

SILVER LAKE RESERVOIR COMPLEX MASTER PLAN PROJECT **DRAFT ENVIRONMENTAL IMPACT REPORT**

California State Clearinghouse #2022010055
October 6, 2022

PREPARED FOR:
Bureau of Engineering
Department of Public Works
City of Los Angeles

Contact:
Dr. Jan Green Rebstock, Environmental Affairs Officer
jan.green.rebstock@lacity.org

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Draft Environmental Impact Report

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626 Wilshire Boulevard
Suite 1100
Los Angeles, CA 90017
213.599.4300
esassoc.com



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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AB	Assembly Bill
ACC	Advanced Clean Cars
ACM	asbestos-containing materials
ADA	Americans with Disabilities Act
ADT	average daily trips
AEGL	Acute Exposure Guideline Level
AEP	Association of Environmental Professionals
AERMOD	USEPA AMS/EPA Regulatory Model
AFY	acre-feet per year
AIA	airport influence area
ALUP	Airport Land Use Plan
APE	Area of Potential Effect
AQMP	Air Quality Management Plan
AR4	Fourth Assessment Report
AR5	Fifth Assessment Report
ARMR	Archaeological Resource Management Report
ARMR	Archaeological Resource Management Report
ASCE	American Society of Civil Engineers
ASHRAE	America Society of Heating, Refrigerating and Air-Conditioning Engineers
AST	aboveground storage tanks
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BAU	Business-as-Usual
BCA	biological constraints analysis
BCWTF	Ballona Creek Water Task Force
BEN	Bicycle Enhanced Network
BERD	Built Environment Resource Directory
BMP	best management practice
BOE	Los Angeles Bureau of Engineering
BSA	biological study area
BSS	Bureau of Street Services
C2F6	Hexafluoroethane
C2H4F2	1,1-Difluoroethane
C2H6	ethane
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy

Acronym/Abbreviation	Definition
CalARP	California Accidental Release Prevention
CalEEMod	California Emissions Estimator Model
Cal-EMA	California Emergency Management Agency
CalEPA	California Environmental Protection Agency
CalGEM	California Geologic Energy Management Division
CALGreen	California Green Building Standards
CalOES	State Office of Emergency Services
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAS	Climate Adaptation Strategy
CAT	Climate Action Team
CBC	California Building Code
CBSC	California Building Standards Commission
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDOF	California Department of Finance
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERC	Consolidated Emergency Response/Contingency Plan
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERS	California Environmental Reporting System
CESA	California Endangered Species Act
CF4	Tetrafluoromethane
CFC	Chlorofluorocarbons
CFC	California Fire Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH2FCF3	1,1,1,2-Tetrafluoroethane
CH4	methane
CHC	Cultural Heritage Commission
CHF3	Fluoroform
CHHS	California Department of Health and Human Services
CHL	California Historical Landmarks
CHP	California Highway Patrol
CHRIS	California Historic Resource Information System
CIWMB	California Integrated Waste Management Board
CLARTS	Central LA Recycling and Transfer Station
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level

Acronym/Abbreviation	Definition
CNPS	California Native Plant Society
CNRA	California Natural Resources Agency
CO	Carbon Monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CPHI	California Points of Historical Interest
CPUC	California Public Utilities Commission
CRA	Colorado River Aqueduct
CREC	Controlled Recognized Environmental Conditions
CVC	California Vehicle Code
CWA	Clean Water Act
CWC	The California Water Code
DART	Downey Area Recycling and Transfer
dB	decibels
dBA	A-weighted decibels
DBS	Department of Building and Safety
DNL	day-night average noise level
DOC	California Department of Conservation
DPM	diesel particulate matter
DSOD	California Division of Safety of Dams
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EAP	Emergency Action Plan
EIA	U.S. Energy Information Administration
EIR	Environmental Impact Report
EISA	Energy Independence and Security Act of 2007
EMD	Los Angeles Emergency Management Department
EMS	emergency medical service
EOO	Emergency Operations Organization
EOP	Emergency Operations Plan
EPCA	Energy Policy and Conservation Act of 1975
ERC	Emission Reduction Credits
ESU	evolutionarily significant unit
EV	electric vehicle
EWMP	Enhanced Watershed Management Programs
FED	Functional Equivalent Document
FEMA	Federal Emergency Management Agency
FESA	federal Endangered Species Act
FHSZ	fire hazard severity zone
FHWA	Federal Highway Administration
FMMP	Farmland Mapping and Monitoring Program

Acronym/Abbreviation	Definition
FRAP	Fire and Resource Assessment Program
FTA	Federal Transit Administration
GAC	granular activated carbon
GHG	greenhouse gas
GSA	groundwater sustainability agency
GSP	Groundwater Sustainability Plans
GWh	gigawatt-hours
GWP	global warming potential
H ₂ S	Hydrogen Sulfide
HCM	Historic-Cultural Monument
HCP	Habitat Conservation Plan
HCS	Historic Context Statement
HFC	Hydrofluorocarbons
HIN	High Injury Network
HPOZ	Historic Preservation Overlay Zone
HQTA	high quality transit areas
HRA	health risk assessment
HREC	Historical Recognized Environmental Conditions
HSC	California Health and Safety Code
HVAC	heating, ventilation, and air conditioning
HWRP	Hyperion Water Reclamation Plant
IBC	International Building Code
IPaC	Information for Planning and Consultation
IPCC	Intergovernmental Panel on Climate Change
IRP	Integrated Resources Plan
IWMA	Integrated Waste Management Act
JBA	Jano Baghdanian & Associates
JPA	joint powers authority
kWh	kilowatt-hour
LAA	Los Angeles Aqueducts
LAAFP	Los Angeles Aqueduct Filtration Plant
LACFCD	Los Angeles County Flood Control District
LACM	History Museum of Los Angeles County
LACSD	Los Angeles County Sanitation District
LADOT	City of Los Angeles Department of Transportation
LADPR	Los Angeles Department of Parks and Recreation
LADPW	Los Angeles Department of Public Works
LADWP	Los Angeles Department of Water and Power
LAFD	City of Los Angeles Fire Department
LAGWRP	Los Angeles-Glendale Water Reclamation Plan
LAHSA	Los Angeles Homeless Services Authority

Acronym/Abbreviation	Definition
LAMC	Los Angeles Municipal Code
LAPD	Los Angeles Police Department
LASAN	Los Angeles Bureau of Sanitation
LAUSD	Los Angeles Unified School District
LBP	lead-based paint
LCFS	Low Carbon Fuel Standard
LEED	Leadership in Energy and Environmental Design
LEV	Low-Emission Vehicle
LHMP	Local Hazard Mitigation Plan
LID	Low Impact Development
LOS	level of service
LRA	Local Responsibility Area
LSA	Lake and Streambed Alteration
LST	localized significance threshold
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MCA	Medieval Climatic Anomaly
MGD	million gallons per day
MLD	Most Likely Descendant
MMP	Mitigation Monitoring Program
MMT	million metric tons
MMTCO _{2e}	million metric tons of carbon dioxide equivalent
MND	Mitigated Negative Declaration
MORe	Mandatory Commercial Organics Recycling
MPD	Multiple Property Documentation
MPO	metropolitan planning organization
MRZ	Mineral Resource Zone
MS4	Municipal separate storm sewer system
MW	megawatts
MWh	megawatt-hours
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards National Standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NCCP	Natural Community Conservation Plan
NCRS	Natural Resources Conservation Service
ND	Negative Declaration
NEIS	North East Interceptor Sewer
NEN	Neighborhood Enhanced Network
NF ₃	nitrogen trifluoride

Acronym/Abbreviation	Definition
NHTSA	National Highway Traffic Safety Administration
NMA	Neighborhood Mobility Area
NMFS	National Marine Fisheries Service
NO ₂	Nitrogen Dioxide
NOP	Notice of Preparation
NOX	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRPA	National Recreation and Park Association's
NSR	New Source Review
NWI	National Wetlands Inventory
OEHHA	California Office of Environmental Health Hazard Assessment
OHP	State Office of Historic Preservation
OPR	Office of Planning and Research
OS	Open Space
OSHA	Occupational Safety and Health Administration
PCE	perchloroethylene
PDF	Project Design Feature
PED	Pedestrian Enhanced Districts
PEV	plug-in electric vehicle
PFC	perfluorocarbons
PGA	Priority Growth Area
PHEV	plug-in hybrid electric vehicle
PM	Particulate Matter
PM ₁₀	Respirable Particulate Matter
PPV	peak particle velocity
PRA	Paleontological Resources Assessment
PRC	Public Resources Code
PRP	Public Recreation Plan
PVC	polyvinyl chloride
RAP	City of Los Angeles Recreation and Parks Department
RAP	Department of Recreation and Parks
RCP	Regional Comprehensive Plan
RCRA	Resources Conservation and Recovery Act
REC	Recognized Environmental Conditions
RFS	Renewable Fuel Standard
RMP	Risk Management Plan
RMS	root mean square
RPS	Renewables Portfolio Standards
RTP	Regional Transportation Plan

Acronym/Abbreviation	Definition
RWQCB	Regional Water Quality Control Board
SAFE	Safer Affordable Fuel-Efficient
SAR	Second Assessment Report
SARA	Superfund Amendments and Reauthorization Act
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCAR	Sewer Capacity Availability Review
SCCIC	South Central Coastal Information Center
SCDOJ	State of California Department of Justice
SCG	Southern California Gas Company
SCLF	Scholl Canyon Landfill
SCS	Sustainable Communities Strategy
SDC	seismic design category
SEA	Significant Ecological Area
SEATAC	SEA Technical Advisory Committee
SEMS	Standard Emergency Management System
SERRF	Southeast Resource Recovery Facility
SF6	sulfur hexafluoride
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLF	Silver Lake Forward
SLF	Sacred Lands File
SLN	Silver Lake Now
SLNC	Silver Lake Neighborhood Council
SLRC	Silver Lake Reservoir Complex
SLRC	Silver Lake Reservoirs Conservancy
SLWS	Silver Lake Wildlife Sanctuary
SO2	Sulfur Dioxide
SO42	Sulfates
SOX	Sulfur oxides
SPCC	Spill Prevention, Control and Countermeasure
SR	State Route
SRA	source receptor area
SRA	State Responsibility Area
SurveyLA	Los Angeles Historic Resources Survey
SVP	Society of Vertebrate Paleontology
SWG	Stakeholder Working Group
SWIRP	Solid Waste Integrated Resources Plan
SWPPP	Stormwater Pollution Prevention Plan

Acronym/Abbreviation	Definition
SWQCB	State Water Quality Control Board
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TAG	Transportation Assessment Guidelines
TCE	trichloroethylene
TCR	The Climate Registry
TDS	total dissolved solids
TEN	Transit Enhanced Network
THV	Tiny Home Village
TIA	Transportation Impact Assessment
TIA	Transportation Impact Assessment
TMDL	Total Maximum Daily Load
TOC	Transit Oriented Communities
TOD	transit-oriented development
TPA	Transit Priority Area
TPD	tons per day
TPZ	tree protection zone
TSCA	Toxic Substances Control Act
UBC	Uniform Building Code
UFD	Urban Forestry Division
ULARA	Upper Los Angeles River Area
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
USACE	United States Army Corps of Engineers
USC	United States Code
USCB	United States Census Bureau
USDA	United States Department of Agriculture
USDCDCC	U.S. District Court for the District Court of Columbia
USDOE	U.S. Department of Energy
USDOT	United States Department of Transportation
USEIA	U.S. Energy Information Administration
USEPA	U.S. Environmental Protection Agency
USFS	U.S. Forest Service
USFWS	United States Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tanks
UWMP	Urban Water Management Plan
VdB	decibel notation
VEN	Vehicle Enhanced Network
VHFHSZ	Very High Fire Hazard Severity Zone
VMT	vehicle miles traveled

Acronym/Abbreviation	Definition
VOC	Volatile Organic Compound
WBWG	Western Bat Working Group
WDR	Waste Discharge Permit
WEAP	worker environmental awareness program
WGCEP	Working Group on California Earthquake Probabilities
WSA	water supply assessment
WSCP	Water Shortage Contingency Plan
WSCP	under LADWP's Water Shortage Contingency Plan
WSV	Water Supply Verification
ZE	zero emission
ZEV	Zero-Emission Vehicle
ZIMAS	Zone information and Map Access System
ZNE	Zero Net Energy

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EXECUTIVE SUMMARY

ES.1 Introduction

This Draft Environmental Impact Report (EIR) evaluates the Silver Lake Reservoir Complex Master Plan Project (Project or proposed Project) pursuant to the requirements of the California Environmental Quality Act (CEQA, Public Resources Code sections 21000 et. seq.) and the CEQA Guidelines. The City of Los Angeles (City) is the Lead Agency under CEQA.

The proposed Project would redesign approximately 116 acres of the 127-acre Silver Lake Reservoir Complex (SLRC) with community park amenities, which includes the City constructing various community park facilities and allowing some new public park uses within portions of the SLRC. The proposed Project is based on the Silver Lake Reservoir Complex Master Plan which was prepared in December 2020 over a year-long community engagement process that included several community workshops and stakeholder working group meetings.

This Executive Summary provides an overview of the proposed Project and its environmental effects in accordance with Section 15123 of the CEQA Guidelines. Accordingly, this chapter of the Draft EIR includes (1) a brief description of the Project; (2) issues raised during the Notice of Preparation (NOP) process, including areas of controversy known to the lead agency; (3) identification of potentially significant impacts and proposed mitigation measures or alternatives that would reduce or avoid those impacts; and (4) issues to be resolved, including the choice among alternatives and whether and how to mitigate the potential significant impacts.

ES.2 Project Objectives

The proposed Project's fundamental objective is, as follows:

- Create a clear, bold design that repurposes the SLRC into a public park, while preserving and enhancing its unique character. The underlying purpose of the Project is to put the SLRC to a beneficial public park use because it is no longer usable for storing potable water due to government regulations. Because LADWP is required to maintain the reservoirs for other environmental purposes, including maintaining the dams, the proposed Project would use the reservoirs as part of a park to benefit area residents.

Other objectives of the proposed Project are, as follows:

- Preserve and enhance the unique character of the SLRC with increased points of access, improved internal circulation and access to the water's edge, and increased spaces for community and family gatherings.

- Expand existing active recreational uses and increase passive recreational uses.
- Enhance and expand wildlife habitat by introducing wetland and aquatic ecologies and improving upland habitat.
- Provide opportunities for the public to connect with nature and provide facilities for onsite environmental education and stewardship while limiting human/wildlife interactions through design and operations to protect habitat.
- Allow for continued underlying LADWP operations, access, and future use of designated areas of the site, thereby allowing continued use of the reservoirs and adjacent facilities that are intended to remain for proprietary use by LADWP.

ES.3 Project Description

Project Location and Setting

The proposed Project would be located in the Silver Lake neighborhood of the City of Los Angeles. The Silver Lake neighborhood is primarily made up of residential uses, with some smaller commercial areas and some existing public access in and around the SLRC that allows park uses. The SLRC is comprised of a 127-acre site that includes reservoirs, dams, buildings and structures, water and stormwater infrastructure, interior roads, and public recreational facilities. The proposed Project area is contained within the outer boundary of the SLRC, including existing recreational facilities, but excluding the existing Los Angeles Department of Water and Power (LADWP) facilities, Neighborhood Nursery School, and Tesla Park. The proposed Project area would be bounded by Tesla Avenue on the north, Armstrong Avenue and Silver Lake Boulevard on the east, Van Pelt Place and Silver Lake Boulevard on the south, and West Silver Lake Drive on the west. The entire SLRC and proposed Project area is zoned as Open Space (OS) and is currently located in the City of Los Angeles Council Districts 4 and 13 (City of Los Angeles 2021). The zoning designation of the entire proposed Project area would not change with proposed Project implementation.

