus Street is approximately 325 feet, with the roadway alignment immediately adjacent to one home. Construction of an additional, currently unplanned roadway segment in this location would result in additional impacts related to biological resources and noise, as well as potentially cultural and paleontological resources. The Project would not result in significant impacts related to traffic/transportation, and disruption to the community would be minimized by limiting haul truck trips to no more than 50 round trips per day. Therefore, this alternative was not considered to feasibly avoid or reduce significant environmental impacts and was rejected.

## 8.4 Proposed Project Alternatives

The following two alternatives are evaluated in this analysis:

- No Project Alternative; and
- Encelia Drive Construction Access.

The following rationale was considered when identifying these alternatives:

- The No Project Alternative is required per CEQA Guidelines Section 15126.6(e). It provides a basis for comparing the impacts that would occur if the Project were approved, relative to what would occur if the Project were not approved.
- The Encelia Drive Construction Access Alternative is included because it would reduce significant impacts to biological resources, as well as potentially significant impacts to cultural and paleontological resources, that would result from implementation of the Project.

These alternatives represent a reasonable range of alternatives, as defined in the State CEQA Guidelines, because they provide feasible alternate project designs that would reduce and/or eliminate significant impacts associated with the Project. As detailed above, thorough evaluation of other potential alternatives failed to identify other options that would (1) feasibly meet the basic objectives of the Project; and (2) avoid or substantially lessen the significant effects of the Project.

The impacts associated with these alternatives are compared to those identified for the Project in the following analysis, and the alternatives are assessed relative to their ability to meet the basic objectives of the Project. An overview of Project and alternative impacts is provided in Table 8-1, *Comparison of Project and Alternative Impacts*, located at the end of this chapter.

### 8.4.1 No Project Alternative

#### 8.4.1.1 Description

Section 15126.6(e) of the CEQA Guidelines provides that the “no project” analysis shall discuss the existing conditions at the time the notice of preparation is published, as well as what would be

reasonably expected to occur in the foreseeable future if a project were not approved, based on current plans and consistent with available infrastructure and community services. Accordingly, the No Project Alternative assumes that the Project would not be adopted and a new La Jolla View Reservoir and associated pipelines would not be constructed. The existing Exchange Place Reservoir would remain inoperable and would presumably be demolished at some point in the future. The existing La Jolla View Reservoir could continue to be operable, but with severely limited function due to the noted issues, for a period of time. Eventually, however, its deteriorating condition would require it to be taken out of service and demolished. Upon demolition, the foundation and all associated structures and appurtenant items would be removed, the original grade for the hillside would be restored, and the hillside would be replanted with native vegetation. Access for the demolition and grading activities would occur via the existing Encelia Drive access road. The Muirlands Pipeline would be abandoned in place from the existing reservoir location to Country Club Drive.

As part of the Planning Study (City 2010), modeling was conducted to determine what water flow conditions would be without an operational La Jolla View Reservoir. With 2030 peak hour demands, the lowest pressure in the service area would be 39.43 pounds per square inch (psi), relative to a minimum pressure requirement of 40 psi. This is considered barely acceptable. In the event of a major water facility (i.e., the 30-inch La Jolla Shores pipeline) out of service, however, the lowest pressure in the service area would be 19.20 psi, which is substantially below the minimum pressure requirement.

#### **8.4.1.2 Environmental Analysis**

##### **Land Use**

Under the No Project Alternative, it is anticipated that the existing reservoirs and pipelines would, at some point in the future, be demolished. Their sites would be recontoured and restored/revegetated with native plant species. This alternative would avoid conflicts with the Noise Element of the General Plan, as demolition activities could occur entirely within normal construction hours. This alternative also would substantially reduce impacts to environmentally sensitive areas and would result in existing disturbed areas within La Jolla Heights Natural Park being returned to their natural contours and restored with native vegetation communities. Therefore, this alternative would avoid or substantially reduce potential conflicts with the goals and policies of applicable land use plans.

##### **Visual Quality/Neighborhood Character**

The No Project Alternative would not involve the construction of a new reservoir and pipelines. The existing La Jolla View Reservoir and its associated access road would be removed, with the site returned to its natural contours and restored with native vegetation communities. This would result in visual quality superior to that which is currently existing or would occur with the Project.

##### **Noise**

Under the No Project Alternative, noise levels would be temporarily increased in association with demolition of the existing reservoirs. Similar to the Project, impacts associated with demolition of the Exchange Place Reservoir would be significant but could be reduced to below a level of

significance through use of appropriate noise barriers. As this alternative would not involve extended construction hours associated with construction of the new La Jolla View Reservoir, this alternative would avoid temporary, significant and unmitigable impacts that would result from the Project.

### **Transportation/Circulation**

Upon abandonment of the existing facilities, maintenance trips (approximately weekly) that are required under existing conditions and would be necessary for the Project would not be necessary under the No Project Alternative. Therefore, this alternative would further reduce the negligible, less than significant transportation impacts that would result from the Project. This alternative would temporarily result in additional truck trips associated with import of fill to recontour the sites of the existing La Jolla View Reservoir and Exchange Place Reservoir. The required import would, however, be less than the export that would be required in association with the Project. Therefore, community disruption related to temporary construction traffic would be reduced by this alternative.

### **Biological Resources**

The No Project Alternative would not result in construction in currently undisturbed habitat. Therefore, this alternative would avoid significant but mitigable impacts to sensitive biological resources (sensitive vegetation communities and species, as well as jurisdictional drainages) that would occur from implementation of the Project. Similar to the Project, this alternative would include restoration of the existing La Jolla View Reservoir site and access road.

### **Cultural Resources**

As the No Project Alternative would not include disturbance in previously undisturbed areas, this alternative would avoid potentially significant but mitigable impacts to currently unknown archaeological resources, TCRs, and/or human remains. This alternative would include demolition of the existing Exchange Place Reservoir and La Jolla View Reservoir, which have been determined not to be significant historical resources.

### **Paleontological Resources**

Under the No Project Alternative, fill would be placed in previously graded areas, but no disturbance of previously undisturbed formational materials would occur. Accordingly, potentially significant but mitigable impacts related to the potential for paleontological resources in Ardath Shale (high potential), Quaternary Very Old Paralic Deposits (moderate potential), and Cretaceous Mount Soledad Formation (moderate potential) from implementation of the Project would be avoided.

### **Air Quality**

The No Project Alternative would result in some generation of air pollutants associated with demolition of the existing reservoirs and placement of fill at their current sites. Such activities would be substantially less than what would be required for the Project, however. Therefore, this alternative would result in reduced impacts relative to the less-than-significant impacts that would result from the Project.

## **Greenhouse Gas Emissions**

Similar to air quality, this alternative would reduce the quantities of GHGs generated by construction activities. Therefore, this alternative would result in reduced impacts relative to the less-than-significant impacts that would result from the Project.

## **Energy**

Because the construction activities involved in the No Project Alternative would be substantially reduced, the energy demands associated with construction activities also would be reduced accordingly. Therefore, this alternative would result in reduced energy consumption impacts relative to the less-than-significant impacts that would result from the Project.

## **Hydrology/Water Quality**

The No Project Alternative would result in the removal of existing impervious surfaces associated with the existing reservoirs and La Jolla View Reservoir access road, and it would not include the construction of new impervious surfaces. Therefore, less-than-significant impacts related to hydrology and water quality that would be associated with the Project would be reduced for this alternative. Demolition and fill/recontouring activities would result in disturbance of the existing ground surface and associated potential for erosion/sedimentation on a temporary basis until new vegetation is established. As the amount of surface disturbed under this alternative would be less than required for the Project, the associated potential for erosion and sedimentation that would be less than significant for the Project would be reduced under this alternative.

## **Geology and Soils**

The No Project Alternative would not result in construction of new structures, and thus would avoid associated potential impacts related to existing geologic and soil conditions. Placement of fill on the site of the demolished La Jolla View Reservoir does have the potential to exacerbate geologic hazards associated with a potential landslide deposit. Similar to the Project, potential impacts associated with this alternative would be avoided or reduced below a level of significance through implementation of proposed design measures and required conformance with applicable regulatory/industry standards.

## **Health and Safety**

The No Project Alternative would include demolition of the existing Exchange Place and La Jolla View Reservoirs, which contain asbestos and lead-based paint. Similar to the Project, appropriate precautions would reduce associated potential impacts to below a level of significance.

## **Utilities and Service Systems**

The No Project Alternative would result in the generation of waste associated with demolition of the existing reservoirs but would avoid the generation of additional waste associated with additional clearing, grubbing, grading, and construction. This alternative would remain subject to applicable waste diversion requirements in association with demolition debris. Therefore, the

less-than-significant impacts that would result from the Project would be reduced under this alternative.

### **8.4.1.3 Conclusion**

The No Project Alternative would avoid significant and unmitigable impacts related to nighttime construction noise, including associated conflicts with the General Plan Noise Element. It would also avoid significant but mitigable impacts to biological resources and potential impacts to cultural and paleontological resources. Less-than-significant impacts to visual resources, transportation/circulation, air quality, GHGs, energy, hydrology/ water quality, geology and soils, health and safety, and waste management that would result from the Project also would be reduced under this alternative.

This alternative would not replace water storage facilities that are beyond their useful lives with a modern water storage system that provides appropriate water storage and conveyance capabilities. Specifically, as described in Section 8.4.1.1, modeling conducted for this alternative determined that in the event of a major water facility being out of service, pressure in the service area would be substantially below the minimum pressure requirement. This alternative would, therefore, fail to meet any of the basic project objectives listed above in Section 8.2.1.