Approximately 3.4 acres of SLRC land is currently operated and maintained by the City of Los Angeles Recreation and Parks Department (RAP) as a publicly accessible park space. This area is currently called the Meadow and is an open grassy area along the eastern side of the SLRC that is open to public access from dawn till dusk. In addition, RAP operates the existing Silver Lake Recreation Center, located along the southern side of the SLRC. The Silver Lake Recreation Center includes a recreation center facility, playground, and basketball courts. A dog park operated and maintained by RAP is currently located along the southern side of the SLRC. Currently, there are two public pathways on the west side of Ivanhoe Reservoir and along the top of Silver Lake Dam. The entire SLRC is enclosed by a perimeter chain-link fence varying in height from approximately 4 feet at the Meadow and 6 to 12 feet around the remaining areas. An interior fence in the Meadow area establishes the Meadow's boundary and the park area open to the public. The Neighborhood Nursery School and the Tesla Pocket Park are both located along the northeastern side of the SLRC in an area outside of the proposed Project footprint.

The Silver Lake and Ivanhoe Reservoirs are bound by three dams, which are managed by LADWP: the Ivanhoe Dam is located on the north side of Ivanhoe Reservoir, the Silver Lake

Dam on the south side of Silver Lake Reservoir, and the Divider Dam separates the Silver Lake Reservoir and the Ivanhoe Reservoir and contains a spillway between the two. Approximately 4 acres of existing paved surfaces around the reservoirs' perimeters are available for shared public use with LADWP. The embankment edges around the reservoirs have changed significantly over time from unpaved earthen slopes to steep paved surfaces. Ivanhoe Reservoir was resurfaced in 1993 to 1994 with concrete paving. The edges are smooth, beige in color, and have a small curb at the edge of the embankment. Silver Lake Reservoir is paved with 3-inch asphalt. An inconsistent 6-inch curb runs along some of its embankment edge.

Access gates managed by LADWP are located throughout the SLRC to restrict public access to LADWP-operated facilities. Existing LADWP facilities cover approximately 11 acres of land within the SLRC and would remain fenced and not accessible to the public. LADWP facilities discussed above are not a part of the proposed Project area and would not be altered or changed as a result of proposed Project implementation.

Proposed Project Summary

The proposed Project would re-develop the SLRC with a contemporary design that would create park zones blending vegetated areas with public spaces. The design would enhance the visual and recreational quality of the area to be consistent with goals and objectives of the Community Plan and provide the opportunity for the public to access natural park space. None of the existing public park facilities within the SLRC would be removed, rather public spaces and facilities would be expanded, renovated, and redesigned to improve visitor experience, including the perimeter walking path/promenade. The proposed Project would impact approximately 116 acres of the 127-acre SLRC, including the approximately 77 acres of open water. The existing area would be organized into a series of new spaces (park zones) surrounding the reservoirs. The proposed Project design would consist of seven park zones connected by a 2.5-mile, tree-lined promenade. These zones would include the Meadow, the Knoll, Ivanhoe Reservoir, the Eucalyptus Grove, the East and West Narrows, the South Valley, and Habitat Islands (**Figure ES-1**).

The proposed Project would remove portions of the existing perimeter fence over time as the park zones are constructed while maintaining or introducing new fencing needed to secure existing LADWP facilities, protect habitat, and protect the public. Fences around LADWP facilities would be approximately 8 feet high and with a minimum 6-inch clear zone along the bottom for small mammals to pass through.

The proposed Project would include offsite improvements along areas surrounding the SLRC. One improvement would include the addition of 90-degree parking along the north side of West Silver Lake Drive, east of Redesdale Avenue along the grassy area adjacent to the Silver Lake Recreation Center. Trees would be avoided along this area and parking would be added in a way that it would not encroach on trees. Currently, there are 10 parallel parking spaces along this segment of West Silver Lake Drive. By converting to 90-degree parking, a total of approximately 25 parking spaces would be added, resulting in a net increase in parking of 15 spaces at this location. Two of the new parking spaces would be dedicated to electric vehicle (EV) parking.

Offsite Improvement Area



SOURCE: Hargreaves Jones Landscape Architects, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure ES-1
Proposed Project



Additionally, offsite improvements would occur along Silver Lake Boulevard, between Armstrong Avenue and Duane Street for a length of approximately 3,000 feet. Two options for improvement are proposed along this portion of the proposed Project. Option 1 would include an improved bike lane on the west side of the road, closest to the SLRC, buffered by a 2-foot sidewalk running the length of this segment, followed by the addition of parallel parking on the west side of the road. Currently, there is only parking along the eastern side of Silver Lake Boulevard and the proposed design would add approximately 135 new parking spaces to the western side of the road. Option 2 would include restriping along Silver Lake Boulevard with improvements to the bike lane only and no addition of parking.

ES.4 Project Alternatives

Section 15126.6(a) of the CEQA Guidelines requires that an EIR “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” In addition, Section 15126.6(e) requires that an EIR evaluate a “no project” alternative. The following alternatives to the Project were selected to inform evaluation of the Project in light of the significant and unavoidable environmental impact of the Project (i.e., temporary construction noise), the objectives established for the Project (listed above), the feasibility of the alternatives considered, and public input received during the scoping period:

- Alternative 1 – No Project Alternative
- Alternative 2 – Reduced Project Alternative
- Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative

CEQA Guidelines require the identification of the environmentally superior alternatives. The No Project Alternative would be the environmentally preferred alternative. Section 15126.6(e)(2) of the CEQA Guidelines state, “If the environmentally superior alternative is the no project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” Based on the analysis in Chapter 5 of this EIR, Alternative 2, Reduced Project Alternative was determined to be the Environmentally Superior Alternative.

ES.5 Areas of Known Controversy

CEQA Guidelines Section 15123 states that an EIR shall identify areas of controversy known to the Lead Agency, including issues raised by the agency and the public. Based on comments received during the scoping meetings and NOP comment period as outlined in **Appendix A, Scoping Summary Report**, the following issues are known to be of concern and may be controversial. Each issue is further evaluated in the Draft EIR:

- Removal of the perimeter security fencing and related concerns regarding homeless encampments, public safety, and impacts to wildlife
- Increased parking and traffic circulation on local streets
- Pedestrian connections and pedestrian safety
- Connectivity with the bike network and cyclist safety

- Potential impacts to habitat and tree removals
- Noise impacts from construction activities and amplified sound during special events

ES.6 Summary of Environmental Impacts

Table ES-1, at the end of this chapter, presents a summary of the impacts and mitigation measures identified for the proposed Project. The complete impact statements and mitigation measures are presented in Chapter 3 of this Draft EIR. The level of significance for each impact was determined using significance criteria (thresholds) developed for each category of impacts; these criteria are presented in the appropriate sections of Chapter 3. Significant impacts are those adverse environmental impacts that meet or exceed the significance thresholds; less than significant impacts would not exceed the thresholds. Table ES-1 indicates the measures that will be implemented to avoid, minimize, or otherwise reduce significant impacts to a less than significant level. In addition, **Table ES-2** identifies Project Design Features (PDFs) that would also be adopted as part of the proposed Project.

The *CEQA Guidelines* require that an EIR discuss the significant environmental effects of the Proposed Project (Section 15126.2[a]), which is summarized in Table ES-1 and provided in Chapters 3 and 4 of the Draft EIR. The *CEQA Guidelines* also require that an EIR discuss the significant environmental effects which cannot be avoided (Section 15126.2[b]), and significant irreversible environmental changes which would be caused by the Proposed Project should it be implemented (Section 15126.2[c]). These are discussed below.

Significant Unavoidable Impacts

Section 15126.2(c) of the State CEQA Guidelines states that the EIR must describe any significant impacts, including those that can be mitigated but not reduced to a less-than significant level. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons the project is being proposed, notwithstanding their effect, should be described. The only resource areas that would remain at a significant and unavoidable level even after implementation of mitigation measures would be noise/vibration and recreation.

As discussed in Section 3.12, *Noise*, while implementation of mitigation measures would reduce noise level and associated impacts at noise-sensitive receptors, noise levels could still exceed local jurisdiction significance thresholds when taking into account the potential worst-case overlap of the various construction phases. Noise impacts during construction and project vibration impacts from construction activities with respect to human annoyance would be considered significant and unavoidable even with implementation of mitigation measures. Operational noise impacts associated with amplified music from special events would also be considered potentially significant and unavoidable with implementation of mitigation measures.

As discussed in Section 3.15, *Recreation and Parks*, the proposed Project would have significant and unavoidable construction and operational (during special events) impacts related to recreational facilities due to the significant and unavoidable impacts associated with noise.

TABLE ES-1
SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Environmental Impact	Mitigation Measures	Significance after Mitigation
3.1 Aesthetics		
3.1-1. <i>Scenic Vistas</i>	No mitigation measures are required.	Less than Significant
3.1-2. <i>Scenic Resources</i>	No mitigation measures are required.	No Impact
3.1-3. <i>Visual Character/Quality</i>	No mitigation measures are required.	Less than Significant (Construction) No Impact (Operation)
3.1-4. <i>Light or Glare</i>	<p>AES-1: Shielded Fixtures. All new permanent exterior lighting shall be shielded and directed downward to avoid any light spill onto surrounding land uses including natural habitat areas, open water, residential areas, or into the night skies.</p> <p>AES-2: Non-Glare Materials. All new structures and buildings shall be designed to include non-glare exterior materials and coatings to minimize glare or reflection.</p>	No Impact (Construction) Less than Significant (Operation)
3.1-5. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.2 Agriculture and Forestry Resources		
3.2-1. <i>Prime Farmland</i>	No mitigation measures are required.	No Impact
3.2-2. <i>Williamson Act Contracts</i>	No mitigation measures are required.	No Impact
3.2-3. <i>Forest Land Zoning</i>	No mitigation measures are required.	No Impact
3.2-4. <i>Loss of Forest Land</i>	No mitigation measures are required.	No Impact
3.2-5. <i>Farmland Conversion</i>	No mitigation measures are required.	No Impact
3.2-6. <i>Cumulative</i>	No mitigation measures are required.	No Impact
3.3 Air Quality		
3.3-1. <i>Applicable Air Quality Plan</i>	<p>AIR-1: Haul Trucks and Construction Equipment. The City shall implement the following requirements for construction equipment operating at each Project site. These requirements shall be included in applicable bid documents and contractor(s) must demonstrate the ability to supply such equipment. Construction equipment shall include the following:</p> <ul style="list-style-type: none"> The Project shall utilize off-road diesel-powered construction equipment that meets or exceeds the California Air Resources Board (CARB) and United States Environmental Protection Agency (USEPA) Tier 4 Final off-road emissions standards or equivalent for equipment rated at 50 horsepower (hp) or greater during Project construction where available within the Los Angeles region. Such equipment shall be outfitted with Best Available Control Technology (BACT) which means a CARB certified Level 3 Diesel Particulate Filter or equivalent. A copy of each unit's certified tier specification, BACT documentation, and CARB or Southern California Air Quality Management District (SCAQMD) operating permit at the time of mobilization of each applicable unit of equipment shall be provided. 	Less than Significant

Environmental Impact	Mitigation Measures	Significance after Mitigation
	<ul style="list-style-type: none"> Contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. All construction equipment must be properly tuned and maintained in accordance with the manufacturer's specifications. The contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications. Tampering with construction equipment to increase horsepower or to defeat emission control devices shall be prohibited. To import and export of on-site materials shall be scheduled to minimize empty return trips. Use alternatively fueled (e.g., compressed natural gas, liquefied natural gas, propane), gasoline fueled, or electrified construction equipment in place of diesel-fueled equipment to the extent locally available. 	
3.3-2. <i>Criteria Pollutant</i>	Implement AIR-1 described above.	Less than Significant
3.3-3. <i>Sensitive Receptors</i>	Implement AIR-1 described above.	Less than Significant
3.3-4. <i>Other Emissions</i>	No mitigation measures are required.	Less than Significant
3.3-5. <i>Cumulative</i>	Implement AIR-1 described above.	Less than Significant
3.4 Biological Resources		
3.4-1. <i>Species Impacts</i>	<p>BIO-1: Pre-Construction Training. Prior to construction, a worker environmental awareness program (WEAP) training will be provided by a qualified biologist/ISA certified arborist to describe biological resources (including protected trees) that could be impacted and summarize the construction BMPs and project design features to be implemented. The WEAP will include all contractors (including grading, tree removal/pruning, and builders). The meeting shall include a focus on instructing the contractors on tree protection practices including information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that shall accomplish these tasks. All equipment operators and spotters, assistants, or those directing operators from the ground shall provide written acknowledgement of receiving training.</p> <p>BIO-2: Preconstruction Surveys and Mitigation for Crotch's Bumble Bee and Monarch Butterfly. Prior to the start of construction activities, the City shall conduct pre-construction surveys for special-status invertebrates, Crotch's bumble bee and monarch butterfly, within 100 feet of construction activities near host plant communities (including nectar plants for Crotch's bumble bee and mature eucalyptus and pines trees for monarch butterfly). The pre-construction surveys shall be conducted 7 days prior to the start of construction activities. If any of these species are determined to be present within 100 feet of construction areas, construction best management practices (BMPs) will be implemented to avoid potential impacts to these species. BMPs shall include limiting construction vehicle speeds to 15 miles per hour when operating within 100 feet of the habitat areas, fencing habitat areas using temporary silt fencing, and cleaning up all trash and debris daily. Construction personnel will be instructed to not directly harm any special-status species on-site by halting activities until the species can move to off-site areas or contact a qualified biologist to move the species out of harm's way.</p> <p>BIO-3: Special-Status Bats. Prior to construction activities, bat surveys shall be conducted by a qualified bat biologist 7 days prior to the start of construction activities to determine if the special-status hoary bat, western mastiff bat, or western yellow bat could be impacted by proposed Project implementation. If special-status bat species are determined to be present within the proposed Project impact areas and if removal of roosting habitat (mature trees or palm trees) is required, a qualified biologist (a biologist with the ability to identify bat guano and assess habitat suitability) shall inspect the base of trees and palm skirts for guano prior to removal of skirted palm trees (i.e. palm trees with several layers of accumulated dead fronds).</p>	Less than Significant

Environmental Impact	Mitigation Measures	Significance after Mitigation
	<p>If bats are detected, tree removal shall avoid the bat maternity season (April 1 through August 31). If tree removal cannot avoid the maternity season, bat protection protocols shall be identified and implemented by a qualified bat biologist and approved by CDFW. The protocols may require installation of bat exclusionary devices, followed by up to four weeks of nightly monitoring by a qualified biologist to confirm bats are being excluded without harm until it is determined bats are no longer present. Construction of substitute bat habitat (i.e., bat boxes, artificial tree structures) should take place one-month prior the start of bat exclusion activities. Substitute bat habitat should be in the vicinity of bat-occupied mature trees or palm trees that a qualified biologist has been confirmed that bats are using. Bat boxes manufactured by vendors such as Bat Conservation and Management should be used. The one-month window prior to the start of bat exclusion activities will allow bats sufficient time to acclimate to a new potential roost location. The bat boxes shall be installed in an area that is close to suitable foraging habitat as determined by a qualified bat biologist. Bat boxes should be located on poles 10 to 20 feet off the ground. Additionally, the bat boxes will be oriented to the south or southwest, and the area chosen for the bat boxes must receive sufficient sunlight (at least 6 hours daily) to allow the bat boxes to reach an optimum internal temperature (approximately 80-100°F).</p> <p>At a minimum monitoring by qualified bat biologist should be required each month during construction and quarterly thereafter until it can be established that the bat box is being utilized. A determination needs to be made of what bat species are using the box. If the boxes are unsuccessful adaptive management measures should be developed in coordination with the CDFW.</p>	
3.4-2. <i>Sensitive Natural Communities</i>	No mitigation measures are required.	No Impact
3.4-3. <i>Wetlands</i>	No mitigation measures are required.	No Impact
3.4-4. <i>Wildlife Corridors</i>	No mitigation measures are required.	Less than Significant
3.4-5. <i>Local Policies and Ordinances</i>	<p>BIO-4: Tree Salvage and Replanting Plan. For impacts to trees protected under local policies and ordinances, the City shall prepare and implement a tree salvage and replanting plan. This salvage and replanting plan shall be prepared by a certified arborist familiar with the target species and in compliance with the specifications of the City Tree Ordinance or RAP Tree Policy (dependent on property location). The salvage and replanting plan shall include measures to salvage, replant, and monitor the new trees for a total of 10 years. The replanting plan will specify for planted trees to occur in the most naturalized habitat areas on-site (e.g., the Knoll) to maximize increasing habitat value and establishment success. The replanting plan shall also specify the appropriate spacing of planted trees to accommodate growth horizontally, vertically, and laterally below ground. The plan shall also specify recommended long-term monitoring, maintenance, and inspection until all planted trees survive to produce reproductive structures. Follow up inspections by the project arborist should be conducted after construction is completed for ten years. Preferably, follow up visits should be conducted quarterly during Years 1 and 2, biannually for Years 3 through 5, and annually for Years 6 through 10. More frequent monitoring and/or post-construction steps to improve any trees that are doing poorly should be carried out as recommended by the arborist. The plan will also include a measure to address if observations of stress or potential failure of planted trees occur (e.g., consulting with a certified arborist or tree specialist to provide recommendations so there is no net loss of trees). Any replacement trees that fail will be replaced at 1:1 with 15-gallon tree of like species.</p> <p>BIO-5: Native Oak Trees. Native oak trees removed as a result of the Project with a trunk at DSH less than 12 inches shall be replaced at a 4:1 ratio, and if the diameter is between 12-24 inches at a 5:1 ratio, and greater than 24 inches at a 10:1 ratio.</p>	Less than Significant
3.4-6. <i>Habitat Conservation Plan</i>	No mitigation measures are required.	No Impact

Environmental Impact	Mitigation Measures	Significance after Mitigation
3.4-7. <i>Cumulative</i>	Implement BIO-1 through BIO-5 described above.	Less than Significant
3.5 Cultural Resources		
3.5-1. <i>Historical Resource</i>	No mitigation measures are required.	Less than Significant
3.5-2. <i>Archaeological Resource</i>	<p>CR-1: Archaeological Monitoring. The City shall retain a qualified Archaeologist who meets the Secretary of the Interior’s Professional Qualifications Standards for professional archaeology (qualified Archaeologist) to carry out and ensure proper implementation of mitigation measures that address archaeological resources. The qualified Archaeologist shall oversee an archaeological monitor who shall be present during construction activities on the Project Site deemed by the qualified Archeologist to have the potential for encountering archeological resources, such as demolition, clearing/grubbing, drilling/auguring, grading, trenching, excavation, or other ground disturbing activity associated with the Project in areas of historic fill or previously undisturbed sediments, and in the vicinity of the Canal & Reservoir Ditch, within the South Valley, the East West Narrows, the Eucalyptus Grove, and areas of quaternary alluvium within the Knoll. The archeological monitor shall have the authority to direct the pace of construction equipment activity in areas of higher sensitivity and to temporarily divert, redirect or halt ground disturbance activities to allow identification, evaluation, and potential recovery of archaeological resources in coordination with the qualified Archaeologist. Full-time monitoring may be reduced to part-time inspections, or ceased entirely, if determined appropriate by the qualified Archaeologist.</p> <p>CR-2: Archaeological Resources Sensitivity Training. Prior to commencement of construction activities, a Sensitivity Training shall be given by the qualified Archaeologist for construction personnel. The training shall focus on how to identify archaeological resources that may be encountered during construction activities, and the procedures to be followed in such an event. Within 5 days of completing the training, a list of those in attendance shall be provided by the qualified Archaeologist to the City.</p> <p>CR-3: Discovery of Archaeological Resources. In the event that historic-period (e.g., bottles, foundations, early infrastructure, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A 50-foot buffer shall be established by the Qualified Archaeologist around the find where construction activities shall not be allowed to continue. Work may continue outside of the buffer area. All archaeological resources unearthed by Project construction activities shall be evaluated by the Qualified Archaeologist. If a resource is determined by the Qualified Archaeologist to constitute a “historical resource” pursuant to CEQA Guidelines Section 15064.5(a) or a “unique archaeological resource” pursuant to Public Resources Code Section 21083.2(g), the Qualified Archaeologist shall coordinate with the Applicant and the City to develop a formal treatment plan that would serve to reduce impacts to the resources. If any prehistoric archaeological sites are encountered within the project area, consultation with consulting Native American parties will be conducted to apprise them of any such findings and solicit any comments they may have regarding appropriate treatment and disposition of the resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment and shall be explored to see if Project activities can avoid archaeological resources, such as: if the archaeological site can be deeded into a permanent conservation easement, if the resources can be capped with chemically stable soil or if the resource can be incorporated within open space.</p>	Less than Significant

Environmental Impact	Mitigation Measures	Significance after Mitigation
	<p>If, in coordination with the City, it is determined that preservation in place is not feasible, and in order to mitigate potential impacts to significant resources pursuant to Section 15064.5 of CEQA, data recovery is feasible. Appropriate treatment of the resource shall be developed by the Qualified Archaeologist in coordination with the City. A data recovery plan shall be implemented. A data recovery plan will make provision for adequately recovering the scientifically consequential information from and about the historical resources, and may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing, analysis, reporting, and commemoration in the form of signage or other public education and awareness.</p> <p>Any archaeological material collected shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be donated to a local school or historical society in the area for educational purposes.</p> <p>CR-4: Archeological Monitoring Reports. At the conclusion of the archaeological monitoring, the qualified Archaeologist shall prepare a memorandum stating that the archaeological monitoring requirement of the mitigation measure has been fulfilled and summarize the results of any archaeological finds. The memorandum shall be submitted to the City. Following submittal of the memorandum, the qualified Archaeologist shall prepare a technical report that follows the format and content guidelines provided in California Office of Historic Preservation's Archaeological Resource Management Reports (ARMR). The technical report shall include a description of resources unearthed, if any, treatment of the resources, results of the artifact processing, analysis, and research, and evaluation of the resources with respect to the California Register of Historical Resources and CEQA. Appropriate California Department of Parks and Recreation Site Forms (Site Forms) shall also be prepared and provided in an appendix to the report. The technical report shall be prepared under the supervision of the qualified Archaeologist and submitted to the City within 150 days of completion of the monitoring. The final draft of the report shall be submitted to the South Central Coastal Information Center.</p>	
3.5-3. <i>Human Remains</i>	No mitigation measures are required.	Less than Significant
3.5-4. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.6 Energy		
3.6-1. <i>Consumption of Energy Resources</i>	No mitigation measures are required.	Less than Significant
3.6-2. <i>State and Local Plans</i>	No mitigation measures are required.	Less than Significant
3.6-3. <i>Cumulative Impacts</i>	No mitigation measures are required.	Less than Significant
3.7 Geology, Soils, and Mineral Resources		
3.7-1. <i>Seismic Hazards</i>	No mitigation measures are required.	Less than Significant
3.7-2. <i>Soil Erosion</i>	No mitigation measures are required.	Less than Significant
3.7-3. <i>Unstable Geologic Units or Soil</i>	No mitigation measures are required.	Less than Significant
3.7-4. <i>Expansive Soil</i>	No mitigation measures are required.	Less than Significant
3.7-5. <i>Septic Tanks</i>	No mitigation measures are required.	No Impact

Environmental Impact	Mitigation Measures	Significance after Mitigation
<p>3.7-6. <i>Paleontological Resources or Unique Geologic Feature</i></p>	<p>PALEO-1: Construction Personnel Paleontological Resources Sensitivity Training. The City shall retain a paleontologist who meets the Society of Vertebrate Paleontology’s (SVP 2010) definition for Qualified Professional Paleontologist (Qualified Paleontologist) to carry out all mitigation related to paleontological resources. Prior to the start of ground-disturbing activities, the Qualified Paleontologist or their designee shall conduct construction worker paleontological resources sensitivity training for all construction personnel. Construction personnel shall be informed on how to identify the types of paleontological resources that may be encountered, specific Project activities that would require paleontological monitoring, the proper procedures to be enacted in the event of an inadvertent discovery of paleontological resources, and safety precautions to be taken when working with paleontological monitors. The City shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.</p> <p>PALEO-2: Paleontological Monitoring. Paleontological monitoring shall be conducted during ground-disturbing activities that produce visible spoils or cuts for project construction below 10-feet in previously undisturbed Quaternary alluvium or at any depth in the Miocene Monterey Formation. Monitoring shall be conducted by a qualified paleontological monitor (SVP, 2010) working under the direct supervision of the Qualified Paleontologist. Monitoring shall consist of visually inspecting fresh exposures of rock for larger fossil remains and, where appropriate, collecting sediment samples to wet or dry screen to test promising horizons for smaller fossil remains. If the Qualified Paleontologist determines that full-time monitoring is no longer warranted, based on the specific geologic conditions at the surface or at depth, the Qualified Paleontologist may recommend that monitoring be reduced to periodic spot-checking or cease entirely.</p> <p>PALEO-3: Paleontological Resource Discovery. If a potential fossil is found, the paleontological monitor shall be allowed to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil to facilitate evaluation of the discovery. An appropriate buffer area shall be established around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. At the monitor’s discretion, and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock/sediment samples for initial processing and evaluation. If a fossil is determined to be significant, the Qualified Paleontologist shall implement a paleontological salvage program to remove the resources from their location, following the guidelines of the SVP (2010). If the discovery is considered scientifically significant, the monitor will collect the fossil specimen(s) and associated data. For this Project, the SVP (2010) criteria of scientific significance will be used to make this determination in the field. In general, small unidentifiable vertebrate fossils will not be collected and only well-preserved or representative invertebrates or plants will be salvaged if avoidance is not feasible. Any fossils encountered and recovered shall be prepared to the point of identification, catalogued, and curated at an accredited repository.</p> <p>If construction personnel discover any potential fossils during construction while the paleontological monitor is not present, regardless of the depth of work or location, work at the discovery location shall cease in a 25-foot radius of the discovery until the Qualified Paleontologist has assessed the discovery and recommended and implemented appropriate treatment as described in this measure.</p> <p>PALEO-4: Reporting. At the conclusion of paleontological monitoring, the Qualified Paleontologist shall prepare a report summarizing the results of the monitoring and any salvage efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted by the Applicant to the City, the Natural History Museum of Los Angeles County, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the proposed project and required mitigation measures.</p>	<p>Less than Significant (Construction) No Impact (Operation)</p>

Environmental Impact	Mitigation Measures	Significance after Mitigation
3.7-7. <i>Known Mineral Resources</i>	No mitigation measures are required.	No Impact
3.7-8. <i>Locally-Important Mineral Resources</i>	No mitigation measures are required.	No Impact
3.7-9. <i>Cumulative</i>	Implement Mitigation Measures PALEO-1 through PALEO-4 described above.	Less than Significant
3.8 Greenhouse Gas Emissions		
3.8-1. <i>Greenhouse Gas Emissions</i>	No mitigation measures are required.	Less than Significant
3.8-2. <i>Applicable Plan, Policy, or Regulation</i>	No mitigation measures are required.	Less than Significant
3.8-3. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.9 Hazards and Hazardous Materials		
3.9-1. <i>Hazardous Materials</i>	No mitigation measures are required.	Less than Significant
3.9-2. <i>Hazardous Materials Near Schools</i>	No mitigation measures are required.	Less than Significant
3.9-3. <i>Hazardous Material Site Listing</i>	No mitigation measures are required.	Less than Significant
3.9-4. <i>Safety Hazards Near Airport</i>	No mitigation measures are required.	No Impact
3.9-5. <i>Emergency Preparedness</i>	No mitigation measures are required.	Less than Significant
3.9-6. <i>Wildland Fires</i>	No mitigation measures are required.	Less than Significant
3.9-7. <i>Safety Hazards Near Private Airstrip</i>	No mitigation measures are required.	No Impact
3.9-8. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.10 Hydrology and Water Quality		
3.10-1. <i>Water Quality</i>	No mitigation measures are required.	Less than Significant
3.10-2. <i>Groundwater Supplies</i>	No mitigation measures are required.	Less than Significant
3.10-3. <i>Alteration of Drainage Patterns</i>	No mitigation measures are required.	Less than Significant
3.10-4. <i>Flood Hazard, Tsunami, or Seiche</i>	No mitigation measures are required.	Less than Significant
3.10-5. <i>Water Quality Control Plan or Sustainable Groundwater Management Plan</i>	No mitigation measures are required.	Less than Significant
3.10-6. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant

Environmental Impact	Mitigation Measures	Significance after Mitigation
3.11 Land Use and Planning		
3.11-1. <i>Divide Established Community</i>	No mitigation measures are required.	Less than Significant
3.11-2. <i>Land Use Plans</i>	No mitigation measures are required.	Less than Significant
3.11-3. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.12 Noise		
3.12-1. <i>Noise Standards</i>	<p>NOISE-1: Equipment Controls. Noise and vibration construction equipment whose specific location on the Project site may be flexible (e.g., compressors and generators) shall be located away from the nearest off-site noise-sensitive land uses (at least 100 feet away) if sufficient distance on the implementing Project site is available. If 100 feet is not feasible, the equipment shall have natural and/or manmade barriers (e.g., berms, intervening construction trailers, etc.) or a noise enclosure around the specific equipment location that screens the receptor from propagation of noise from such equipment. The barrier and/or enclosure shall block the line-of-site from the construction equipment to any similarly elevated noise-sensitive receptors. Noise enclosures shall provide sufficient space and gate access as needed for the safe operation of equipment, construction activities, material deliveries, and equipment access by construction personnel. A noise enclosure is not required if it would pose a safety risk or unreasonably prevent access to the construction equipment as deemed by the on-site construction manager such as in areas that have limited equipment maneuvering space or access. The contractor shall provide documentation verifying compliance with this measure.</p> <p>NOISE-2: Mobile Noise Barriers. For construction areas within 500 feet of a residential land use or other sensitive receptor, the contractor shall install temporary noise barriers between the active construction area and the off-site noise-sensitive receptors. The mobile noise barriers shall achieve sound level reductions of a minimum of 10 dBA between the Project construction sites and the sensitive receptor location. These temporary noise barriers shall be used to block the line-of-sight between the construction equipment and similarly elevated ground-level noise-sensitive receptors. The barriers should allow for repositioning in order to block the noise at the sensitive receptor as construction activities move along the Project boundary. A noise barrier is not required if it would pose a safety risk or unreasonably prevent access to the construction area as deemed by the on-site construction manager such as in areas that have limited equipment maneuvering space or access. Any barrier capable of a reduction greater than 10 dBA would require greater height and heavier noise insulation which would make mobility of the barrier infeasible and cause safety concerns related to barrier stability. Further, noise barriers would only be effective if they block the line-of-sight to sensitive receptors. The elevation of the surrounding area increases quickly and receptors within the vicinity of all identified sensitive receptors may still have a direct line-of-sight to the Project Site and may not benefit from the use of a mobile noise barrier. The contractor shall provide documentation verifying compliance with this measure.</p> <p>NOISE-3: Construction Equipment Noise Shielding and Muffling Devices, Contractors shall ensure that all construction equipment, fixed or mobile, are equipped with properly operating and maintained noise shielding and muffling devices, consistent with manufacturers' standards. Prior to the issuance of demolition permits, certification of muffler installation shall be submitted to the applicable City for review. The construction contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturers' specifications. The primary source of noise from construction equipment originates from the intake and exhaust portions of the engine cycle. According to FHWA, use of adequate mufflers systems can</p>	<p>Significant and Unavoidable (Construction)</p> <p>Significant and Unavoidable (Operation- Amplified Speaker System during Special Events)</p>