## **8.4.2 Encelia Drive Construction Access Alternative**

### **8.4.2.1 Description**

The Encelia Drive Construction Access Alternative proposes that all temporary access for construction of the La Jolla View Reservoir would occur from Encelia Drive (Figure 8-2, *Encelia Drive Construction Access*). Under this alternative, a temporary access road between Country Club Drive and the new reservoir site would not be constructed and excess soil from excavation of the reservoir would not be stockpiled on site. Rather, a temporary access road would be cut from Encelia Drive down to the tank pad with approximately 94,000 CY of soil hauled off site during excavation. Approximately 67,000 CY would be returned to the site to cover the reservoir and fill in the temporary access road after tank and pipeline construction. The alternate access route would increase the distance traveled by each haul truck by approximately one-half mile per trip along steep, narrow residential streets, and would require approximately 32,000 truck trips. In order to minimize traffic congestion by limiting the number of daily haul truck trips, this would require 640 working days of hauling, or approximately 540 more working days than the Project. In addition, all access to/from the site, including material deliveries, equipment, and workers, would be along the small residential streets up to Encelia Drive. It could be necessary to temporarily prohibit parallel parking on Brodiaea Way to provide sufficient width for two trucks to pass each other.

The other elements of this alternative would be the same as described for the Project.



## **8.4.2.2 Environmental Analysis**

### **Land Use**

Under this alternative, the reservoir construction process would be the same as identified for the Project. As a result, this alternative would result in the same conflict with the General Plan Noise Element, related to extended construction hours during continuous concrete pours. This alternative would avoid stockpiling and minimize the length of the temporary access road. Thus, while impacts to sensitive natural areas, in conflict with the La Jolla Community Plan, would occur, these impacts would be reduced.

### **Visual Quality/Neighborhood Character**

The Encelia Drive Construction Access Alternative would minimize the less-than-significant temporary visual impacts that would result from the Project, as the temporary stockpile would not be constructed. Trenching for the pipeline would nonetheless result in disturbance across the face of the hillside. Similar to the Project, the recontouring and restoration/revegetation of the site following the completion of construction activities would render visual impacts less than significant.

### **Noise**

The reservoir construction process under this alternative would be the same as identified for the Project. Therefore, the same significant and unmitigable impacts associated with continuous concrete pours (up to approximately 18 hours per day for a maximum of 20 days) also would occur under this alternative. Similar to the Project, noise associated with the remaining construction activities would be in compliance with the City's Noise Ordinance or would be reduced to compliance levels through use of appropriate noise barriers. As the number of haul truck trips would be limited in order to mitigate traffic impacts, noise impacts associated with haul trips also would be the same as those from the Project relative to the CEQA significance thresholds. Therefore, noise impacts would be substantially similar to those that would result from the Project from a CEQA perspective. It should also be noted, however, that the duration of noise disturbance to the neighborhood would be substantially increased under this alternative. Also, more residential areas would be affected by truck traffic noise with this access route.

### **Transportation/Circulation**

Operational trips under the Encelia Drive Construction Access Alternative would be the same as required for the Project and, therefore, transportation/circulation impacts would be the same (less than significant) as for the Project. This alternative would substantially increase the number of haul truck trips that would be required to remove excess material from the reservoir site, and then return a portion of that material to backfill the site upon reservoir completion. Similar to the Project, traffic congestion related to these haul trucks would be reduced by restricting the allowable number of haul trucks per day. This would, however, increase the number of hauling days from approximately 100 days under the Project to approximately 640 days under this alternative. This would substantially increase the duration of disturbance from construction to members of the community. Truck trips would also occur along narrow residential streets that would be avoided by the Project's access route. In particular, it could be necessary to temporarily prohibit parallel parking

on Brodiaea Way to provide sufficient width for two trucks to pass each other, which would represent an additional source of disruption to the community.

### **Biological Resources**

The Encelia Drive Construction Access Alternative would minimize the construction footprint of the project by avoiding stockpiling on site and reducing the length of the construction access road. Therefore, this alternative would substantially reduce the significant but mitigable impacts to sensitive biological resources (sensitive vegetation communities and species, as well as jurisdictional drainages) that would occur from implementation of the Project. Similar to the Project, the areas of temporary disturbance would be returned to native contours and restored/revegetated.

### **Cultural Resources**

This alternative would reduce the areal extent of grading that would be associated with project construction, thereby reducing the potential for impacts to currently unidentified archaeological resources, TCRs, and/or human remains. Similar to the Project, potential impacts would be reduced below a level of significance through the identified mitigation measures.

### **Paleontological Resources**

Although the areal extent of grading would be reduced under this alternative, the total amount of cut would be increased from 78,000 cy for the Project to 94,000 cy under this alternative. As a result, the potential for impacts to buried paleontological resources also would be increased. Similar to the Project, potential impacts would be reduced below a level of significance through the identified mitigation measures.

### **Air Quality**

The Encelia Drive Construction Access Alternative would increase the total amount of grading (and associated equipment emissions) that would occur as well as the amount of haul trucks that would be required. Because the number of haul trucks would be limited based on traffic considerations, the maximum daily emissions would be the same as those that would result from the Project. Similar to the Project, therefore, air quality impacts would be less than significant. Due to the increased number of working days, total emissions of criteria air pollutants associated with this alternative would, however, be greater than those of the Project.

### **Greenhouse Gas Emissions**

This alternative would increase the amount of GHG emissions that would result from grading activities and haul trucks. Similar to the Project, this alternative would comply with the CAP and other applicable policies and regulations addressing GHGs, and impacts would, therefore, be less than significant. The total emissions of GHGs associated with this alternative would, however, be greater than those of the Project.

### **Energy**

As described for GHG emissions, the Encelia Drive Construction Access Alternative would increase the amount of energy required for grading activities and haul trucks. Similar to the Project, this

alternative would not result in excessive or wasteful energy consumption, and impacts would, therefore, be less than significant. The construction process under this alternative would be less efficient than for the Project, and the amount of energy required would be greater.

### **Hydrology/Water Quality**

This alternative would reduce the areal extent of grading relative to the Project, including avoiding temporary fill and placement of a culvert in the primary drainage. As a result, the less-than-significant impacts related to hydrology, water quality, and erosion/sedimentation that would result from the Project would be reduced under this alternative.

### **Geology and Soils**

Construction of the reservoir and pipeline would be the same under this alternative as described for the Project. Similar to the Project, therefore, potential impacts associated with this alternative would be avoided or reduced below a level of significance through implementation of proposed design measures and required conformance with applicable regulatory/industry standards.

### **Health and Safety**

The Encelia Drive Construction Access Alternative would include demolition of the existing Exchange Place and La Jolla View Reservoirs, which contain asbestos and lead-based paint. Similar to the Project, appropriate precautions would reduce associated potential impacts to below a level of significance.

### **Utilities and Service Systems**

Generation of waste under this alternative would be similar to that for the Project, with the exception that the amount of soil that would require disposal would be substantially increased. Based on City standards, however, 100 percent of excavated earth is assumed to be diverted from landfills; therefore, the amount of waste that would require landfill disposal would be the same. Similar to the Project, conformance with an approved WMP would reduce impacts to below a level of significance.

### **8.4.2.3 Conclusion**

The Encelia Drive Construction Access Alternative would reduce significant, but mitigable, impacts to biological and potential cultural resources, due to the reduction in the areal extent of grading. Less-than-significant impacts to visual resources and hydrology/water quality also would be reduced under this alternative.

Impacts to geology and soils, health and safety, and utilities and service systems would be similar overall to the less-than-significant impacts that would occur from the Project. This alternative also would result in the same significant and unmitigable impacts related to the generation of noise during extended construction hours that would occur from the Project. While noise impacts from haul trucks would be the same relative to CEQA significance thresholds, the actual disruption to the community would be increased under this alternative. Transportation/circulation impacts would be

less than significant, similar to the Project; however, the disturbance to the community would be increased under this alternative.

Although still less than significant, impacts to air quality, GHG emissions, and energy under this alternative would be increased due to the substantial increase in the required number of haul trucks and increased cubic yards of grading. The potential for disturbance of sensitive paleontological resources also would be increased, with this impact reduced to below a level of significance through the same mitigation measure as required for the Project.

This alternative would replace water storage facilities that are beyond their useful lives with a modern water storage system that meets current standards and meets identified water storage, cycling, and conveyance needs. It also would be consistent with the MOU terms that require that the facility be constructed underground and return the ground to existing contours to the extent feasible. Therefore, the Encelia Drive Construction Access Alternative would meet all of the identified project objectives.

## 8.5 Environmentally Superior Alternative

The CEQA Guidelines require the identification of an environmentally superior alternative among the alternatives analyzed in an EIR. The guidelines also require that if the No Project Alternative is identified as the environmentally superior alternative, another environmentally superior alternative must be identified. The identification of the environmentally superior alternative is based on its ability to avoid or substantially lessen the effects of the project that would be significant based on CEQA thresholds.

Based on a comparison of the overall environmental impacts for the described alternatives, the No Project Alternative is identified as the environmentally superior alternative. This alternative would not result in any contribution to significant impacts related to land use, noise, biological resources, cultural resources, and paleontological resources, which would occur with the Project (refer to Table 8-1, *Comparison of Project and Alternative Impacts*). The No Project Alternative does not meet the purpose and objectives of the Project, however, as outlined in Section 8.4.1.3.

Of the remaining alternatives, the environmentally superior alternative is the Encelia Drive Construction Access Alternative. This alternative would meet all of the identified project objectives and would reduce significant but mitigable impacts to biological and cultural resources. Impacts to cultural resources are permanent; while the majority of biological resources disturbed by construction would be restored, the impacts are relatively long term in nature. Significant and unavoidable impacts (related to short-term nighttime construction noise and associated land use policy inconsistency) would remain the same under this alternative as for the Project. Transportation impacts would be the same (less than significant) relative to CEQA significance thresholds. All other impacts would be less than significant under either scenario. Therefore, because permanent or relatively long-term significant cultural and biological impacts would be reduced under this alternative, and significant temporary impacts would be the same relative to CEQA thresholds, this alternative is considered to be environmentally superior.

It should be noted that the Encelia Drive Construction Access Alternative would result in trucks traveling on more narrow, residential streets, and the haul period being substantially extended.

Although not altering the assessment of impacts relative to CEQA significance thresholds, this would result in substantial additional disruption to the community. Such community impacts may be considered by decision makers in the ultimate selection of the alternative to be implemented.