Environmental Impact	Mitigation Measures	Significance after Mitigation
	<p>achieve reductions in noise levels of up to 10 dBA.¹ The contractor shall use muffler systems that provide a minimum reduction of 10 dBA compared to the same equipment without an installed muffler system, reducing maximum construction noise levels. Contractors shall include the muffler requirements in contract specifications. The contractor shall also keep documentation on-site prepared by a noise consultant verifying compliance with this measure. Mufflers providing a noise reduction greater than 10 dBA would be technically infeasible or cost prohibitive given the current best available technologies. Further, mufflers are only effective on equipment with internal combustion engines and would not result in noise reductions for hand tools and other light-duty construction equipment. Therefore, NOISE-3 incorporates muffling devices to the maximum extent feasible.</p> <p>NOISE-4: Special Event Permit - Amplified Speaker System. The use of an amplified speaker system in the Meadow shall avoid facing north or south to limit noise impacts at the nearby sensitive receptors, as feasible. Special event permits shall be issued prior to any special event with provisions related to speaker directionality, hours of operations, and noise level restrictions. Further, temporary noise barriers, blankets, or baffles may be required on either side of and behind speakers to limit the amount of excess noise reaching nearby sensitive receptors.</p>	
<p>3.12-2. <i>Groundborne Vibration</i></p>	<p>NOISE-5: Equipment Setbacks (Construction – Structural Damage). The operation of construction equipment that generates high levels of vibration during any phase of construction occurring in the South Valley will be limited to setback distances from receptor V8. Receptor V8 includes the South Outlet Chlorination Station and Meter House. Setback distances apply in all directions surrounding the two buildings identified as V8. The following equipment shall be prohibited from operating within their respective setback distances:</p> <ul style="list-style-type: none"> • Large bulldozers shall be prohibited within 21 feet of receptor V8 • Loaded Trucks shall be prohibited within 19 feet of receptor V8 • Jackhammers shall be prohibited within 12 feet of receptor V8 • Small bulldozer shall be prohibited within 3 feet of receptor V8 <p>The contractor(s) shall require and document compliance with the minimum allowable setbacks in a construction vibration management plan, which shall be provided to the City prior to issuance of a demolition permit. The construction vibration management plan shall detail the types of equipment to be used during demolition, grading, and building construction, estimated vibration velocities, and distance to vibration receptor V8. Equipment and or alternative construction techniques to be used within the required setbacks for large bulldozers, loaded trucks, jackhammers, and small bulldozers shall be identified to ensure that vibration velocities will not exceed thresholds for potential structural damage.</p> <p>No feasible and practical mitigation measures are available (Construction – Human Annoyance).</p> <p>No mitigation measures are required (Operation).</p>	<p>Less than Significant (Construction – Structural Damage)</p> <p>Significant and Unavoidable (Construction - Human Annoyance)</p> <p>Less than Significant (Operation)</p>
<p>3.12-3. <i>Airport Noise</i></p>	<p>No mitigation measures are required.</p>	<p>No Impact</p>

¹ FHWA, Special Report – Measurement, Prediction, and Mitigation, Chapter 4 Mitigation, https://www.fhwa.dot.gov/Environment/noise/construction_noise/special_report/hcn04.cfm. Accessed July 16, 2021.

Environmental Impact	Mitigation Measures	Significance after Mitigation
3.12-4. <i>Cumulative</i>	Implement Mitigation Measures NOISE-1 through NOISE-4 described above (Construction and Operation Noise).	Significant and Unavoidable (Construction and Operation Noise)
	Implement Mitigation Measure NOISE-5 described above (Construction Vibration).	Significant and Unavoidable (Construction Vibration)
	No mitigation measures are required (Operation Vibration).	Less than Significant (Operation Vibration)
3.13 Population and Housing		
3.13-1. <i>Unplanned Population Growth</i>	No mitigation measures are required.	Less than Significant
3.13-2. <i>Displace People or Housing</i>	No mitigation measures are required.	No Impact
3.13-3. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.14 Public Services		
3.14-1. <i>Public Services: Fire and Police Protection</i>	No mitigation measures are required.	Less than Significant
3.14-2. <i>Public Services: Schools, Other Facilities</i>	No mitigation measures are required.	Less than Significant
3.14-3. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.15 Recreation and Parks		
3.15-1. <i>New Park Facility Impacts</i>	No mitigation measures are required.	Less than Significant
3.15-2. <i>Neighborhood and Regional Parks</i>	No mitigation measures are required.	Less than Significant
3.15-3. <i>Recreational Facilities</i>	Implement all mitigation measures listed in this table (Construction and Operation - Amplified Speaker System during Special Events).	Significant and Unavoidable (Construction Noise) Significant and Unavoidable (Operation- Amplified Speaker System during Special Events)
3.15-4. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.16 Transportation		
3.16-1. <i>Conflict with a Program Plan, Ordinance or Policy</i>	No mitigation measures are required.	Less than Significant
3.16-2. <i>Conflict with CEQA Guidelines section 15064.3, subdivision (b)</i>	No mitigation measures are required.	Less than Significant

Environmental Impact	Mitigation Measures	Significance after Mitigation
3.16-3. <i>Geometric Design Features</i>	No mitigation measures are required.	Less than Significant
3.16-4. <i>Emergency Access</i>	No mitigation measures are required.	Less than Significant
3.16-5. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.17 Tribal Cultural Resources		
3.17-1. <i>Tribal Cultural Resource</i>	<p>TCR-1: Native American Monitoring. Prior to the commencement of any ground disturbing activity at the project site, the City shall reach out to retain a Native American Monitor from both the Gabrieleno Band of Mission Indians-Kizh Nation and the Gabrielino Tongva Indians of California Tribal Council to provide a Native American monitor. Should neither Tribe be available to monitor during ground disturbance work may continue but should Tribal Cultural Resources be encountered work will stop and both Tribes will be immediately notified. The Tribal monitors will only be present on-site during the construction phases that involve ground-disturbing activity in areas of quaternary alluvium within the Knoll, and will not be necessary in portions of the Knoll where the Puente Sandstone bedrock formation is present either at depth or at the surface. In addition, any ground disturbance required in the Eucalyptus Grove will be subject to Tribal monitoring. Ground disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing, or auguring, grubbing, tree removals, boring, grading, excavation, drilling, and trenching within the areas above. The on-site Tribal monitoring shall end when all ground-disturbing activities within the Knoll and the Eucalyptus Grove are completed, or when the Tribal representatives and Tribal Monitor have indicated that the project site has little to no potential for impacting Tribal Cultural Resources.,</p> <p>In the event that cultural resources of Native American origin are identified during construction, the City will coordinate with the qualified archaeologist (who meets the Secretary of the Interior's Professional Qualifications Standards), and both tribes that participated in consultation. If the City, in consultation with the Gabrieleno Band of Mission Indians-Kizh Nation and the Gabrielino Tongva Indians of California Tribal Council, determines that the resource is a Tribal Cultural Resource and thus significant under CEQA, a treatment plan shall be prepared and implemented in accordance with state guidelines and in consultation with the two Native American tribes. The treatment plan may include, but would not be limited to, avoidance, capping in place, excavation and removal of the resource, interpretive displays, sensitive area signage, or other mutually agreed upon measure.</p>	Less than Significant
3.17-2. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant
3.18 Utilities and Service Systems		
3.18-1. <i>Utilities Expansion or Relocation</i>	UTIL-1: Underground Utilities Search and Coordination. During design and prior to construction of Project facilities, the City shall conduct an underground utilities search and coordinate with all utility providers that operate in the same public rights-of-way impacted by construction activities. The City shall ensure that any temporary disruption in utility service caused by construction is minimized and that any affected parties are notified in advance.	Less than Significant
3.18-2. <i>Water Supplies</i>	No mitigation measures are required.	Less than Significant
3.18-3. <i>Wastewater Treatment</i>	No mitigation measures are required.	Less than Significant
3.18-4. <i>Solid Waste</i>	No mitigation measures are required.	Less than Significant
3.18-5. <i>Solid Waste Regulations</i>	No mitigation measures are required.	Less than Significant
3.18-6. <i>Cumulative</i>	No mitigation measures are required.	Less than Significant

Environmental Impact	Mitigation Measures	Significance after Mitigation
3.19 Wildfire		
<i>3.19-1. Emergency Response Plan</i>	No mitigation measures are required.	Less than Significant
<i>3.19-2. Exposure to Pollutant Concentrations</i>	No mitigation measures are required.	Less than Significant
<i>3.19-3. Infrastructure that Exacerbates Wildfire Risk</i>	No mitigation measures are required.	Less than Significant
<i>3.19-4. Post-Fire Slope or Drainage</i>	No mitigation measures are required.	Less than Significant
<i>3.19-5. Cumulative</i>	No mitigation measures are required.	Less than Significant

**TABLE ES-2
PROJECT DESIGN FEATURES**

Environmental Resource	Project Design Features
Biological Resources	<p>PDF-BIO-1: Ornamental Native Plants. If the proposed Project impacts native planted species within the Community Restoration Area, including Nevin's barberry, showy island snapdragon, and Coulter's matilija poppy, these species will be replanted onsite at a 1:1 ratio.</p> <p>PDF BIO-2: Nesting Birds. If construction and vegetation removal is proposed between February 1 and August 31, a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds and raptors 30 days prior to the start of construction, and then weekly, within 300-feet of the construction limits (or to the outer limits of the park area bounded by West Silver Lake Drive, Van Pelt Place, and Silver Lake Boulevard) to determine and map the location and extent of breeding birds that could be affected by the Project. Nesting bird surveys shall be conducted at appropriate nesting times and concentrate on potential roosting or perch sites. Weekly surveys will take place with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work." If Project activities are delayed or suspended for more than 7 days after the last survey, surveys shall be repeated before work can resume.</p> <p>If an active nest is located, clearing and construction within appropriate buffers as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. Due to the urbanized nature of the Project site, 300-feet for raptors and 150-feet for passerine birds could suffice for nesting bird buffers however it will be at the discretion of the qualified biologist. The buffer zone from the nest shall be established in the field with flagging and stakes. The qualified biologist shall retain the ability to increase buffers if needed to protect the nesting birds. Temporary fencing and signage shall be maintained for the duration of the Project. Construction personnel shall be instructed on the sensitivity of the area and be advised not to work, trespass, or engage in activities that would disturb nesting birds near or inside the buffer. On-site construction monitoring may also be required to ensure that no direct or indirect impacts occur to the active nest. Project activities may encroach into the buffer only at the discretion of the qualified biologist.</p> <p>PDF-BIO-3: Wildlife Fencing Signage. Interpretive signage will be installed near all wildlife friendly fencing to educate the public on wildlife and habitat sensitivity, and to encourage the public to not enter the restricted areas.</p> <p>PDF-BIO-4: Tree Protection Fencing. Establish tree protection fencing around the tree protection zone (TPZ). This area will be marked and avoided during all construction activities near the protected trees. This area will be kept clear of any construction material, debris, equipment, portable toilets, and foot or equipment traffic. Fencing will be installed prior to construction at the edge of the TPZ and remain in place until the entire project is complete. The fence will be chain link and a minimum of five feet in height.</p> <p>PDF-BIO-5: Grading/Trenching in TPZ. Grading/trenching will be restricted to areas outside the TPZ of the trees. All grubbing and clearing within the TPZ of a tree will be done manually. All soil removal will be done with hand tools, using an air spade or comparable equipment that will excavate soil without damaging the roots. Jack hammers will not be used to remove the soil. When a root is encountered, soil removal will be done without chipping, marring, or damaging the root bark in any way (damaging the root bark will open up the bark barrier so that disease can enter the tree, allowing rot to develop or fungus to take over, and can result in root death).</p> <p>PDF-BIO-6: Avoiding Root Damage. If tree roots must be cut, cuts will be less than one inch. If any roots over one inch in diameter are damaged, they will be clean-cut with a sharp and sterilized hand tool. Any roots permanently exposed from grading or scraping of topsoil will be cleanly cut just below the new soil grade.</p> <p>PDF-BIO-7: Soil Grade. Soil levels will be returned to the original grade, at which trees' roots were first established. Existing fill soil above that original grade will be removed to the extent possible; no additional fill soil will be placed over the original grade. If soil is filled back to the original grade, compaction will be done manually only (no equipment will be used). Compaction will be done in layers of three to six inches depending on soil structure. No gaps or pockets will remain in the soil.</p> <p>PDF-BIO-8: Irrigation. During construction, trees will only be watered under the guidance of the project arborist. Where it is needed, temporary irrigation (drip, leaking tube, or other) will be installed at intervals throughout the fenced protection zone to allow periodic deep watering during construction. The entire TPZ of the trees will be watered to a soil depth of four feet. This may require slow irrigation for 8-24 hours or more, or may require repeat waterings of shorter duration to promote saturation. The soil will be allowed to dry out completely before watering is repeated. The period between waterings may be a month or more. The project arborist will monitor the protected trees and provide recommendations on the effectiveness and duration of temporary irrigation.</p>

Environmental Resource
Project Design Features

PDF-BIO-9: Landscaping Around Native Trees. Landscaping near protected trees will be drought-tolerant only unless trees are already accustomed to current landscape irrigation (to be confirmed by arborist). Irrigation overspray or runoff, as a result of lawn or ornamental irrigation, will be avoided in the TPZ of any protected tree with the noted exception above. All landscaping will be kept away from the trunk of any protected tree by a minimum of two feet.

PDF-BIO-10: Tree Pest Inspection. Prior to tree removal, the City will have a certified arborist evaluate the trees to ensure they are free of pests.

PDF-BIO-11: Development of Pest Management Plan. If the certified arborist determines trees are impacted by infectious pests or diseases, the City will work with the certified arborist to prepare an Infectious Tree Disease Management Plan or develop a detailed, robust, enforceable, and feasible list of preventative measures. A plan/list will provide measures relevant for each tree pest or disease observed. To avoid the spread of infectious tree pests and diseases, infected trees should not be transported from the Project site without first being treated using best available management practices described Infectious Tree Disease Management Plan or the list of preventative measures.

PDF-BIO-12: Prevention of Pathogen Spread. All tree material, especially infected tree material, will be left on site, chipping the material for use as ground cover or mulch. Cleaning and disinfecting pruning and power tools before use will be completed to prevent introducing pathogens from known infested areas, and after use to prevent spread of pathogens to new areas.

PDF-BIO-13: City Tree Ordinance. Any tree or shrub covered under the City Tree Ordinance which may be impacted by proposed Project construction, either through removal or encroachment within the TPZ, shall be replaced with nursery stock at a minimum 4:1 mitigation ratio of like species and 15-gallon in size. The City will work with a certified arborist and/or tree specialist to acquire appropriately sized, locally sourced trees from a local native plant nursery that implements Phytophthora/Clean Nursery Stock protocols. This may reduce the probability of introducing replacement trees contaminated with pests, diseases, and pathogens that could spread and infect native trees or habitats. A certified arborist and/or tree specialist should inspect and potentially quarantine nursery stock before bringing them into the Project site. Replacement tree plantings shall be located in areas protected by the habitat fencing to ensure their protection from the public.

PDF-BIO-14: RAP Tree Policy. Any tree or shrub covered under the RAP Tree Policy which may be impacted by the proposed Project construction, either through removal or encroachment within the TPZ, shall be replaced with nursery stock. The City at a minimum will be required to replace impacted trees at a 1:1 ratio for trunk diameter. The impacted trees' aggregate diameter, measured at DSH (multi-trunk trees are to be measured immediately below the lowest trunk) shall be replaced at an equal or greater rate of caliper of new trees. Each one-inch DSH of existing tree shall be replaced with a minimum one-inch caliper new tree.

Cultural Resources

PDF-CR-1: Archaeological Resource Discovery During Construction. If archaeological resources are discovered during excavation, grading, or construction activities, work shall cease in the area of the find until a qualified archaeologist has evaluated the find in accordance with State and local guidelines, including those set forth in California PRC Section 21083.2. Personnel of the proposed Project shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of the Project site. The found deposits would be treated in accordance with State and local guidelines, including those set forth in California PRC Section 21083.2. If the discovery proves significant under CEQA (Section 15064.5f; PRC 21082), additional work such as testing or data recovery may be warranted. Should any Native American artifacts be encountered, additional consultation with NAHC-listed tribal groups should be conducted immediately. The process for contacting the tribal group and the timing of the contact should be addressed in the management plan.

PDF-CR-2: Human Remains Discovery During Construction. If human remains are encountered unexpectedly during construction demolition and/or grading activities, Section 7050.5 of the California Health and Safety Code requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California PRC 5097.98. Remains suspected to be Native American are treated under CEQA at CCR 15064.5; PRC 5097.98 illustrates the process to be followed if remains are discovered. If human remains are discovered during excavation activities, the following procedure shall be observed:

Stop immediately and contact the County Coroner:

1104 N. Mission Road
 Los Angeles, CA 90033
 323-343-0512 (8 am to 5 pm Monday through Friday) or
 323-343-0714 (After hours, Saturday, Sunday, and Holidays)

- If the remains are determined to be of Native American descent, the Coroner has 24 hours to notify the NAHC.
- The NAHC will immediately notify the person it believes to be the MLD of the deceased Native American.

Environmental Resource	Project Design Features
	<ul style="list-style-type: none"> The MLD has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods. If the owner does not accept the MLD's recommendations, the owner or the MLD may request mediation by the NAHC.
Energy	Implement PDF-UTIL-1: Drought-Tolerant Landscaping and PDF-UTIL-2: Water-Efficient Irrigation discussed below.
Greenhouse Gas Emissions	Implement PDF-UTIL-1: Drought-Tolerant Landscaping and PDF-UTIL-2: Water-Efficient Irrigation discussed below.
Hazards and Hazardous Materials	Implement PDF-TRA-1: Construction Traffic Management Plan , PDF-TRA-2: Construction Staging Plan , PDF-TRA-3: Construction Traffic , PDF-TRA-4: Access to Parcels , and PDF-TRA-5: Site-Specific Traffic Control and Transit Plan for Large Events discussed below.
Noise	<p>PDF-NOISE-1: Haul Route. Prior to commencement of construction and operational maintenance activities, the City shall establish approved truck haul routes that avoid or minimize, to the extent feasible, unnecessary truck travel on local roadways through residential neighborhoods or adjacent to schools, and prioritize travel on collector and arterial streets.</p> <p>PDF-NOISE-2: Construction Noticing and Community Liaison. Prior to commencement of construction activities, the City shall notify in writing adjacent residents and businesses along the Project route or worksite of proposed construction activities and the tentative schedule. The City shall require the construction contractor to designate a community liaison to respond to any issues and/or concerns related to construction activities, including any noise or vibration complaints. The community liaison shall maintain a log of communications and resolutions of issues or concerns and share the log with the City. Notices and construction signs will include a hotline and website address which will be updated quarterly and will include project-related information</p>
Public Services	<p>PDF-PS-1: Construction Security Measures. During construction, on-site security measures will include security lighting and a construction security fence with gated and locked entry around active construction areas.</p> <p>PDF-PS-2: Operational Security Measures. For Special Events that occur during the nighttime hours, security lighting will be provided.</p> <p>Implement PDF-TRA-1: Construction Traffic Management Plan discussed below.</p>
Transportation	<p>PDF-TRA-1: Construction Traffic Management Plan. A Construction Traffic Management Plan will be prepared for the phases of the proposed Project that affect offsite components or require increased vehicle access consistent with the LADOT Construction Traffic Control Guidelines. This plan will address the planned Project construction phasing, sequence of construction activities, access, and circulation. In addition, the plan would include planned detour routes and BMPs, as well as coordination with and advance notice to local emergency providers.</p> <p>PDF-TRA-2: Construction Staging Plan. A construction staging plan shall be developed to reduce impacts related to noise, dust, traffic, and other health hazards. In addition, construction site BMPs (e.g., fencing, signs, and detours) shall be implemented to minimize hazards and prevent safety issues on the roadways and sidewalks surrounding the construction site.</p> <p>PDF-TRA-3: Construction Traffic. Construction-related trips shall be scheduled with increased frequency during off-peak hours to minimize impacts to commuters.</p> <p>PDF-TRA-4: Access to Parcels. It is not anticipated that access to existing parcels outside of the proposed Project impact areas would be impacted. However, if access to any existing parcels is removed during proposed construction activities, temporary access shall be provided, and/or new points of access shall be constructed.</p> <p>PDF-TRA-5: Site-Specific Traffic Control and Transit Plan for Large Events. Large event permittees shall develop a site-specific traffic control plan to provide information on parking and circulation and highlight transit options for event attendees to minimize congestion and vehicle miles traveled. Traffic control strategies for events will include inbound/outbound flex lanes and sheriff-controlled intersections. Traffic control plans will also identify nearby public parking facilities and identify passenger pick-up/drop-off locations. Permittees will be required to consider the cumulative traffic impacts of their event in relation to other events in the Project Area. The traffic control plans will also identify emergency services egress and access.</p> <p>PDF-TRA-6: Expand Public Transit Connections. The future site operator and relevant City departments (LADOT, Recreation and Parks Department, City Planning, etc.) shall work together to explore options for expanding public transit connections to the Project site to expand community access and reduce VMT.</p>

Environmental Resource	Project Design Features
Tribal Cultural Resources	Implement PDF-CR-1: Archaeological Resource Discovery During Construction and PDF-CR-2: Human Remains Discovery During Construction discussed above.
Utilities and Service Systems	<p>PDF-UTIL-1: Drought-Tolerant Landscaping. The Project will use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses.</p> <p>PDF-UTIL-2: Water-Efficient Irrigation. Irrigation water would be pumped from the reservoirs to wetland habitat areas which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. Recycled water may also be used to irrigate ornamental planting, should such water supplies become available in the future.</p> <p>PDF-UTIL-3: Decentralized Drainage Strategy. To prevent untreated surface runoff from entering the reservoir waters, proposed Project will implement decentralized drainage facilities to capture and filter or infiltrate stormwater runoff from the developed portions of the Project site.</p>
Wildfire	<p>PDF-WF-1: Fire Code. The Project Manager is responsible for compliance with applicable LAMC Fire Code Section 57 et seq. for construction sites on, adjacent to or in the immediate vicinity of a VHFHSZ as designated through LAMC Sections 57.4908.1.1 through 57.4908.1.3 and identified on City maintained databases such as NavigateLA and Zone information and Map Access System (ZIMAS) (which maintain digitalized LA General Plan and zoning maps).</p> <p>PDF-WF-2: Open Flame. Pursuant to LAMC Section 57.4908.5 open flame is prohibited upon any road, street, or fire road with the VHFHSZ.</p> <p>PDF-WF-3: Smoking Prohibited. No smoking is allowed where conditions are such as to make smoking a hazard and in spaces where flammable or combustible materials are stored or handled per Section 310.2 of the California Fire Code. Further, it shall be unlawful for any person to light, ignite or smoke any cigar, cigarette, tobacco in a pipe or other form of smoldering substance within the VHFHSZ compliant with LAMC Section 57.4908.6. The Section also prohibits open flame upon any road, street, or fire road within the VHFHSZ.</p> <p>PDF-WF-4: Signage. No person, except one authorized and acting within the scope of his official duties, shall remove, deface, mar, mutilate, or change the position of any sign, installed by the Chief pursuant to this article, designating "CLOSED AREA," "NO SMOKING," "NO OPEN FIRES," "RESTRICTED ENTRY," or other sign or device installed to give warning and to regulate persons' actions within the VHFHSZ as stated in Section 57.4908.9.1.</p> <p>PDF-WF-5: Brush Clearance Activities. Pursuant to Ordinance No. 185789 which added Sections 57.305.5.2, 57.305.5.2.1, 57.322.1.1.10 and 57.322.1.1.10.1, and amended Section 57.322.1.1 to Article 7, Chapter V of the LAMC, the applicable requirements for brush clearing activities in the VHFHSZ would apply including, but not limited to:</p> <ul style="list-style-type: none"> • Use of metal cutting blades for grass or brush clearance shall be limited to those which are nonferrous/non-sparking. • Brush clearance cannot be done on red flag days, when fire weather conditions are at their peak. • Individuals engaged in brush clearance operations shall not engage in any other activities during their actual clearance of grass or brush. • Individuals engaged in grass or brush clearance operations shall use an appropriate extinguishing agent immediately to extinguish a fire. • All fires, regardless of size, shall be reported immediately via the 9-1-1 system to the Fire Department. • An approved fire extinguisher, or a pressurized garden hose with attached nozzle shall be within 10 feet of any grass or brush clearance operation, to quickly extinguish a small fire before it burns out of control. • Where a gasoline container is present at the site of the grass or brush clearance operation, a minimum 4A 60 BC dry chemical fire extinguisher shall be within 10 feet of the brush clearance operation. • A cell phone capable of dialing 9-1-1 shall be charged and readily accessible to the grass or brush clearance operation. • A safety strap shall be used at all times for any tool or appliance with hot exhaust. Hot exhaust shall not come in contact with any brush, grass, flash fuels, or other flammable material.

Cumulative Impacts

With implementation of mitigation measures, the proposed Project's contribution to cumulative impacts would be less than significant except for noise impact during construction and operational noise related to amplified speaker systems during special events, which would remain significant and unavoidable despite implementation of feasible mitigation measures.

Significant Irreversible Environmental Changes

Section 15126.2(c) of the CEQA Guidelines indicates that uses of nonrenewable resources during the initial and continued phases of a project may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as a street improvement that provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with a project. Irretrievable commitments of resources should be evaluated to ensure that such current consumption is justified.

Implementing the proposed Project would commit nonrenewable (e.g., petroleum) or slowly renewable (e.g., timber) resources during construction and operation. In order to construct the proposed Project, machinery, equipment, materials (e.g., lumber, sand, gravel), and workers would be required, representing an irreversible commitment of some of these resources. Similarly, during operation, some of these resources (e.g., energy, electricity) would again be needed, representing a long-term commitment and permanent investment. New facilities would be all-electric, and would be Leadership in Energy and Environmental Design (LEED) rated. The consumption and use of some of these resources would limit their availability for future generations. However, the proposed Project would provide public recreational facilities to primarily the local and occasionally the regional community. In addition, the proposed Project would be designed to meet the City's sustainability goals and all buildings would be all-electric. Therefore, the significant irreversible changes have been deemed acceptable in light of the proposed Project's overall benefits.

ES.7 References

California Department of Transportation (Caltrans), 2020 Transportation and Construction Vibration Guidance Manual, April 2020.

City of Los Angeles 2021. Map Gallery Citywide. Available online at: <https://ladcp.maps.arcgis.com/apps/View/index.html?appid=bb34a3ae0beb4574aa6051c928899e01>, accessed September 2021.

City of Los Angeles Bureau of Engineering (BOE). 2021. Silver Lake Reservoir Complex Master Plan. Available online at: <https://eng.lacity.org/silver-lake-reservoir-complex-master-plan/master-plan>.

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CHAPTER 1

Introduction

This Draft Environmental Impact Report (EIR) evaluates the Silver Lake Reservoir Complex Master Plan Project (proposed Project) in the City of Los Angeles pursuant to the requirements of the California Environmental Quality Act (CEQA, Public Resources Code sections 21000 et. seq.) and the CEQA Guidelines. The City of Los Angeles (City) is the Lead Agency under CEQA.

1.1 Purpose of the Environmental Impact Report

The purpose of the Draft EIR is to provide the public and pertinent agencies with information about the potential effects on the local and regional environment associated with construction and operation of the proposed Project. This Draft EIR describes the environmental impacts of the proposed Project and identifies mitigation measures where necessary to avoid or reduce any significant impacts. The impact analyses are based on a variety of sources, including publicly available documents, agency consultation, technical studies and field surveys.

The City shall consider and certify this EIR prior to approving the proposed Project. The Lead Agency shall certify that this EIR has been completed in compliance with CEQA and that the EIR reflects its independent judgment and analysis (CEQA Guidelines Section 15090[a]).

1.2 CEQA Process Overview

The basic purposes of CEQA are to (1) inform decision makers and the public about the potential, significant adverse environmental effects of proposed governmental decisions and activities, (2) identify the ways those environmental effects can be avoided or significantly reduced, (3) prevent significant, avoidable and adverse environmental effects by requiring changes in projects through the use of alternatives or mitigation measures when feasible, and (4) disclose to the public the reasons why an implementing agency may approve a project even if significant unavoidable environmental effects are involved.

An EIR uses a multidisciplinary approach, applying social and natural sciences to make a qualitative and quantitative analysis of all the foreseeable environmental impacts that a proposed project would exert on the surrounding area. As stated in *CEQA Guidelines* Section 15151:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible.

This Draft EIR has been prepared to comply with CEQA and the *CEQA Guidelines* and is to be used by local regulators and the public in their review of the potential significant adverse environmental impacts of the proposed Project and alternatives, and review of mitigation measures that would minimize or avoid those potential environmental effects. The City will consider the information presented in this Draft EIR, along with other factors, prior to considering and making any final decisions regarding the proposed Project.

1.3 Notice of Preparation and Scoping Meeting

In accordance with the requirements of CEQA, the City has provided opportunities for various agencies and the public to participate in the environmental review process. During preparation of the Draft EIR, efforts were made to contact various federal, state, regional, and local government agencies and other interested parties to solicit comments on the scope of review in this document. This included the distribution of a Notice of Preparation (NOP) to various responsible agencies, trustee agencies, and interested parties. Pursuant to CEQA Guidelines Section 15082, the City circulated the NOP directly to public agencies (including the State Clearinghouse Office of Planning and Research), special districts, and members of the public who had requested such notice. The NOP was posted for a 30-day scoping period. The 30-day scoping period occurred between January 6, 2022, and February 7, 2022. The purpose of the NOP was to formally announce the preparation of a Draft EIR for the proposed Project, and that, as the lead agency, the City was soliciting input regarding the scope and content of the environmental information to be included in the EIR. The NOP provided preliminary information regarding the anticipated range of impacts to be analyzed within the EIR. As stated in the NOP, all resource areas listed in Appendix G of the CEQA Guidelines will be analyzed in this Draft EIR. The NOP is provided in **Appendix A**.