**Table 8-1**  
**COMPARISON OF PROJECT AND ALTERNATIVE IMPACTS**

<b>Environmental Topic</b>	<b>Proposed Project</b>	<b>No Project Alternative</b>	<b>Encelia Drive Construction Access Alternative</b>
Land Use	SU	N	SU-
Visual Quality/Neighborhood Character	N	N-	N-
Noise	SU	N	SU
Transportation/Circulation	N	N-	N
Biological Resources	SM	N	SM-
Cultural Resources	SM	N	SM-
Paleontological Resources	SM	N	SM+
Air Quality	N	N-	N+
Greenhouse Gas Emissions	N	N-	N+
Energy	N	N-	N+
Hydrology/Water Quality	N	N-	N-
Geology and Soils	N	N-	N
Health and Safety	N	N-	N
Utilities and Service Systems	N	N-	N

SM = significant but mitigable impacts; SU = significant and unmitigated impacts; N = no significant impacts  
- = reduced impact level(s) relative to the Project; + = increased impact level(s) relative to Project

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ARTIFICIAL FILL

LINDAVISTA FORMATION

MOUNT SOLEDAD CONGLOMERATE

CABRILLO FORMATION

GEOLOGIC CONTACT  
(APPROXIMATE, AFTER KENNEDY, 1975)

FAULT, DASHED WHERE INFERRED,  
DOTTED WHERE CONCEALED

LANDSLIDE (PROBABLE)

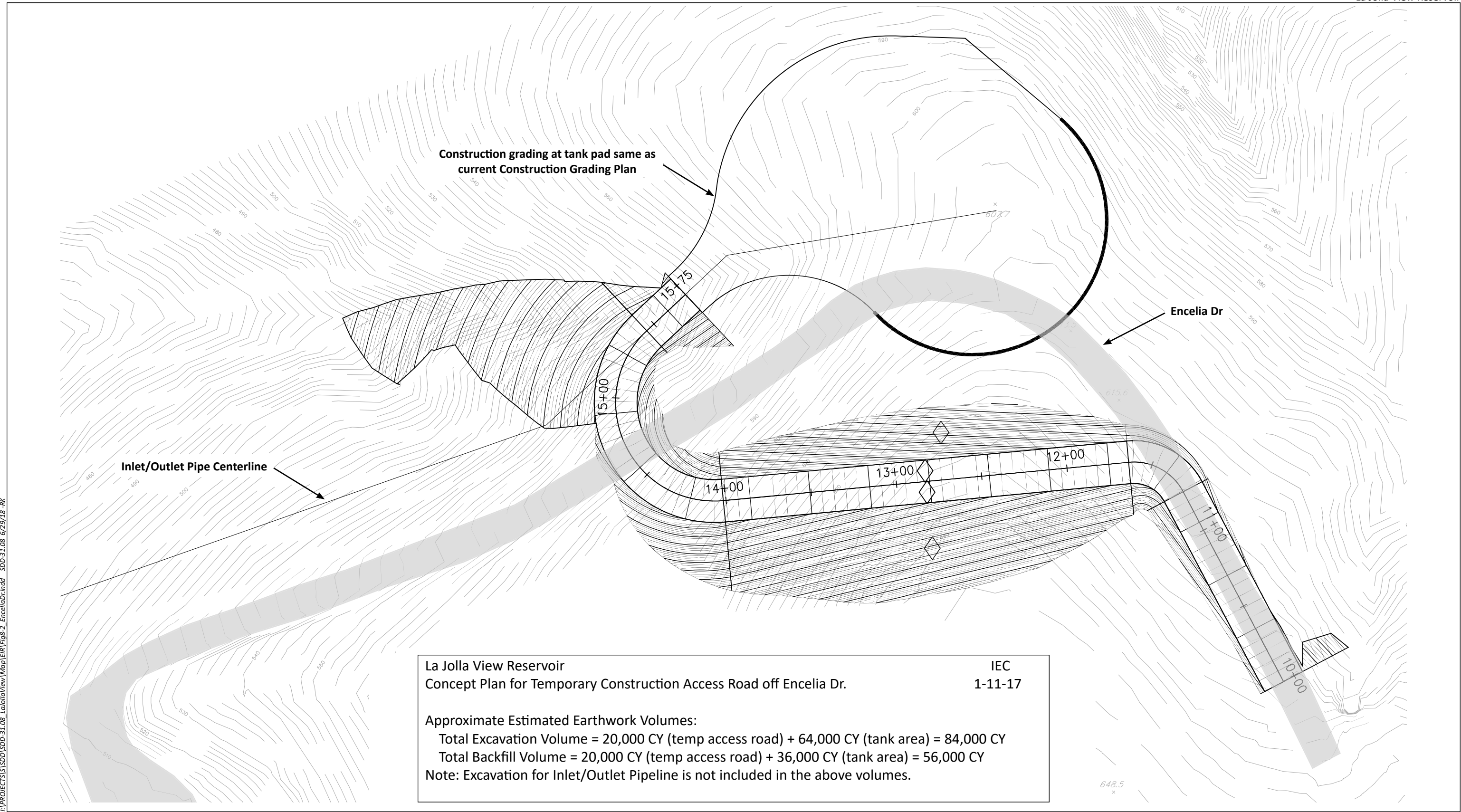
LANDSLIDE (POSSIBLE)

AREA MOST SUSCEPTIBLE TO  
LANDSLIDING, AFTER TAN, 1995

NORTH

Source: Law Crandall 2001





Source: IEC 2017



## 9.0 MITIGATION, MONITORING AND REPORTING PROGRAM

As Lead Agency for the proposed project under CEQA, the City of San Diego will administer the Mitigation, Monitoring and Reporting Program (MMRP) for the following environmental issue areas as identified in the La Jolla View Reservoir Project EIR: Noise, Biological Resources, Cultural Resources, and Paleontological Resources. This MMRP shall be made a requirement of project approval.

Section 21081.6 of the State of California PRC requires a Lead or Responsible Agency that approves or carries out a project where an EIR has identified significant environmental effects to adopt a "reporting or monitoring program for adopted or required changes to mitigate or avoid significant environmental effects." The City of San Diego is the Lead Agency for the La Jolla View Reservoir Project EIR, and therefore must ensure the enforceability of the MMRP. An EIR has been prepared for this project that addresses potential environmental impacts and, where appropriate, recommends measures to mitigate these impacts.

To ensure that site development would avoid significant environmental impacts, a MMRP is required. Compliance with the mitigation measures shall be the responsibility of the applicant. The mitigation measures are described below.

Prior to the issuance of a Notice to Proceed (NTP) or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits the Assistant Deputy Director (ADD) environmental designee of the City's Land Development Review Division (LDR) shall verify that the following statement is shown on the grading and/or construction plans as a note under the heading Environmental Requirements: "La Jolla View Reservoir Project is subject to Mitigation, Monitoring and Reporting Program and shall conform to the mitigation conditions as contained in the (EIR/Project Tracking System (PTS) No. 331101 and State Clearinghouse number 2016071031)."

### A. GENERAL REQUIREMENTS – PART I

#### Plan Check Phase (prior to permit issuance or Notice to Proceed)

1. Prior to the Bid Opening/Bid Award or beginning any construction related activity on-site, the Development Services Department (DSD) Director's Environmental Designee (ED) shall review and approve all Construction Documents (CD) (plans, specification, details, etc.) to ensure the MMRP requirements are incorporated into the design.
2. In addition, the ED shall verify that the MMRP Conditions/Notes that apply ONLY to the construction phases of this project are included VERBATIM, under the heading, "ENVIRONMENTAL/MITIGATION REQUIREMENTS."
3. These notes must be shown within the first three (3) sheets of the construction documents in the format specified for engineering construction document templates as shown on the City website: <http://www.sandiego.gov/development-services/industry/standtemp.shtml>.

4. The title index sheet must also show on which pages the “Environmental/Mitigation Requirements” notes are provided.

## **B. GENERAL REQUIREMENTS – PART II**

### Post Plan Check (After Permit Issuance/Prior to Start of Construction)

1. Pre construction meeting is required ten (10) working days prior to beginning any work on this project. The Permit Holder/Owner is responsible to arrange and perform this meeting by contacting the City Resident Engineer (RE) of the field engineering division and City staff from Mitigation Monitoring Coordination (MMC). Attendees must also include the Permit Holder’s representative(s), job site superintendent, and the following consultants:

- Qualified Archaeologist, Paleontological, Acoustical, Historic Resources, Native American and Biological Monitors

Note: Failure of all responsible Permit Holder’s representatives and consultants to attend shall require an additional meeting with all parties present.

Contact Information:

- a) The Primary Point of Contact (POC) is the RE at the Field Engineering Division – 858-627-3200
  - b) For Clarification of environmental requirements, it is also required to call RE and MMC at 858-627-3360
2. MMRP Compliance: This Project, PTS No. 331101 and/or Environmental Document No. 331101, shall conform to the mitigation requirements contained in the associated Environmental Document and implemented to the satisfaction of the DSD’s Environmental Designee (MMC) and the City Engineer (RE). The requirements may not be reduced or changed but may be annotated (i.e., to explain when and how compliance is being met and location of verifying proof, etc.). Additional clarifying information may also be added to other relevant plan sheets and/or specifications as appropriate (i.e., specific locations, times of monitoring, methodology, etc.).  
  