A virtual public meeting was held during the scoping period on January 19, 2022, from 6:00 p.m. to 7:30 p.m. via Zoom for reviewing agencies and the public. The purpose of the virtual scoping meeting was to provide an overview of the proposed Project, an overview of the CEQA process, and the timeline for environmental review. A recorded presentation was shown during the public meeting and was made available to the public on the City's website during the 30-day scoping period (<https://eng.lacity.org/silver-lake-reservoir-complex-master-plan/eir>).

A total of 206 comment letters were received in response to the NOP and 26 verbal comments were obtained during the NOP scoping meeting. Please see Table 1 in Appendix A for a detailed summary of the issues raised. The environmental concerns raised during the scoping period were addressed during the preparation of this Draft EIR. The comment letters received during the NOP comment period, along with a summary of the issues raised during the virtual public scoping meeting, are also included in Appendix A.

1.4 Stakeholder Outreach

In addition to required public notifications under CEQA, the City conducted an extensive outreach process during the Master Plan and preliminary design preparation. The Silver Lake Reservoir Complex Master Plan is the result of an inclusive public engagement and participatory

planning process led by Hargreaves Jones in partnership with the City of Los Angeles, Department of Public Works, Bureau of Engineering (BOE), Los Angeles Department of Water and Power (LADWP), and the Council Districts 4 and 13. Public feedback was solicited and integrated at all critical stages in the planning process: analysis, visioning and programming, Master Plan Alternatives, Preferred Master Plan, and Final Master Plan.

The overall process for the Master Plan development included the following:

- Bi-weekly meetings with City Staff and Council Districts;
- Multiple focused meetings with City officials and departments regarding project goals and design features;
- Eight Stakeholder Working Group Meetings held at critical moments throughout the process; and
- Five Community Workshops with attendance by 1,570 community members and more than 8,400 questionnaire responses.

Stakeholder Working Group Meetings. The Silver Lake community has a long history of organizing around the reservoirs. Today, there are multiple community groups, including formalized non-profit organizations, with missions directly involving the Silver Lake Reservoir Complex (SLRC). Early in the Master Plan process, a Stakeholder Working Group (SWG) was formed comprised of members from five active groups representing a diverse range of interests in the community (more information on each group can be found in the Master Plan included as Appendix B):

- Silver Lake Forward (SLF)
- Silver Lake Neighborhood Council (SLNC)
- Silver Lake Now (SLN)
- Silver Lake Reservoirs Conservancy (SLRC)
- Silver Lake Wildlife Sanctuary (SLWS)

Community Workshops. Community Workshops are a recognized, successful way to solicit public input during Master Plan development. Rather than following standard presentation and open house formats, the Workshops included interactive sessions, facilitated conversations, and site walks. The goal of the Community Workshops was for participants to feel energized about the future of the SLRC and recognize that their input is valued and heard. The success of the Workshops stemmed from their level of attendance and participation. Four in-person and one virtual Community Workshop were held during the Master Plan preparation process. For more information related to Community Workshops please refer to Chapter 4 of the Master Plan included as Appendix B.

1.5 Areas of Known Public Controversy

CEQA Guidelines Section 15123 states that an EIR shall identify areas of controversy known to the Lead Agency, including issues raised by the agency and the public. Based on comments

received during the scoping meetings and NOP comment period, the following issues are known to be of concern and may be controversial. Each issue is further evaluated in the EIR:

- Removal of the perimeter security fencing and related concerns regarding homeless encampments, public safety, and impacts to wildlife
- Increased parking and traffic circulation on local streets
- Pedestrian connections and pedestrian safety
- Connectivity with the bike network and cyclist safety
- Potential impacts to habitat and tree removals
- Noise impacts from construction activities and amplified sound during special events

1.6 Compliance with CEQA

1.6.1 Public Review of Draft EIR

The Draft EIR is available to the general public for review at the locations listed below and on the proposed Project’s website: <https://eng.lacity.org/silver-lake-reservoir-complex-master-plan/eir>

- Silver Lake Branch Library, 2411 Glendale Blvd, Los Angeles, CA 90039
- Los Angeles County City Terrace Library, 4025 E. City Terrace Drive, Los Angeles, CA 90063

In accordance with CEQA Guidelines Sections 15087 and 15105, this Draft EIR will be circulated for a 45-day public review period starting on October 6, 2022, and ending on November 21, 2022. The public is invited to comment in writing on the information contained in this document. Interested agencies and members of the public are invited to provide written comments on the Draft EIR and are encouraged to provide information that they believe should be included in the Draft EIR and identify where the information can be obtained.

A virtual public meeting will also be held on October 26, 2022, via Zoom starting at 6:00 pm. The meeting will include a presentation about the proposed Project and the findings in the Draft EIR. Public comments will be accepted at the meeting.

Comments can be submitted online through the proposed Project website at: <https://eng.lacity.org/silver-lake-reservoir-complex-master-plan/eir>.

Additionally, comments can be emailed to eng.slrcmp@lacity.org (please include “SLRC” in the subject line) or sent by mail to:

City of Los Angeles Department of Public Works, Bureau of Engineering
c/o ESA- Nicolle Steiner
626 Wilshire Boulevard, Suite 1100
Los Angeles, CA 90017

1.6.2 Final EIR

Upon completion of the 45-day Draft EIR public review period, the City will evaluate all written comments on significant environmental points received from persons or agencies reviewing the Draft EIR. Pursuant to CEQA Guidelines Section 15088, the City will prepare written responses to comments raising environmental issues. Pursuant to CEQA Guidelines Section 15132, the Final EIR will be prepared, which will consist of:

- a) The Draft EIR and revisions to the Draft EIR
- b) Comments and recommendations received on the Draft EIR
- c) A list of persons, organizations, and public agencies commenting on the Draft EIR
- d) The lead agency's responses to significant environmental points raised in the review and consultation process

Additionally, pursuant to CEQA Guidelines Section 15088, after the Final EIR is completed, the City will provide a written proposed response to each public agency on comments made by that public agency at least 10 days prior to certifying the EIR.

1.6.3 Certification of the Final EIR

The Draft EIR, as revised by the Final EIR, will be considered by the Los Angeles City Council for certification, consistent with CEQA Guidelines Section 15090, which states:

Prior to approving a project, the lead agency shall certify that:

- 1) *The final EIR has been completed in compliance with CEQA;*
- 2) *The final EIR was presented to the decision-making body of the lead agency, and that the decision-making body reviewed and considered the information contained in the final EIR prior to approving the project; and*
- 3) *The final EIR reflects the lead agency's independent judgment and analysis.*

Regarding the adequacy of an EIR, according to CEQA Guidelines Section 15151, "An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed Project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure."

1.6.4 Mitigation Monitoring Program

CEQA Guidelines Section 15097 requires lead agencies to "adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects" (*CEQA Guidelines* Section 15097(a)). The

mitigation measures, if any, adopted as part of the Final EIR will be included in a Mitigation Monitoring Program (MMP) and implemented by the City.

1.6.5 Project Consideration

After certification of the Final EIR, the City may consider approval of the proposed Project. A decision to approve the proposed Project would be accompanied by specific, written findings, in accordance with CEQA Guidelines Section 15091 and a specific, written statement of overriding considerations if required, in accordance with CEQA Guidelines Section 15093.

1.7 EIR Format

The Draft EIR is organized into the following seven chapters:

Executive Summary, provides summaries of the proposed Project description, project design features, environmental impacts, and mitigation measures.

Chapter 1, *Introduction*, summarizes the environmental review process in compliance with CEQA.

Chapter 2, *Project Description*, provides a detailed proposed Project description indicating proposed Project location, setting, background, and history, as well as proposed Project characteristics, objectives, phasing, and approval actions required to implement the proposed Project.

Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*, contains a detailed environmental analysis of the existing (baseline) conditions, potential proposed Project impacts, recommended mitigation measures, and possible unavoidable adverse impacts and cumulative impacts for each resource area section.

Chapter 4, *Other CEQA Considerations*, discusses the long-term implications of the proposed Project. Irreversible environmental changes that would be involved in the proposed Project, should it be implemented, are considered. The proposed Project's growth-inducing impacts, including the potential for population growth impacts, are also discussed.

Chapter 5, *Alternatives to the Proposed Project*, describes a reasonable range of alternatives to the proposed Project or its location that could avoid or substantially lessen the proposed Project's significant impacts and still feasibly attain the proposed Project's basic objectives.

Chapter 6, *Report Preparers*, lists the preparers of the EIR and its technical studies, in addition to a summary of the federal, state, and local agencies; other organizations; and individuals consulted.

CHAPTER 2

Project Description

2.1 Introduction

The City of Los Angeles (City), as lead agency, is proposing the Silver Lake Reservoir Complex Master Plan Project (Project or proposed Project). The proposed Project would be located within the Silver Lake neighborhood of the City of Los Angeles (**Figure 2-1**) and would redesign approximately 116-acres of the 127-acre Silver Lake Reservoir Complex (SLRC) with community park amenities, which includes the City constructing various community park facilities and allowing some new public park uses within portions of the SLRC. The Silver Lake Reservoir Complex Master Plan was prepared in December 2020 over a year-long community engagement process that included several community workshops and stakeholder working group meetings. The proposed Project is based on that Silver Lake Reservoir Complex Master Plan (included as Appendix B), but it is more specifically described in this document.

2.2 Project Background

The Silver Lake and Ivanhoe Reservoirs and surrounding facilities are collectively known as the SLRC and are owned and operated by the Los Angeles Department of Water and Power (LADWP). In response to guidance provided by the U.S. Environmental Protection Agency in 2006 regarding water quality guidelines for open reservoirs, LADWP decommissioned both the Silver Lake and Ivanhoe Reservoirs and built the Headworks Reservoir, a new covered water storage facility north of Griffith Park (USEPA 2006). As a result, the Silver Lake Reservoir was removed from service in 2008 and the Ivanhoe Reservoir was removed from service in 2017. LADWP supplies water to the reservoirs from local groundwater wells, but both reservoirs have been isolated from the potable water delivery system.

Under the Los Angeles City General Plan of 2004, the Silver Lake–Echo Park–Elysian Valley Community Plan (Community Plan) establishes policy and land use guidelines for the Silver Lake region of the City. The Community Plan identifies several opportunities related to the proposed Project, including the promotion and facilitation of implementing the Project as a valuable community and recreational asset. Although the Silver Lake and Ivanhoe Reservoirs are no longer in service for the City’s potable water needs, they are considered an important neighborhood-defining characteristic.

LADWP currently operates various facilities within the SLRC as shown on **Figure 2-2** in support of water supply operations, and some of these facilities would be preserved for LADWP operations, staff, and future projects. LADWP has, and will continue to have, operational responsibilities within the SLRC, such as maintaining the integrity of the dams and active use, maintenance of LADWP onsite facilities, and conveying water to both reservoirs.

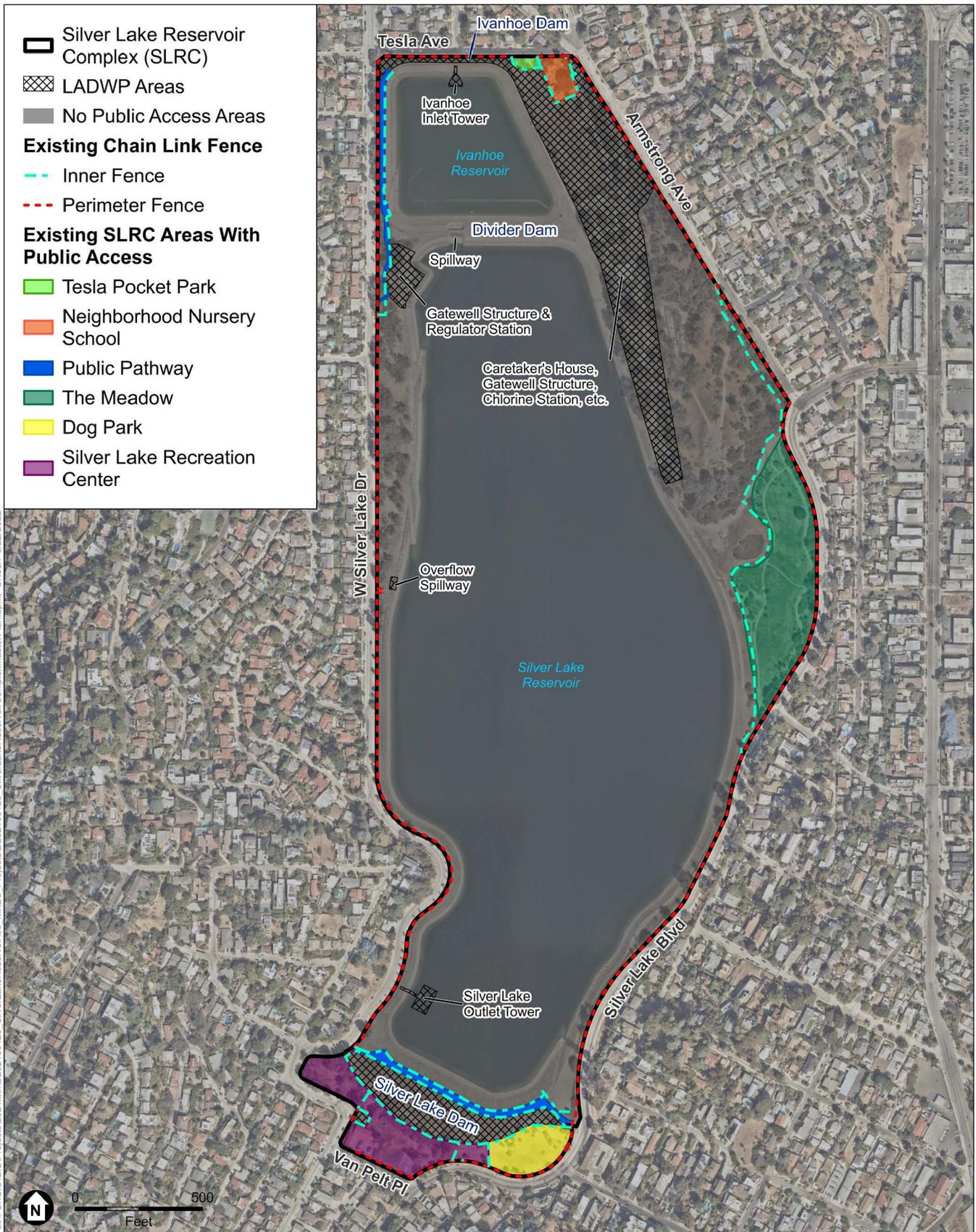


SOURCE: ESRI, 2021

Silver Lake Reservoir Complex Master Plan Project

Figure 2-1
Regional Location





SOURCE: Nearmap, 2021; ESA, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 2-2
Existing Conditions

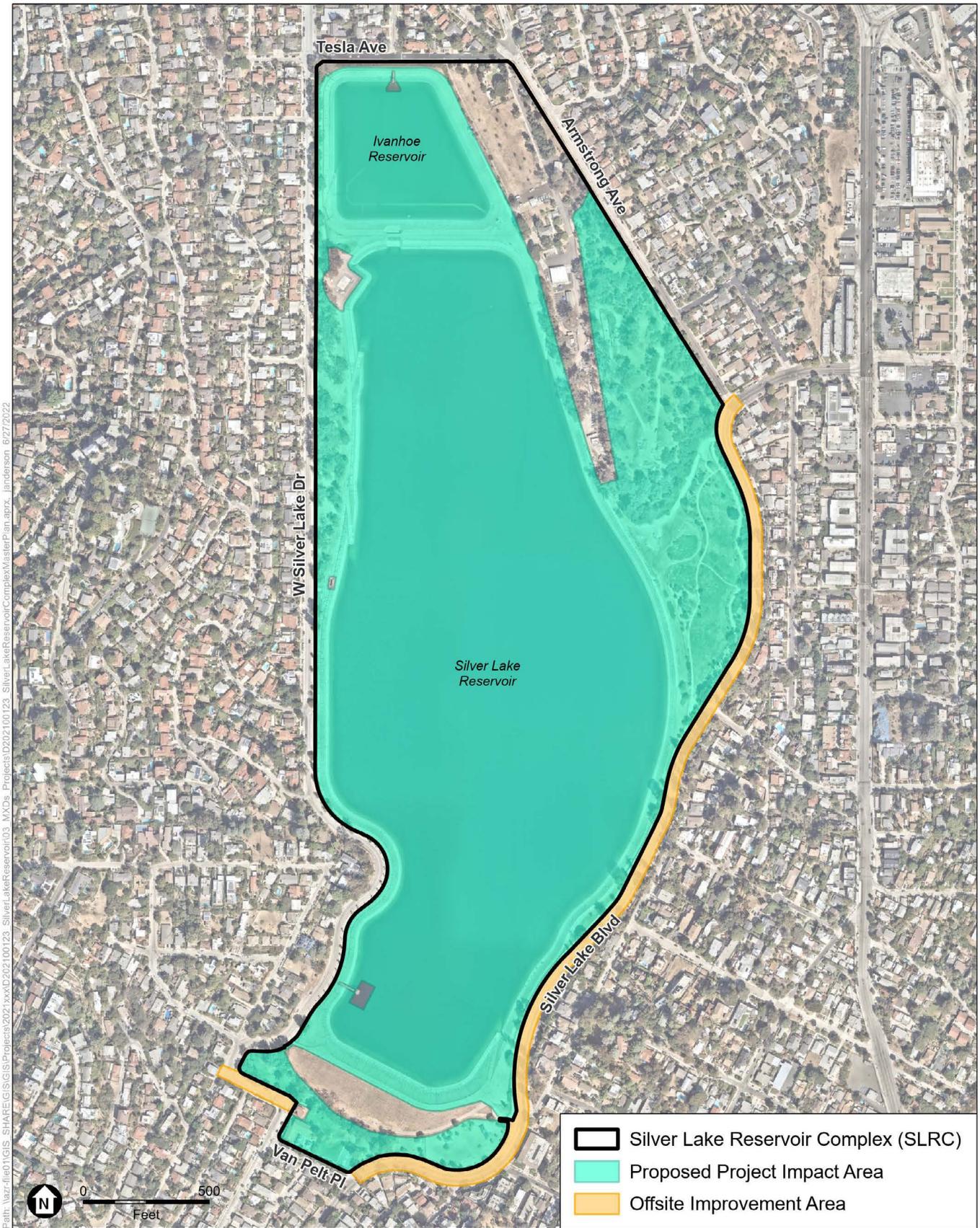


2.3 Project Location and Existing Characteristics

The proposed Project would be located in the Silver Lake neighborhood of the City of Los Angeles (Figure 2-1). The Silver Lake neighborhood is primarily made up of residential uses, with some smaller commercial areas and some existing public access in and around the SLRC that allows park uses (Figure 2-2). The proposed Project area is contained within the outer boundary of the SLRC, including existing recreational facilities and surrounding sidewalks and Silver Lake Boulevard, but excluding the existing LADWP facilities, Neighborhood Nursery School, and Tesla Park. The proposed Project area would be bounded by Tesla Avenue on the north, Armstrong Avenue and Silver Lake Boulevard on the east, Van Pelt Place and Silver Lake Boulevard on the south, and West Silver Lake Drive on the west (see **Figure 2-3**). The entire SLRC and proposed Project area is zoned as Open Space (OS) and is currently located in the City of Los Angeles Council Districts 4 and 13 (City of Los Angeles 2021). The zoning designation of the entire proposed Project area would not change with proposed Project implementation.

The SLRC is comprised of a 127-acre site that includes reservoirs, dams, buildings and structures, water and stormwater infrastructure, interior roads, and public recreational facilities. Approximately 3.4 acres of SLRC land is currently operated and maintained by the City of Los Angeles Recreation and Parks Department (RAP) as a publicly accessible park space. This area is currently called the Meadow and is an open grassy area along the eastern side of the SLRC that is open to public access from dawn till dusk. In addition, RAP operates the existing Silver Lake Recreation Center, located along the southern side of the SLRC. The Silver Lake Recreation Center includes a recreation center facility, playground, and basketball courts. A Dog Park operated and maintained by RAP is currently located adjacent to the Silver Lake Recreation Center along the southeastern side of the SLRC. Currently, there are two public pathways, one on the west side of Ivanhoe Reservoir and one path along the top of Silver Lake Dam to the south. Approximately 4 acres of existing paved surfaces around the reservoirs' perimeters are available for shared public use with LADWP. The entire SLRC is enclosed by a perimeter chain-link fence varying in height from approximately 4 feet at the Meadow and 6 to 12 feet around the remaining areas. An interior fence in the Meadow area establishes the Meadow's boundary and the park area open to the public. The Neighborhood Nursery School and the Tesla Pocket Park are both located along the northeastern side of the SLRC in an area outside of the proposed Project footprint. Refer to Figure 2-2 for the location of existing recreational facilities within the proposed Project area.

The Silver Lake and Ivanhoe Reservoirs are bound by three dams (see Figure 2-2), which are managed by LADWP: the Ivanhoe Dam is located on the north side of Ivanhoe Reservoir, the Silver Lake Dam on the south side of Silver Lake Reservoir, and the Divider Dam separates the Silver Lake Reservoir and the Ivanhoe Reservoir and contains a spillway between the two. While the reservoirs were in service, LADWP operated the reservoirs at water level elevations between 440 – 451 above mean sea level to meet the potable water system requirements including pressure requirements. Future water levels may fluctuate depending on operational considerations and groundwater conditions. As noted in LADWP's Water Shortage Contingency Plan (WSCP), during drought conditions or other emergencies identified by local, state, or federal agencies, water levels in the reservoirs are subject to reduction compared to past operating ranges to conform to emergency water conservation requirements.



SOURCE: Nearmap, 2021; ESA, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 2-3
Proposed Project Impact Area

The embankment edges around the reservoirs have changed significantly over time from unpaved earthen slopes to steep paved surfaces. Ivanhoe Reservoir was resurfaced in 1993 to 1994 with concrete paving. The edges are smooth, beige in color, and have a small curb at the edge of the embankment. Silver Lake Reservoir is paved with 3-inch asphalt. An inconsistent 6-inch curb runs along some of its embankment edge.

The SLRC is currently used as a source of water for firefighting operations. Under an agreement with LADWP, both the City and the County of Los Angeles Fire Departments may use the reservoir water for firefighting purposes, and both departments have used the water in the past.

Access gates managed by LADWP are located throughout the SLRC to restrict public access to LADWP-operated facilities. Existing LADWP facilities cover approximately 11 acres of land within the SLRC and would remain fenced and not accessible to the public. These LADWP facilities and those illustrated on Figure 2-2 are not a part of the proposed Project area and would not be altered or changed as a result of proposed Project implementation.

The SLRC is a designated Historic Cultural Monument (HCM No. 422). The SLRC was designated as a Historic-Cultural Monument primarily for the following:

- Its significant association with the development of the Silver Lake neighborhood
- Its significant association with William Mulholland
- As an early and important example of a hydraulically sluiced reservoir

A visible historic feature of the project is a low concrete wall along Silver Lake Boulevard and West Silver Lake Drive which was constructed to keep stormwater runoff from entering Silver Lake Reservoir.

2.4 Project Objectives

The proposed Project's fundamental objective is, as follows:

- Create a clear, bold design that repurposes the SLRC into a public park, while preserving and enhancing its unique character. The underlying purpose of the Project is to put the SLRC to a beneficial public park use because it is no longer usable for storing potable water due to government regulations. Because LADWP is required to maintain the reservoirs for other environmental purposes, including maintaining the dams, the proposed Project would use the reservoirs as part of a park to benefit area residents.

Other objectives of the proposed Project are, as follows:

- Preserve and enhance the unique character of the SLRC with increased points of access, improved internal circulation and access to the water's edge, and increased spaces for community and family gatherings.
- Expand existing active recreational uses and increase passive recreational uses.
- Enhance and expand wildlife habitat by introducing wetland and aquatic ecologies and improving upland habitat.

- Provide opportunities for the public to connect with nature and provide facilities for onsite environmental education and stewardship while limiting human/wildlife interactions through design and operations to protect habitat.
- Allow for continued underlying LADWP operations, access, and future use of designated areas of the site, thereby allowing continued use of the reservoirs and adjacent facilities that are intended to remain for proprietary use by LADWP.

2.5 Project Description

The proposed Project would re-develop the SLRC with a contemporary design that would create park zones blending vegetated areas with public spaces. The design would enhance the visual and recreational quality of the area to be consistent with goals and objectives of the Community Plan and provide the opportunity for the public to access natural park space. Existing public spaces would be removed with the intent of expanding, renovating, and redesigning them to improve visitor experience, including the perimeter walking path/promenade. The proposed Project would impact approximately 116 acres of the 127-acre SLRC, including the approximately 77 acres of open water. The existing area would be organized into a series of new spaces (zones) surrounding the reservoirs as shown in **Figure 2-4**.

The proposed Project would remove portions of the existing perimeter fence over time as the park zones are constructed while maintaining or introducing new fencing needed to secure existing LADWP facilities, protect habitat, and protect the public. Figure 2-4 provides a conceptual plan for locating fences and guardrails. Fences around LADWP facilities would be approximately 8 feet high and with a minimum 6-inch clear zone along the bottom for small mammals to pass through.

2.5.1 Proposed Park Zones

The proposed Project design would consist of seven park zones connected by a 2.5-mile, tree-lined promenade. These zones would include the Meadow; the Knoll; Ivanhoe Reservoir; the Eucalyptus Grove; the East and West Narrows; the South Valley; and Habitat Islands. Figure 2-4, **Figure 2-5**, and **Table 2-1** summarize the proposed spaces, uses, and activities within the proposed Project area, and are further described below.



SOURCE: Nearmap, 2021; Hargreaves Jones Landscape Architects, 2020; ESA, 2022

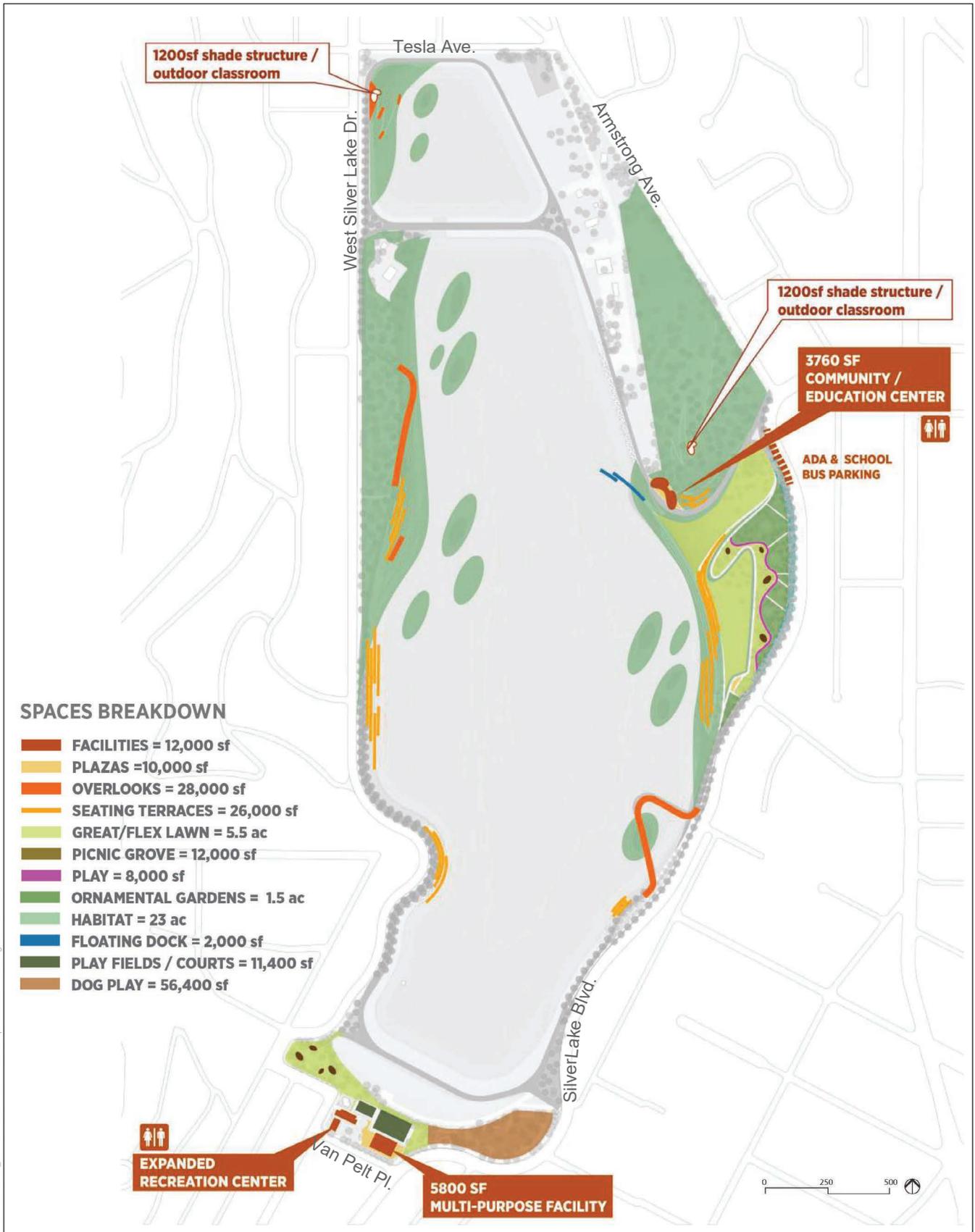
Silver Lake Reservoir Complex Master Plan Project

Figure 2-4
Proposed Park Zones

**TABLE 2-1
PROPOSED PARK SPACES, USES, AND ACTIVITIES PER PARK ZONE**

Proposed Park Zone	Existing Uses	Proposed Park Space, Use, or Activity
The Meadow	Lawn	Reconfigure and expand lawn Add: Education Center, seating terraces, ornamental gardens, picnic grove, informal play area, floating dock, wetland terraces, lighting
The Knoll	No public access	Upland habitat improvements Add: shade structure, nature trail, seating terraces, habitat fences, and lighting (promenade)
Ivanhoe Reservoir	Short walking path along the western side of the Ivanhoe Reservoir	Expand walking path/promenade Add: habitat terraces, shade pavilion, wetland footpaths and observation platforms, embankment improvements, habitat fences, lighting
The Eucalyptus Grove	No public access	Upland habitat improvements Add: habitat terraces, overlook, seating terraces, promenade, habitat fences, and lighting (promenade)
The East and West Narrows	Walking path along the southernmost side	Update and expand walking path/promenade Add: embankment enhancements, seating terraces, overlook, fitness circuit, and lighting
The South Valley	Silver Lake Recreation Center, Dog Park, basketball court, play field, picnic tables	Update and reconfigure Silver Lake Recreation Center Renovate and expand Dog Park Relocate play field, and relocate and resize basketball court Add/relocate picnic tables Add: trees, entry plaza and seating, new Multi-Purpose Facility, and lighting
Habitat Islands	No public access	Add: Habitat islands and introduce fish and other aquatic wildlife to the reservoir

SOURCE: BOE 2021



SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-5
Proposed Spaces, Uses and Activities Diagram

The Meadow

The existing Meadow area consists of open lawn with some shade trees and a mix of ornamental and native planting with several walking paths. Approximately 3.4 acres of this space is currently managed and operated by RAP. The area is open to the public during the day and closed at night. See Figure 2-4 to locate the Meadow within the SLRC.