Note: Permit Holder’s Representatives must alert RE and MMC if there are any discrepancies in the plans or notes, or any changes due to field conditions. All conflicts must be approved by RE and MMC BEFORE the work is performed.
3. Other Agency Requirements: Evidence of compliance with all other agency requirements or permits shall be submitted to the RE and MMC for review and acceptance prior to the beginning of work or within one week of the Permit Holder obtaining documentation of those permits or requirements. Evidence shall include copies of permits, letters of resolution or other documentation issued by the responsible agency.
  - Regional Water Quality Control Board: National Pollutant Discharge Elimination System General Construction Permit

- U.S. Army Corps of Engineers: Clean Water Act Section 404 authorization
4. **Monitoring Exhibits:** All consultants are required to submit, to RE and MMC, a monitoring exhibit on a 11x17 reduction of the appropriate construction plan, such as site plan, grading, landscape, etc., marked to clearly show the specific areas including the LIMIT OF WORK, scope of that discipline's work, and notes indicating when in the construction schedule that work will be performed. When necessary for clarification, a detailed methodology of how the work will be performed shall be included.
  5. **Other Submittals and Inspections:** The Permit Holder/Owner's representative shall submit all required documentation, verification letters, and requests for all associated inspections to the RE and MMC for approval per the following schedule:

#### Document Submittal/Inspection Checklist

Issue Area	Document Submittal	Associated Inspection/ Approvals/Notes
General	Consultant Qualification Letters	Prior to Preconstruction Meeting
General	Consultant Construction Monitoring Exhibits	Prior to or at Preconstruction Meeting
Biology	Biology Reports	Biology/Habitat Restoration Inspection
Paleontology	Paleontology Reports	Paleontology Site Observation
Archaeology	Archaeology Reports	Archaeology Observation
Noise	Acoustical Reports	Noise Mitigation Features Inspection
Tribal Cultural Resources	Archaeology Reports	Archaeology Observation
Waste Management	Waste Management Reports	Waste Management Inspections

### C. SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS FROM EIR

#### NOISE

##### ***Mitigation Measure NOI-1***

**Noise Barrier for Construction Phase 3 - Demolition of Exchange Place Reservoir.** Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and Mitigation Monitoring Coordinator (MMC) shall ensure the following notes are included on the project plans. For demolition of the existing Exchange Place Reservoir, if a breaker is used within 73 feet or if a concrete saw is used within 98 feet of a residence, a temporary 16-foot-high noise control barrier shall be erected between the breaker or concrete saw and the residence to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour). The barrier shall be a minimum of five feet above the first floor foundation of the adjacent residential structure. If applicable, a construction safety barrier may be enhanced to act as a noise control barrier by meeting the specifications listed below.

The temporary noise control barrier shall be tall enough to break the line of sight between the breaker and concrete saw and the sensitive receptor. The sound attenuation barrier must be solid. It can be constructed of wood, plywood, or flexible vinyl curtains that meet a rating of Sound Transmission Class (STC) 19, as long as there are no cracks or gaps, through or below the wall. Any

seams or cracks must be filled or caulked. If wood or plywood is used, it can be tongue and groove and must be at least 5/8-inch total thickness or have a density of at least 3.5 pounds per square foot.

Alternative methods (including, but not limited to the use of alternative sound barriers, noise attenuation devices/modifications to construction equipment, limiting hours of operation, or a combination of these measures) may be employed to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour); however, if alternate measures are employed, they shall be evaluated by a qualified acoustician prior to the initiation of construction activities to ensure that they will reduce noise levels to within City standards.

### ***Mitigation Measure NOI-2***

**Noise Barrier for Construction Phase 6.** Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and MMC shall ensure the following notes are included on the project plans. For construction of the proposed reservoir, if concrete pouring occurs during evening and nighttime hours, a temporary 16-foot-high noise control barrier shall be erected and shall surround the construction site and operating equipment to reduce noise levels.

The sound attenuation barrier must be solid. It can be constructed of wood, plywood, or flexible vinyl curtains that meet a rating of STC 19, as long as there are no cracks or gaps, through or below the wall. Any seams or cracks must be filled or caulked. If wood or plywood is used, it can be tongue and groove and must be at least 5/8-inch total thickness or have a density of at least 3.5 pounds per square foot.

### ***Mitigation Measure NOI-3***

**Noise Barrier for Construction Phase 8.** Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and MMC shall ensure the following notes are included on the project plans. For trenching within the Encelia Drive access road, if a backhoe is used within 35 feet of a residence, a temporary 10-foot-high noise control barrier shall be erected between the backhoe and residence to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour).

The temporary noise control barrier shall be tall enough to break the line of sight between the pieces of equipment and the residence. The sound barrier specifications and alternative compliance procedures shall be the same as those described in Mitigation Measure NOI-1.

### ***Mitigation Measure NOI-4***

**Noise Barrier for Construction Phase 10.** Prior to issuance of demolition, grading, or building permits, the City's Environmental Designee and MMC shall ensure the following notes are included on the project plans. For trenching within Country Club Drive, if a concrete saw is used within 25 feet of a residence, a temporary 6-foot-high noise control barrier shall be erected between the concrete saw and the residence to reduce noise levels below the City Noise Ordinance construction threshold of 75 dBA  $L_{EQ}$  (12 hour).

The temporary noise control barrier shall be tall enough to break the line of sight between the pieces of equipment and the residence. The sound barrier specifications and alternative compliance procedures shall be the same as those described in Mitigation Measure NOI-1.

## **BIOLOGICAL RESOURCES**

### ***Mitigation Measure BIO-1***

#### **I. Prior to Construction**

- A. **Biologist Verification** – The owner/permittee shall provide a letter to the City's MMC section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.
- B. **Preconstruction Meeting** – The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.
- C. **Biological Documents** – The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), ESL Ordinance (ESL), project permit conditions; CEQA; endangered species acts (ESAs); and/or other local, state or federal requirements.
- D. **BCME** – The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C, above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coast barrel cactus), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.
- E. **Avian Protection Requirements** – To avoid any direct impacts to coastal California gnatcatcher and avian species identified as a listed, candidate, sensitive, or special status species in the MSCP, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the

results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting coastal California gnatcatcher, sensitive, or MSCP-covered birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable state and federal law (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Qualified Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

- F. Resource Delineation – Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora & fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.
- G. Education – Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

## II. During Construction

- A. Monitoring – All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSV). The CSV shall be e-mailed to MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.
- B. Subsequent Resource Identification – The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on site (e.g., flag plant specimens for avoidance during access, etc.). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

### III. Post Construction Measures

- A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

#### **Vegetation Communities**

Under the City's Biology Guidelines, project impacts to Tiers I-III habitats must be mitigated. Project mitigation must occur at ratios outlined in Table 5.5-4, *Mitigation Requirements for Project Impacts to Sensitive Upland Vegetation Communities*, in Section 5.5.2.4 of this EIR, which also itemizes the impacts anticipated in each habitat type, and the resulting mitigation requirement.

Mitigation will be achieved by conserving lands on and off site.

With the exception of the reservoir facility, utility easements, and required brush management areas for adjacent homeowners, all project areas will be restored for mitigation purposes (refer to Preliminary Revegetation Plans in Appendix H to the BTR). As native plant restoration areas (versus revegetation), these areas will require a five-year mitigation and monitoring program. It is anticipated that on-site restoration will achieve approximately 4.57 acres of mitigation, which is only a portion of the total mitigation needed for project impacts.

With 4.57 acres of Tier I habitat land available for mitigation through on-site restoration, the balance of 6.50 acres of Tier I habitat and 0.14 acre of Tier II habitat will need to be mitigated off site. Mitigation for the remaining 6.64 acres for Project upland impacts will occur on City-owned lands in the Los Peñasquitos Canyon Preserve. At this site, 7.01 acres of combined Tier IIIB disturbed non-native grassland will be converted and Tier II disturbed Diegan coastal sage scrub will be enhanced to Tier I maritime succulent scrub. This approach to mitigation for Tier I impacts associated with the proposed project is acceptable considering the current condition of existing habitat and the presence of similar Tier I vegetation in the vicinity of the proposed mitigation site. The proposed conversion/enhancement of existing disturbed non-native grassland/Diegan coastal sage scrub to Tier I habitat likewise would provide a benefit by restoring habitat that used to be more common in coastal areas historically, and was more abundant within Los Peñasquitos canyon prior to recent fires that favored an expansion of non-native grasses. The proposed mitigation site is within the MHPA and near existing maritime succulent scrub habitat.

It is anticipated that increasing the density and species richness of native vegetation will provide higher quality habitat to facilitate improved use of the site by coastal California gnatcatcher. Based on the presence of appropriate soils and slope aspect within the proposed mitigation area, and existing maritime succulent scrub located nearby on similar soils and slope aspect, target maritime succulent scrub is expected to be self-sustaining at the selected mitigation site. To ensure long-term sustainability, the site will be maintained and monitored for five years, and remedial measures such as re-planting and invasives control will be implemented as the target species establish.

The project applicant will be responsible for ensuring compliance with all revegetation and restoration performance standards as outlined in the project restoration plan. Pursuant to the

Off-Site Tier I Maritime Succulent Scrub Restoration Plan for the La Jolla View Reservoir Replacement Project (HELIX 2019c), final approval of the mitigation effort will be provided by the City MMC when sustained success of the community is achieved. The mitigation area is located within the MHPA on land owned by the City in fee title and managed by the Parks and Recreation Department. Success of the site will be measured and achieved using a reference maritime succulent scrub site located at Kate O. Sessions Neighborhood Park, as outlined and fully described in the Off-Site Tier I Maritime Succulent Scrub Restoration Plan for the La Jolla View Reservoir Replacement Project (HELIX 2019c). Upon successful completion and final approval of the mitigation effort, the Parks and Recreation Department will again be responsible for provision of long-term management in accordance with the MSCP Framework Management Plan and applicable area-specific management directives as part of their Open Space management program. Restoration of 7.01 acres of maritime succulent scrub would exceed the requirement for 6.50 acres of Tier I and 0.14 acre Tier II off-site habitat mitigation by 0.37 acre.

### ***Mitigation Measure BIO-2***

Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental Designee shall verify that the Project has ensured the restoration and preservation of upland habitats based on the ratios shown in Table 5.5-4 in Section 5.5.2.4 of the EIR. This shall be conducted in accordance with the Conceptual On-site Upland and Ephemeral Drainage Restoration and Revegetation Plan (HELIX 2019b) and Off-Site Tier I Maritime Succulent Scrub Restoration Plan (HELIX 2019c).

Prior to the issuance of a Notice to Proceed (NTP) or any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits the ADD environmental designee of the City's LDR Division shall incorporate the following mitigation measures into the project design and include them verbatim on all appropriate construction documents. Note that these requirements apply to both on-site and off-site restoration activities.

### **Prior to Permit Issuance**

#### **A. Land Development Review (LDR) Plan Check**

- 1) Prior to NTP or issuance for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, whichever is applicable, the ADD environmental designee shall verify that the requirements for the revegetation/restoration plans and specifications, including mitigation of direct impacts to southern maritime chaparral have been shown and noted on the appropriate landscape construction documents. The landscape construction documents and specifications must be found to be in conformance with the La Jolla View Reservoir Replacement Project Conceptual On-Site Upland and Ephemeral Drainage Restoration and Revegetation Plan prepared by HELIX Environmental Planning (2019b), the requirements of which are summarized below.

#### **B. Revegetation/Restoration Plan(s) and Specifications**

- 1) Landscape Construction Documents (LCD) shall be prepared on D-sheets and submitted to the City of San Diego Development Services Department, Landscape Architecture Section (LAS) for review and approval. LAS shall consult with Mitigation Monitoring Coordination



(MMC) and obtain concurrence prior to approval of LCD. The LCD shall consist of revegetation/restoration, planting, irrigation, and erosion control plans; including all required graphics, notes, details, specifications, letters, and reports as outlined below.

- 2) Landscape Revegetation/Restoration Planting and Irrigation Plans shall be prepared in accordance with the San Diego Land Development Code (LDC) Chapter 14, Article 2, Division 4, the LDC Landscape Standards submittal requirements, and Attachment "B" (General Outline for Revegetation/Restoration Plans) of the City of San Diego's LDC Biology Guidelines (July 2002). The Principal Qualified Biologist (PQB) shall identify and adequately document all pertinent information concerning the revegetation/restoration goals and requirements, such as but not limited to, plant/seed palettes, timing of installation, plant installation specifications, method of watering, protection of adjacent habitat, erosion and sediment control, performance/success criteria, inspection schedule by City staff, document submittals, reporting schedule, etc. The LCD shall also include comprehensive graphics and notes addressing the ongoing maintenance requirements (after final acceptance by the City).
- 3) The Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Construction Manager (CM) and Grading Contractor (GC), where applicable shall be responsible to ensure that for all grading and contouring, clearing and grubbing, installation of plant materials, and any necessary maintenance activities or remedial actions required during installation and the 120-day plant establishment period are done per approved LCD. The following procedures at a minimum, but not limited to, shall be performed:
  - a. The RMC shall be responsible for the maintenance of the upland mitigation area for a minimum period of 120 days. Maintenance visits shall be conducted on a weekly basis throughout the plant establishment period.
  - b. At the end of the 120-day period the PQB shall review the mitigation area to assess the completion of the short-term plant establishment period and submit a report for approval by MMC.
  - c. MMC will provide approval in writing to begin the five-year long-term establishment/maintenance and monitoring program.
  - d. Existing indigenous/native species shall not be pruned, thinned or cleared in the revegetation/mitigation area.
  - e. The revegetation site shall not be fertilized.
  - f. The RIC is responsible for reseeding (if applicable) if weeds are not removed, within one week of written recommendation by the PQB.
  - g. Weed control measures shall include the following: (1) hand removal, (2) cutting, with power equipment, and (3) chemical control. Hand removal of weeds is the most desirable method of control and will be used wherever possible.
  - h. Damaged areas shall be repaired immediately by the RIC/RMC. Insect infestations, plant diseases, herbivory, and other pest problems will be closely monitored throughout the

- five-year maintenance period. Protective mechanisms such as metal wire netting shall be used as necessary. Diseased and infected plants shall be immediately disposed of off-site in a legally acceptable manner at the discretion of the PQB or Qualified Biological Monitor (QBM) (City approved). Where possible, biological controls will be used instead of pesticides and herbicides.
- 4) If a Brush Management Program is required the revegetation/restoration plan shall show the dimensions of each brush management zone and notes shall be provided describing the restrictions on planting and maintenance and identify that the area is impact neutral and shall not be used for habitat mitigation/credit purposes.

**C. Letters of Qualification Have Been Submitted to ADD**

- 1) The applicant shall submit, for approval, a letter verifying the qualifications of the biological professional to MMC. This letter shall identify the PQB, Principal Restoration Specialist (PRS), and QBM, where applicable, and the names of all other persons involved in the implementation of the revegetation/restoration plan and biological monitoring program, as they are defined in the City of San Diego Biological Review References. Resumes and the biology worksheet should be updated annually.
- 2) MMC will provide a letter to the applicant confirming the qualifications of the PQB/PRS/QBM and all City Approved persons involved in the revegetation/restoration plan and biological monitoring of the project.
- 3) Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the project.
- 4) PQB must also submit evidence to MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program (SWPPP) training.

**Prior to Start of Construction**

**A. PQB/PRS Shall Attend Preconstruction (Precon) Meetings**

- 1) Prior to beginning any work that requires monitoring:
  - a. The owner/permittee or their authorized representative shall arrange and perform Precon Meeting that shall include the PQB or PRS, Construction Manager (CM) and/or Grading Contractor (GC), Landscape Architect (LA), Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC.
  - b. The PQB shall also attend any other grading/excavation related Precon Meetings to make comments and/or suggestions concerning the revegetation/restoration plan(s) and specifications with the RIC, CM and/or GC.
  - c. If the PQB is unable to attend the Precon Meeting, the owner shall schedule a focused Precon Meeting with MMC, PQB/PRS, CM, BI, LA, RIC, RMC, RE and/or BI, if appropriate,

prior to the start of any work associated with the revegetation/restoration phase of the project, including site grading preparation.

2) Where Revegetation/Restoration Work Will Occur

- a. Prior to the start of any work, the PQB/PRS shall also submit a revegetation/restoration monitoring exhibit (RRME) based on the appropriate reduced LCD (reduced to 11"x 17" format) to MMC, and the RE, identifying the areas to be revegetated/restored including the delineation of the limits of any disturbance/grading and any excavation.
- b. PQB shall coordinate with the construction superintendent to identify appropriate Best Management Practices (BMPs) on the RRME.

3) When Biological Monitoring Will Occur

- a. Prior to the start of any work, the PQB/PRS shall also submit a monitoring procedures schedule to MMC and the RE indicating when and where biological monitoring and related activities will occur.

4) PQB Shall Contact MMC to Request Modification

- a. The PQB may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the revegetation/restoration plans and specifications. This request shall be based on relevant information (such as other sensitive species not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA) which may reduce or increase the potential for biological resources to be present.

## **During Construction**

### **A. PQB or QBM Present During Construction/Grading/Planting**

- 1) The PQB or QBM shall be present full-time during construction activities including but not limited to, site preparation, cleaning, grading, excavation, landscape establishment in association with restoration or revegetation activities which could result in impacts to sensitive biological resources as identified in the LCD and on the RRME. The RIC and/or QBM are responsible for notifying the PQB/PRS of changes to any approved construction plans, procedures, and/or activities. The PQB/PRS is responsible to notify the CM, LA, RE, BI and MMC of the changes.
- 2) The PQB or QBM shall document field activity via the Consultant Site Visit Record Forms (CSVSR). The CSVSRs shall be faxed by the CM the first day of monitoring, the last day of monitoring, monthly, and in the event that there is a deviation from conditions identified within the LCD and/or biological monitoring program. The RE shall forward copies to MMC.
- 3) The PQB or QBM shall be responsible for maintaining and submitting the CSVSR at the time that CM responsibilities end (i.e., upon the completion of construction activity other than that of associated with biology).

- 4) All construction activities (including staging areas) shall be restricted to the development areas as shown on the LCD. The PQB/PRS or QBM staff shall monitor construction activities as needed, with MMC concurrence on method and schedule. This is to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved LCD.
- 5) The PQB or QBM shall supervise the placement of orange construction fencing or City approved equivalent, along the limits of potential disturbance adjacent to (or at the edge of) all sensitive habitats, including southern maritime chaparral and Diegan coastal sage scrub, as shown on the approved LCD.
- 6) The PQB shall provide a letter to MMC that limits of potential disturbance has been surveyed, staked and that the construction fencing is installed properly
- 7) The PQB or QBM shall oversee implementation of BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measures, as needed to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible to verify the removal of all temporary construction BMPs upon completion of construction activities. Removal of temporary construction BMPs shall be verified in writing on the final construction phase CSV.
- 8) PQB shall verify in writing on the CSVs that no trash stockpiling or oil dumping, fueling of equipment, storage of hazardous wastes or construction equipment/material, parking or other construction related activities shall occur adjacent to sensitive habitat. These activities shall occur only within the designated staging area located outside the area defined as biological sensitive area.
- 9) The long-term establishment inspection and reporting schedule per LCD must all be approved by MMC prior to the issuance of the Notice of Completion (NOC) or any bond release.

#### B. Disturbance/Discovery Notification Process

- 1) If unauthorized disturbances occur or sensitive biological resources are discovered that where not previously identified on the LCD and/or RRME, the PQB or QBM shall direct the contractor to temporarily divert construction in the area of disturbance or discovery and immediately notify the RE or BI, as appropriate.
- 2) The PQB shall also immediately notify MMC by telephone of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate Best Management Practices (BMPs). After obtaining concurrence with MMC and the RE, PQB and CM shall install the approved protection and agreement on BMPs.
- 3) The PQB shall also submit written documentation of the disturbance to MMC within 24 hours by fax or email with photos of the resource in context (e.g., show adjacent vegetation).

### C. Determination of Significance

- 1) The PQB shall evaluate the significance of disturbance and/or discovered biological resource and provide a detailed analysis and recommendation in a letter report with the appropriate photo documentation to MMC to obtain concurrence and formulate a plan of action which can include fines, fees, and supplemental mitigation costs.
- 2) MMC shall review this letter report and provide the RE with MMC's recommendations and procedures.

### Post Construction

#### A. Mitigation, Monitoring and Reporting Period

- 1) Five-Year Mitigation Establishment/Maintenance Period
  - a. The RMC shall be retained to complete maintenance monitoring activities throughout the five-year mitigation monitoring period.
  - b. Maintenance visits will be conducted twice per month for the first six months, once per month for the remainder of the first year, and quarterly thereafter.
  - c. Maintenance activities will include all items described in the LCD.
  - d. Plant replacement will be conducted as recommended by the PQB (note: plants shall be increased in container size relative to the time of initial installation or establishment or maintenance period may be extended to the satisfaction of MMC).
- 2) Five-Year Biological Monitoring
  - a. All biological monitoring and reporting shall be conducted by a PQB or QBM, as appropriate, consistent with the LCD.
  - b. Monitoring shall involve both qualitative horticultural monitoring and quantitative monitoring (i.e., performance/success criteria). Horticultural monitoring shall focus on soil conditions (e.g., moisture and fertility), container plant health, seed germination rates, presence of native and non-native (e.g., invasive exotic) species, any significant disease or pest problems, irrigation repair and scheduling, trash removal, illegal trespass, and any erosion problems.
  - c. After plant installation is complete, qualitative monitoring surveys will occur monthly during year one and quarterly during years two through five.
  - d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 6, 12, 24, 36, 48 and 60 months by the PQB or QBM. The revegetation/restoration effort shall be quantitatively evaluated once per year (in spring) during years three through five, to determine compliance with the performance standards identified on the LCD. All plant material must have survived without supplemental irrigation for the last two years.

- e. Quantitative monitoring shall include the use of fixed transects and photo points to determine the vegetative cover within the revegetated habitat. Collection of fixed transect data within the revegetation/restoration site shall result in the calculation of percent cover for each plant species present, percent cover of target vegetation, tree height and diameter at breast height (if applicable) and percent cover of non-native/non-invasive vegetation. Container plants will also be counted to determine percent survivorship. The data will be used determine attainment of performance/success criteria identified within the LCD.
- f. Biological monitoring requirements may be reduced if, before the end of the fifth year, the revegetation meets the fifth year criteria and the irrigation has been terminated for a period of the last two years.
- g. The PQB or QBM shall oversee implementation of post-construction BMPs, such as gravel bags, straw logs, silt fences or equivalent erosion control measure, as needed to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible to verify the removal of all temporary post-construction BMPs upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSVR.

#### B. Submittal of Draft Monitoring Report

- 1) A draft monitoring letter report shall be prepared to document the completion of the 120-day plant establishment period. The report shall include discussion on weed control, horticultural treatments (pruning, mulching, and disease control), erosion control, trash/debris removal, replacement planting/reseeding, site protection/signage, pest management, vandalism, and irrigation maintenance. The revegetation/restoration effort shall be visually assessed at the end of 120-day period to determine mortality of individuals.
- 2) The PQB shall submit two copies of the Draft Monitoring Report which describes the results, analysis, and conclusions of all phases of the Biological Monitoring and Reporting Program (with appropriate graphics) to MMC for review and approval within 30 days following the completion of monitoring. Monitoring reports shall be prepared on an annual basis for a period of five years. Site progress reports shall be prepared by the PQB following each site visit and provided to the owner, RMC and RIC. Site progress reports shall review maintenance activities, qualitative and quantitative (when appropriate) monitoring results including progress of the revegetation relative to the performance/success criteria, and the need for any remedial measures.
- 3) Draft annual reports (three copies) summarizing the results of each progress report including quantitative monitoring results and photographs taken from permanent viewpoints shall be submitted to MMC for review and approval within 30 days following the completion of monitoring.
- 4) MMC shall return the Draft Monitoring Report to the PQB for revision or, for preparation of each report.

- 5) The PQB shall submit revised Monitoring Report to MMC (with a copy to RE) for approval within 30 days.
- 6) MMC will provide written acceptance of the PQB and RE of the approved report.

C. Final Monitoring Reports(s)

- 1) PQB shall prepare a Final Monitoring upon achievement of the fifth year performance/success criteria and completion of the five-year maintenance period.
  - a. This report may occur before the end of the fifth year if the revegetation meets the fifth year performance/success criteria and the irrigation has been terminated for a period of the last two years.
  - b. The Final Monitoring report shall be submitted to MMC for evaluation of the success of the mitigation effort and final acceptance. A request for a pre-final inspection shall be submitted at this time, MMC will schedule after review of report.
  - c. If at the end of the five years any of the revegetated area fails to meet the project's final success standards, the applicant must consult with MMC. This consultation shall take place to determine whether the revegetation effort is acceptable. The applicant understands that failure of any significant portion of the revegetation/restoration area may result in a requirement to replace or renegotiate that portion of the site and/or extend the monitoring and establishment/maintenance period until all success standards are met.

**Mitigation Measure BIO-3**

Applicable 404 permits and/or clearances shall be obtained prior to any disturbance of the jurisdictional features on site. All mitigation measures and conditions required per such permits shall be implemented. As a minimum, the following shall be completed for mitigation for impacts to Waters of the U.S. and jurisdictional streambeds. Mitigation options include on site, offsite, in lieu fee mitigation, or a combination, to replace on-site jurisdictional features. Avoided jurisdictional waters shall be fenced or flagged for avoidance. BMPs shall be implemented to avoid indirect impacts to jurisdictional waters, including the following:

1. Vehicles and equipment will not be operated in ponded or flowing water except as described in the permits.
2. Water containing mud, silt, or other pollutants from grading or other activities will not be allowed to enter jurisdictional waters or be placed in locations that may be subjected to high storm flows.
3. Spoil sites will not be located within 30 feet from the boundaries of jurisdictional waters or in locations that may be subject to high storm flows, where spoils might be washed back into drainages.
4. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil, or other petroleum products, or any other substances that could be hazardous to vegetation or

wildlife resources, resulting from project-related activities, will be prevented from contaminating the soil and/or entering avoided jurisdictional waters.

5. No equipment maintenance will occur within 100 feet of jurisdictional waters and no petroleum products or other pollutants from the equipment will be allowed to enter these areas or enter any off-site state-jurisdictional waters under any flow.

## **CULTURAL RESOURCES**

### ***Mitigation Measure HIS-1***

#### **I. Prior to Permit Issuance or Bid Opening/Bid Award**

##### **A. Entitlements Plan Check**

1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.

##### **B. Letters of Qualification have been submitted to ADD**

1. Prior to Bid Award, the applicant shall submit a letter of verification to MMC identifying the PI for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.
3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

#### **II. Prior to Start of Construction**

##### **A. Verification of Records Search**

1. The PI shall provide verification to MMC that a site-specific records search (1/4-mile radius) has been completed. Verification includes but is not limited to a copy of a confirmation letter from South Coastal Information Center (SCIC), or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.



3. The PI may submit a detailed letter to MMC requesting a reduction to the 1/4-mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Construction Manager (CM) and/or Grading Contractor, RE, Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the CM and/or Grading Contractor.
  - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.
2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)
  - a. The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program.
3. Identify Areas to be Monitored
  - a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11"x17") to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
  - b. The AME shall be based on the results of a site-specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation).
  - c. MMC shall notify the PI that the AME has been approved.
4. When Monitoring Will Occur
  - a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
  - b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as age of existing pipe to be replaced,

depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.

5. Approval of AME and Construction Schedule

- a. After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Construction Schedule from the CM.

### **III. During Construction**

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The Archaeological Monitor shall be present full time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. The CM is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.
2. The Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.
3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.
4. The archaeological and Native American consultant/monitor shall document field activity via the CSV. The CSVs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process

1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.

3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance

1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.
  - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
  - b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the program from MMC, CM and RE. ADRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume. Note: If a unique archaeological site is also an historical resource as defined in CEQA Section 15064.5, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.
    - (1) Note: For pipeline trenching and other linear projects in the public right-of-way, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
  - c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.
    - (1) Note: For pipeline trenching and other linear projects in the public right-of-way, if the deposit is limited in size, both in length and depth; the information value is limited and is not associated with any other resource; and there are no unique features/artifacts associated with the deposit, the discovery should be considered not significant.
    - (2) Note: for pipeline trenching and other linear projects in the public right-of-way, if significance cannot be determined, the Final Monitoring Report and Site Record (DPR Form 523A/B) shall identify the discovery as Potentially Significant.

**D. Discovery Process for Significant Resources - Pipeline Trenching and other Linear Projects in the Public Right-of-Way**

The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities or for other linear project types within the Public Right-of-Way including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance:

1. Procedures for documentation, curation, and reporting
  - a. One hundred percent of the artifacts within the trench alignment and width shall be documented in-situ, to include photographic records, plan view of the trench and profiles of side walls, recovered, photographed after cleaning, analyzed, and curated. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact.
  - b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section VI-A.
  - c. The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) the resource(s) encountered during the Archaeological Monitoring Program in accordance with the City's HRG. The DPR forms shall be submitted to the SCIC for either a Primary Record or SDI Number and included in the Final Monitoring Report.
  - d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

**IV. Discovery of Human Remains**

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

**A. Notification**

1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the DSD to assist with the discovery notification process.
2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site

1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.
3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains are determined to be Native American

1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, only the Medical Examiner can make this call.
2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
  - a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being granted access to the site, OR;
  - b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, the landowner shall reinter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbance, THEN
  - c. To protect these sites, the landowner shall do one or more of the following:
    - (1) Record the site with the NAHC;
    - (2) Record an open space or conservation easement; or

(3) Record a document with the County. The document shall be titled "Notice of Reinterment of Native American Remains" and shall include a legal description of the property, the name of the property owner, and the owner's acknowledged signature, in addition to any other information required by PRC 5097.98. The document shall be indexed as a notice under the name of the owner.

d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and items associated and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.

**D. If Human Remains are not Native American**

1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

**V. Night and/or Weekend Work**

**A. If night and/or weekend work is included in the contract**

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting.
2. The following procedures shall be followed.
  - a. No Discoveries: In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSV and submit to MMC via fax by 8:00 a.m. of the next business day.
  - b. Discoveries: All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and Section IV - Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.

- c. Potentially Significant Discoveries: If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III – *During Construction*, and Section IV – *Discovery of Human Remains*, shall be followed.
  - d. The PI shall immediately contact the RE and MMC, or by 8:00 a.m. of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.
- B. If night and/or weekend work becomes necessary during the course of construction
  - 1. The CM shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
  - 2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

## **VI. Post Construction**

- A. Submittal of Draft Monitoring Report
  - 1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the HRG (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring. It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe as a result of delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.
    - a. For significant archaeological resources encountered during monitoring, the ADRP or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
    - b. Recording Sites with State of California Department of Parks and Recreation

The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's HRG, and submittal of such forms to the SCIC with the Final Monitoring Report.
  - 2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
  - 3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.

4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts

1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued.
2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

C. Curation of artifacts: Accession Agreement and Acceptance Verification

1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
2. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection C.
3. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
4. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC.
5. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)

1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report.
2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.



## **PALEONTOLOGICAL RESOURCES**

### ***Mitigation Measure PAL-1***

#### **I. Prior to Permit Issuance or Bid Opening/Bid Award**

##### **A. Entitlements Plan Check**

1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, Environmental Designee shall verify that the requirements for Paleontological Monitoring have been noted on the appropriate construction documents.

##### **B. Letters of Qualification have been submitted to ADD**

1. Prior to Bid Award, the applicant shall submit a letter of verification to MMC identifying the PI for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.
3. Prior to the start of work, the applicant shall obtain approval from MMC for any personnel changes associated with the monitoring program.

#### **II. Prior to Start of Construction**

##### **A. Verification of Records Search**

1. The PI shall provide verification to MMC that a site-specific records search has been completed. Verification includes, but is not limited to, a copy of a confirmation letter from San Diego Natural History Museum, other institution, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

##### **B. PI Shall Attend Precon Meetings**

1. Prior to beginning any work that requires monitoring, the Applicant shall arrange a Precon Meeting that shall include the PI, CM and/or Grading Contractor, RE, BI, if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Paleontological Monitoring program with the CCM and/or Grading Contractor.
  - a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)

The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the paleontological monitoring program.

3. Identify Areas to be Monitored

- a. Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11"x17") to MMC identifying the areas to be monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or as determined by the PI in consultation with the MMC. The determination shall be based on site-specific records search data which supports monitoring at depths less than 10 feet.
- b. The PME shall be based on the results of a site-specific records search as well as information regarding existing known soil conditions (native or formation).
- c. MMC shall notify PI that the PME has been approved.

4. When Monitoring Will Occur

- a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
- b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

5. Approval of PME and Construction Schedule

After approval of the PME by MMC, the PI shall submit MMC written authorization of the PME and Construction Schedule from the CM.

### **III. During Construction**

A. Monitor Shall be Present During Grading/Excavation/Trenching

1. The monitor shall be present full time during grading/excavation/trenching activities as identified on the PME that could result in impacts to formations with high and moderate resource sensitivity. The CM is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances, OSHA safety requirements may necessitate modification of the PME.

2. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.
3. The monitor shall document field activity via the CSV. The CSVs shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE shall forward copies to MMC.

#### B. Discovery Notification Process

1. In the event of a discovery, the Paleontological Monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE or BI, as appropriate.
2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.

#### C. Determination of Significance

1. The PI shall evaluate the significance of the resource.
  - a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.
  - b. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval from MMC, MC, and/or RE. PRP and any mitigation must be approved by MMC, RE, and/or CM before ground disturbing activities in the area of discovery will be allowed to resume.
    - (1) Note: For pipeline trenching projects only, the PI shall implement the Discovery Process for Pipeline Trenching Projects identified below under "D."
  - c. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.

- d. The PI shall submit a letter to MMC indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.
  - (1) Note: For pipeline trenching projects only. If the fossil discovery is limited in size, both in length and depth, the information value is limited and there are no unique fossil features associated with the discovery area, then the discovery should be considered not significant.
  - (2) Note: For pipeline trenching projects only. If significance cannot be determined, the Final Monitoring Report and the Site Record shall identify the discovery as Potentially significant.

#### D. Discovery Process for Significant Resources – Pipeline Trenching Projects

The following procedures constitute adequate mitigation of a significant discovery encountered during pipeline trenching activities including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance.

1. Procedures for documentation, curation, and reporting
  - a. One hundred percent of the fossil resources within the trench alignment and width shall be documented in-situ, photographically drawn in plan view (trench and profiles of side walls), recovered from the trench and photographed after cleaning, then analyzed and curated consistent with the Society of Invertebrate Paleontology Standards. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact and so documented.
  - b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE and indicated in Section VI-A.
  - c. The PI shall be responsible for recording (on the appropriate forms for the San Diego Natural History Museum) the resource(s) encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines. The forms shall be submitted to the San Diego Natural History Museum and included in the Final Monitoring Report.
  - d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

#### IV. Night and/or Weekend Work

- A. If night and/or weekend work is included in the contract
  1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the Precon meeting.

2. The following procedures shall be followed.
  - a. No Discoveries: In the event that no discoveries were encountered during night and/or weekend work, The PI shall record the information on the CSV and submit to MMC via fax by 8:00 a.m. on the next business day.
  - b. Discoveries: All discoveries shall be processed and documented using the existing procedures detailed in Section III - During Construction.
  - c. Potentially Significant Discoveries. If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction shall be followed.
  - d. The PI shall immediately contact MMC, or by 8:00 a.m. on the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.
- B. If night and/or weekend work becomes necessary during the course of construction
  1. The CM shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
  2. The RE, or BI, as appropriate, shall notify MMC immediately.
- C. All other procedures described above shall apply, as appropriate.

## **V. Post Construction**

- A. Preparation and Submittal of Draft Monitoring Report
  1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Paleontological Guidelines which describes the results, analysis, and conclusions of all phases of the PRP (with appropriate graphics) to MMC for review and approval within 90 days following the completion of monitoring,
    - a. For significant paleontological resources encountered during monitoring, the Paleontological Recovery Program shall be included in the Draft Monitoring Report.
    - b. Recording Sites with the San Diego Natural History Museum: The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program in accordance with the City's Paleontological Guidelines, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.
  2. MMC shall return the Draft Monitoring Report to the PI for revision or for preparation of the Final Report.

3. The PI shall submit revised Draft Monitoring Report to MMC for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Fossil Remains

1. The PI shall be responsible for ensuring that all fossil remains collected are cleaned and catalogued.
2. The PI shall be responsible for ensuring that all fossil remains are analyzed to identify function and chronology as they relate to the geologic history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

C. Curation of fossil remains: Deed of Gift and Acceptance Verification

1. The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an appropriate institution.
2. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.
3. The RE or BI, as appropriate, shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.
4. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)

1. The PI shall submit two copies of the Final Monitoring Report to MMC (even if negative), within 90 days after notification from MMC of the approved report.
2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

## 10.0 REFERENCES

### California Air Resources Board (CARB)

- 2018 iADAM Air Quality Data Statistics. Available at:  
<https://www.arb.ca.gov/adam/topfour/topfour1.php>. Accessed on January 18, 2018.
- 2017a Area Designations: Activities and Maps. December. Available at:  
<http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed on January 18, 2018.
- 2017b Greenhouse Gas Inventory Data – Graphs. June 6. Available at:  
<https://www.arb.ca.gov/cc/inventory/data/graph/graph.htm>.
- 2016 Ambient Air Quality Standards. May 4. Available at:  
<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.
- 2015 California Greenhouse Gas Inventory for 2000-2013 – By Sector and Activity. April 24.
- 2014 First Update to the Climate Change Scoping Plan: Building on the Framework. May. Available at: [http://www.arb.ca.gov/cc/scopingplan/2013\\_update/first\\_update\\_climate\\_change\\_scoping\\_plan.pdf](http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf).
- 2009 ARB Fact Sheet: Air Pollution and Health. December 2. Available at:  
<http://www.arb.ca.gov/research/health/fs/fs1/fs1.htm>.
- 2008 Climate Change Scoping Plan – A Framework for Change. December.

### California Department of Conservation (CDC)

- 2016 Farmland Mapping & Monitoring Program. Available at:  
<https://www.conservation.ca.gov/dlrp/fmmp/Pages/SanDiego.aspx>.

### California Department of Resources Recycling and Recovery (CalRecycle)

- 2018 Solid Waste Information System (SWIS) database. Accessed June 28, 2018. Available at: <http://www.calrecycle.ca.gov/swfacilities/directory/search.aspx>.

### California Department of Toxic Substances Control (DTSC)

- 2018 EnviroStor website. Accessed July 9, 2018. Available at:  
<https://www.envirostor.dtsc.ca.gov/public/>.

### California Department of Transportation (Caltrans)

- 2013 Transportation and Construction Vibration Guidance Manual, Environmental Engineering, Hazardous Waste, Air, Noise, Paleontology Office. September.

### California Department of Water Resources (DWR)

- 2004 California's Groundwater. Bulletin No. 118. February 27.

California Geological Survey (CGS)

- 2011 Mineral Land Classification Map of California.
- 2010 Fault Activity Map of California. Geologic Data Map No. 6.
- 2007 Fault-Rupture Hazard Zones in California. Special Publication No. 42.

California Native Plant Society (CNPS)

- 2014 Inventory of Rare and Endangered Plants (online edition). June. Available at:  
<http://www.cnps.org/inventory>.
- 2005 San Diego County Invasive Ornamental Plant Guide. Available at:  
[https://www.aslasandiego.org/aslasdwp/Most\\_Invasive\\_Plant\\_Guide.pdf](https://www.aslasandiego.org/aslasdwp/Most_Invasive_Plant_Guide.pdf).

California Regional Water Quality Control Board (RWQCB)

- 1994 San Diego Region – Basin Plan. Available at:  
[https://www.waterboards.ca.gov/sandiego/water\\_issues/programs/basin\\_plan/](https://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/).

California State Water Resources Control Board (SWRCB)

- 2018 GeoTracker website. Accessed July 9, 2018. Available at:  
<https://geotracker.waterboards.ca.gov/>.

California Storm Water Quality Association

- 2009 *Storm Water Best Management Practices Handbook*.

Chen Ryan

- 2020 La Jolla View Reservoir – Vehicle Miles Traveled (VMT) Analysis Technical Memorandum. December 2.

City of San Diego (City)

- 2020 City of San Diego Transportation Study Manual (TSM). September.
- 2018a 2018 Certified Construction & Demolition Recycling Facility Directory. Environmental Services Department. January 1. Available at:  
[https://www.sandiego.gov/sites/default/files/2018\\_certified\\_construction\\_demolition\\_recycling\\_facility\\_directory.pdf](https://www.sandiego.gov/sites/default/files/2018_certified_construction_demolition_recycling_facility_directory.pdf).
- 2018b 2018 City Stormwater Standards Manual. Available at:  
[https://www.sandiego.gov/sites/default/files/storm\\_water\\_standards\\_manual\\_oct\\_2018.pdf](https://www.sandiego.gov/sites/default/files/storm_water_standards_manual_oct_2018.pdf).
- 2017a Climate Action Plan 2017 Annual Report Appendix. Available at:  
[https://www.sandiego.gov/sites/default/files/appendix\\_for\\_2017\\_annual\\_report.pdf](https://www.sandiego.gov/sites/default/files/appendix_for_2017_annual_report.pdf).
- 2017b City Drainage Design Manual. Available at:  
[https://www.sandiego.gov/sites/default/files/drainage\\_design\\_manual\\_jan2017.pdf](https://www.sandiego.gov/sites/default/files/drainage_design_manual_jan2017.pdf).



City of San Diego (City) (cont.)

- 2016a California Environmental Quality Act Significance Determination Thresholds. July. Available at: [https://www.sandiego.gov/sites/default/files/july\\_2016\\_ceqa\\_thresholds\\_final\\_0.pdf](https://www.sandiego.gov/sites/default/files/july_2016_ceqa_thresholds_final_0.pdf).
- 2016b Climate Action Plan Consistency Checklist. July 12. Available at: [https://www.sandiego.gov/sites/default/files/city\\_of\\_san\\_diego\\_cap\\_checklist\\_071316.pdf](https://www.sandiego.gov/sites/default/files/city_of_san_diego_cap_checklist_071316.pdf).
- 2016c Lead Containing Materials and Asbestos Abatement Specifications: La Jolla View & Exchange Reservoir Demolition. July 7.
- 2015a City of San Diego Climate Action Plan. December. Available at: <http://www.sandiego.gov/planning/genplan/cap/index.shtml>.
- 2015b Zero Waste Plan. June. Available at: <https://www.sandiego.gov/sites/default/files/legacy/mayor/pdf/2015/ZeroWastePlan.pdf>.
- 2014 La Jolla Community Plan and Local Coastal Program Land Use Plan. August. Available at: <https://www.sandiego.gov/sites/default/files/lajollacommunityplanaug2014.pdf>.
- 2012 Land Development Code (LDC) Biology Guidelines. Available at: <https://www.sandiego.gov/sites/default/files/legacy/development-services/pdf/industry/landdevmanual/ldmbio.pdf>.
- 2010 La Jolla View Reservoir Planning Study. November.
- 2008a City of San Diego General Plan. March 10. Available at: <http://www.sandiego.gov/planning/genplan/#genplan>.
- 2008b City of San Diego Seismic Safety Study, Geologic Hazards and Faults. Development Services Department. Grid No. 29. Available at: <http://www.sandiego.gov/development-services/industry/hazards/>.
- 1997 Multiple Species Conservation Program: City of San Diego MSCP Subarea Plan. March. Available at: <https://www.sandiego.gov/sites/default/files/legacy//planning/programs/mscp/pdf/subareafullversion.pdf>.

City of San Diego Fire-Rescue Department (SDFD)

- 2009 Official Very High Fire Hazard Severity Zone Map, Grid Tile 26. February 24. Available at: <https://www.sandiego.gov/sites/default/files/legacy/fire/pdf/maps/grid26.pdf>.

County of San Diego (County)

- 2017 Multi-Jurisdictional Hazard Mitigation Plan. October. Available at:  
[https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency\\_management/HazMit/2017/County-HazMit-Plan-2017-Sections-1-7-with-Appendixes-BOS-Approved.pdf](https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/HazMit/2017/County-HazMit-Plan-2017-Sections-1-7-with-Appendixes-BOS-Approved.pdf).
- 2014 Unified San Diego County Emergency Services Organization and County of San Diego Operational Area Emergency Operations Plan. September. Available at:  
[https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency\\_management/plans/op-area-plan/2014/Updates/2014-OA-EOP-Basic-Plan-and-All-Annexes.pdf](https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/plans/op-area-plan/2014/Updates/2014-OA-EOP-Basic-Plan-and-All-Annexes.pdf).
- 2011 San Diego County Operational Area Hazardous Materials Area Plan. Available at:  
<https://www.sandiegocounty.gov/content/dam/sdc/deh/hmd/pdf/hmd-san-diego-county-operational-area-hazmat-area-plan.pdf>.

Deméré Thomas A., and Stephen L. Walsh

- 1993 Paleontological Resources, County of San Diego. Department of Paleontology, San Diego Natural History Museum.

Energy Policy Initiatives Center (EPIC), University of San Diego School of Law

- 2013 San Diego County GHG Inventory. March.

Federal Emergency Management Agency (FEMA)

- 2012a Flood Insurance Rate Map (FIRM), San Diego County, California and Incorporated Areas, Panel No. 06073C1582G. May 16.
- 2012b FIRM, Panel No. 06073C1584G. May 16.

HELIX Environmental Planning, Inc. (HELIX)

- 2019a La Jolla View Reservoir Project Air Quality Impact Analysis. June.
- 2019b La Jolla View Reservoir Replacement Project Conceptual On-site Upland and Ephemeral Drainage Restoration and Revegetation Plan. October.
- 2019c La Jolla View Reservoir Replacement Project Off-site Tier I Maritime Succulent Scrub Restoration Plan. October.
- 2018a La Jolla View Reservoir Project Acoustical Analysis Report. December.
- 2018b Climate Action Plan Consistency Checklist for La Jolla View Reservoir Project. March.
- 2018c La Jolla View Reservoir Project Waste Management Plan. December.

Infrastructure Engineering Corporation (IEC)

- 2019 Priority Development Project (PDP) Storm Water Quality Management Plan (SWQMP) La Jolla View Reservoir. April 11.

Infrastructure Engineering Corporation (IEC) (cont.)

- 2014 Basis of Design Report for the La Jolla View Reservoir Project. August.

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.

IS Architecture

- 2015a La Jolla Exchange Place Reservoir & Pump Station Historical Resource Technical Report. November 12.

- 2015b La Jolla View Reservoir Historical Resource Technical Report. November 12.

Kunzman Associates, Inc.

- 2017 La Jolla View Reservoir Replacement Project Transportation Impact Analysis. March 13.

Laguna Mountain Environmental, Inc.

- 2018 Cultural Resource Survey, Testing, and Geotechnical Monitoring for the La Jolla View Reservoir Project, La Jolla, City of San Diego, California. October.

Law-Crandall

- 2001 Draft Report of Geologic Reconnaissance and Limited Geotechnical Evaluation, La Jolla View Reservoir Upgrade, San Diego, California. February 19.

Melissadata.com

- 2018 Climate Average data zip code 92037. Available at: <http://www.melissadata.com/Lookups/ZipWeather.asp?ZipCode=92037&submit1=Submit>.

National Aeronautics and Space Administration, Goddard Institute for Space Studies (NASA)

- 2011 NASA Research Finds 2010 Tied for Warmest Year on Record. January 12. Available at <http://www.giss.nasa.gov/research/news/20110112/>.

National Oceanic and Atmospheric Administration, Earth System Research Laboratory (NOAA)

- 2016 Trends in Atmospheric Carbon Dioxide. Available at: <http://www.esrl.noaa.gov/gmd/ccgg/trends/global.html>.

Ninyo & Moore

- 2014 Geotechnical Evaluation La Jolla View Reservoir Replacement Project, La Jolla, California. July 11.

Project Clean Water

- 2018 Model BMP Design Manual, San Diego Region For Permanent Site Design, Storm Water Treatment and Hydromodification Management. May. Available at: <http://www.projectcleanwater.org/download/2018-model-bmp-design-manual/?wpdmdl=6395&ind=1559069112611>.

Rocks Biological Consulting (RBC)

2019 La Jolla View Reservoir Replacement Project Biological Technical Report. October 17.

San Diego Association of Governments (SANDAG)

2009 Regional Energy Strategy Plan. Available at:  
[https://www.sandag.org/uploads/publicationid/publicationid\\_1476\\_10631.pdf](https://www.sandag.org/uploads/publicationid/publicationid_1476_10631.pdf)

San Diego County Air Pollution Control District (SDAPCD)

2016 2016 Revision of the Regional Air Quality Strategy for San Diego County – Final.  
December.

2010 Fact Sheet: Attainment Status. January.

South Coast Air Quality Management District (SCAQMD)

1993 CEQA Air Quality Handbook. April.

Tory R. Walker Engineering (Walker)

2019 CEQA-Level Preliminary Drainage Study for La Jolla View Reservoir, San Diego,  
California. April 10.

U.S. Army Corps of Engineers (USACE)

2008 Wetlands Delineation Manual Regional Supplement: Arid West Region. Available at:  
<https://usace.contentdm.oclc.org/utis/getfile/collection/p266001coll1/id/7627>.

1987 Wetlands Delineation Manual. Available at:  
<https://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf>.

U.S. Environmental Protection Agency (USEPA)

2018 *EPA National Menu of Best Management Practices for Storm Water Phase II – Construction*

2011 Proposed Endangerment and Cause or Contribute Findings for Greenhouse Gases  
under the Clean Air Act. November 22.

2007 The Effects of Air Pollutants – Health Effects.

1999 Urban Storm Water Preliminary Data Summary. Available at:  
[https://www3.epa.gov/npdes/pubs/usw\\_b.pdf](https://www3.epa.gov/npdes/pubs/usw_b.pdf).

U.S. Environmental Protection Agency and U.S. Department of Transportation, National Highway  
Traffic Safety Administration (USEPA and NHTSA)

2012 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and  
Corporate Average Fuel Economy Standards. October 15.

Weston Solutions, Inc.

- 2009 Los Peñasquitos Lagoon TMDL – Watershed Phase I Sediment Source Identification Study, Final Report. June 2. Available from:  
<https://www.sandiego.gov/sites/default/files/lospensedimentstudy.pdf>.

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