The proposed Project would reconfigure and expand the Meadow's existing 3.4 acres of open lawn and shade trees, into approximately 7.5 acres, by incorporating additional acreage to the west. Two lawn areas would be introduced within the Meadow: Silver Lake Lawn and the Great Lawn (**Figure 2-6**). The Silver Lake Lawn would gently slope down approximately 9 feet in elevation to the water's edge. The lawn would terminate at a series of walkways interwoven within wetland terraces. The Great Lawn would be a second flat open area set 5 feet below the proposed picnic grove which would be located to the northeast. Additional terraces would be added with shade trees between the Great Lawn and the water's edge.

Along Silver Lake Boulevard at the edge of the Meadow, a wide, tree-lined promenade would connect to the proposed ornamental gardens, which would encompass approximately 1.5 acres. The gardens would be a mix of native and regionally adapted water-wise (drought-tolerant) plants with an emphasis on attracting pollinator species. Within the gardens, there would be a series of depressions in the ground to function as rain collectors during rain events. Adjacent to the gardens would be picnic grove spaces lined with design elements such as berms and depressions that offer spaces for gathering and play. Figure 2-6 provides a rendering of the proposed Meadow.

A proposed Education Center would be constructed at the base of the Knoll landscape (see the Knoll discussion below) overlooking the Silver Lake Reservoir. **Figure 2-7** provides an artist's rendering of the possible design. The proposed Education Center would include small indoor and outdoor teaching and assembly spaces, including two interior classrooms. The large classroom would be approximately 1,400 square feet (sf) and would accommodate up to approximately 50 people. A slightly smaller classroom would be approximately 1,000 sf and would accommodate up to approximately 35 people. The proposed Education Center would contain approximately 380 sf of office and storage space. Accent lighting would be added to the proposed Education Center (refer to Figure 2-7 and **Figure 2-8**). For additional security, new lighting would be added to the proposed Project area to allow the public to use certain areas after dark and for safety (see Figure 2-8). Public restrooms would be included and would be directly accessible from the promenade to serve the proposed Project area as a whole.

The proposed Education Center would be connected directly to the Silver Lake Reservoir via an accessible pathway leading down to a floating dock. This area would provide educational opportunities and/or guided kayak or canoe tours by ecologists. The roof of the Education Center would be both a landing point along the path leading to the top of the Knoll, with a roof terrace overlooking the reservoirs and an extension of the landscape with a green roof connected to the Knoll's western slope. The proposed promenade would connect the Meadow to the proposed, approximately 3,760-square-foot, Education Center along its western edge.



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SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

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Figure 2-6
Proposed Meadow Renderings





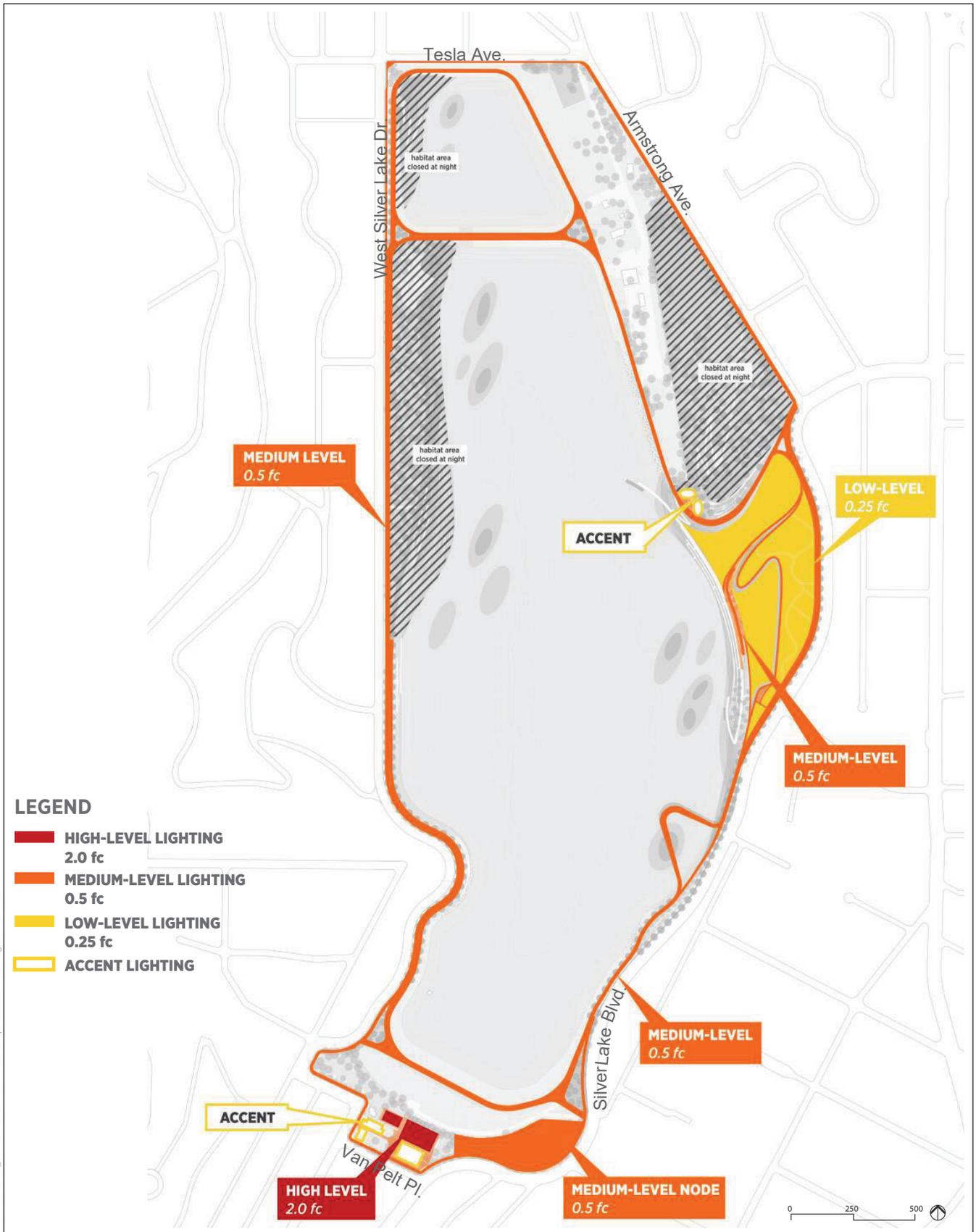
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SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-7
Proposed Knoll and Education Center Renderings





SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-8
Proposed Lighting Diagram

An opening between the two classrooms, would create a small, shaded amphitheater at the center of the facility as depicted in Figure 2-7. A shade canopy would protect the amphitheater and extend over a plaza fronting the proposed Education Center. The building would optimize natural ventilation, daylighting, and rainwater harvesting while minimizing heat gains with shade trees and other architectural features. It will also be an all-electric facility, and be Leadership in Energy and Environmental Design (LEED) rated.

Low-level lighting would be implemented throughout the Meadow, with medium-level lighting along the proposed primary pathways and the promenade within and around the Meadow (refer to Figure 2-8).

The Knoll

The existing Knoll area is a large hill comprising approximately 8.3 acres of wooded area, approximately 45 feet high. The Knoll is currently restricted to LADWP access only and comprises a woodland mix of predominantly eucalyptus and pine species with a varied grass and shrub understory. A portion of the Knoll is currently used for material storage. See Figure 2-4 to locate the Knoll within the SLRC.

The proposed Project would implement a replanting strategy over time to enhance and restore its upland habitat value. A small portion of the Knoll would be made universally accessible via proposed nature trails connecting to the Meadow, Armstrong Avenue, and an approximately 1,200-square-foot shade pavilion that could be used for educational purposes to host small gatherings. A seating area along the southern face of the Knoll would be integrated into the existing topography and oriented toward the Meadow and the water. Figure 2-7 provides a rendering of the proposed Knoll.

No lighting would be proposed within the habitat areas of the Knoll. Lighting in the Knoll park zone is only proposed where City sidewalks or the promenade occur (refer to Figure 2-8).

To protect wildlife and keep people out of planted areas, habitat fences would be installed along all nature trails (Figure 2-4). Habitat fencing would be approximately 3 feet high with swing gates where necessary to allow for walkways to be closed at night and as needed seasonally to protect wildlife.

Ivanhoe Reservoir

The Ivanhoe Reservoir zone would be modified to include proposed park enhancements within two areas: the Ivanhoe Overlook and the Ivanhoe Spillway and Promenade. See Figure 2-4 to locate Ivanhoe Reservoir within the SLRC.

Ivanhoe Overlook

The existing Ivanhoe Reservoir is the smaller of the two reservoirs in the SLRC and is bounded by a path along the top of its -embankment edge. Areas surrounding this reservoir are currently restricted to the public except for a shared path on the west side that connects to a public sidewalk on West Silver Lake Drive (Figure 2-2). This shared path is closed to the public at night.

The proposed Ivanhoe Overlook zone would encompass approximately 5.7 acres, including the existing Ivanhoe Reservoir, Ivanhoe Dam, and proposed walking paths. The proposed design of

the Ivanhoe Overlook zone would be focused along the northwestern corner of the reservoir and would include a new observation deck extending out over new wetland terraces. The proposed Project would implement small footpaths through the proposed wetland terraces to observational platforms that would be used for ongoing monitoring and maintenance of the wetlands, as well as for educational purposes. To help manage human/wildlife interactions and protect habitat, signage would direct the general public to stay on the observation deck and encourage them to sign up for a docent-led tour to get access to the wetland terrace footpaths. **Figure 2-9** provides a rendering of the proposed Ivanhoe zone.

An approximately 1,200-square-foot shade pavilion would be added to the northwestern perimeter of the reservoir, sitting on a deck that projects over the existing reservoir edge to provide a sheltered space for outdoor education or community gathering. The shade pavilion/outdoor education classroom would include signage to educate visitors about the operations of the wetlands. The existing Ivanhoe Tower located on Ivanhoe Dam (north side of the reservoir) would remain in place and operational. Lighting would be implemented along the proposed promenade. The footpaths, observation platforms and wetlands would not include lighting (refer to Figure 2-8).

Ivanhoe Spillway and Promenade

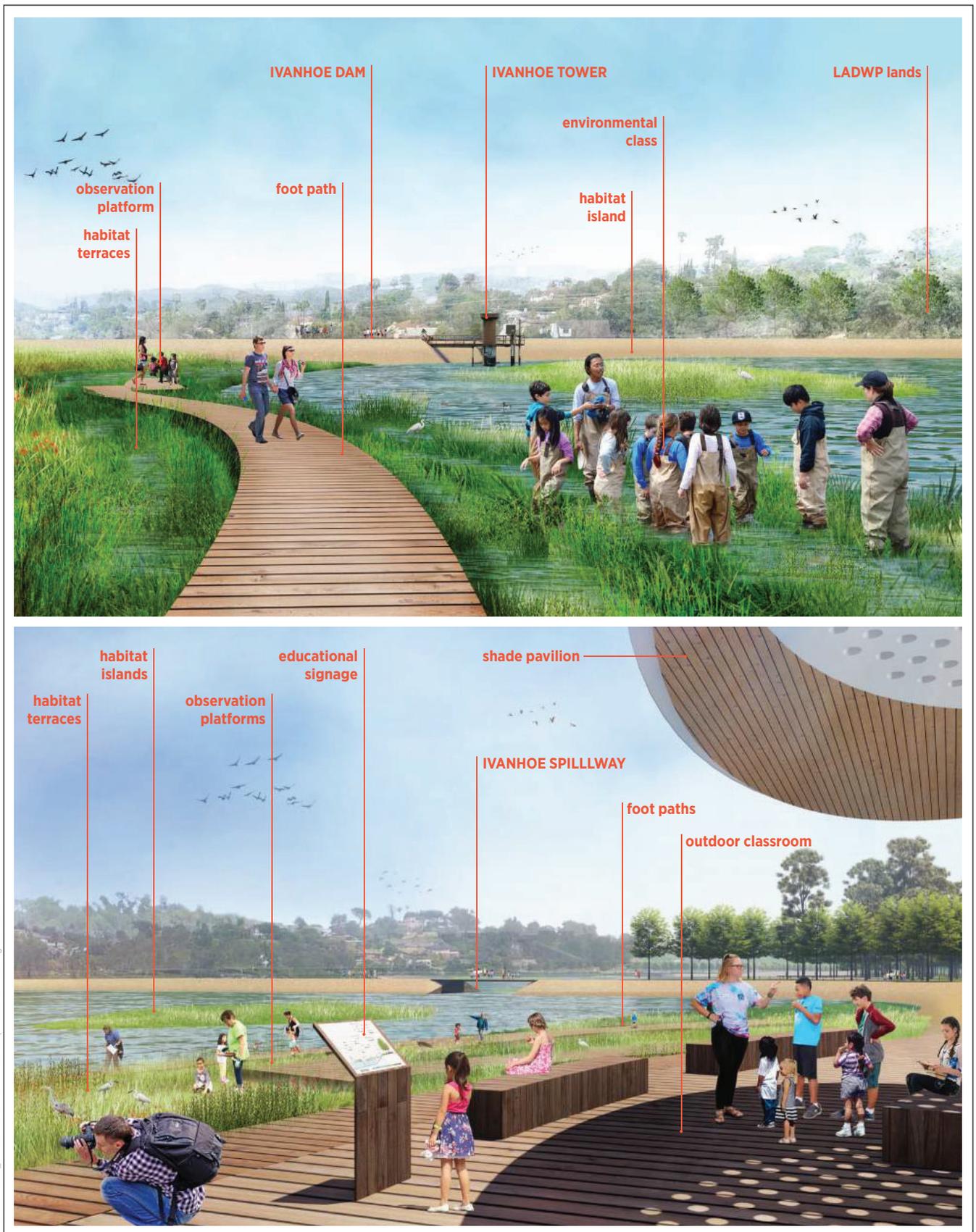
The Ivanhoe Spillway and Promenade would include promenade and embankment enhancements along the northern, eastern, and southern sides of the Ivanhoe Reservoir, extending down to the Meadow along the northeastern boundary of Silver Lake Reservoir as shown in **Figure 2-10**. Lighting would be added along the proposed promenade (refer to Figure 2-8).

The Eucalyptus Grove

The existing Eucalyptus Grove area is located along the western side of Silver Lake Reservoir and is a large, mostly flat area dominated by non-native Eucalyptus trees. Public access to the grove is currently restricted. See Figure 2-4 to locate the Eucalyptus Grove within the SLRC.

The proposed Project would replant this 7.3-acre zone over time to enhance and restore its upland habitat value. This area would include walkways throughout the Eucalyptus Grove, which would incorporate low-lying habitat fencing to protect habitat areas. **Figure 2-11** provides an artist's rendering of the improved Eucalyptus Grove area. To protect wildlife and keep people out of upland planted areas, habitat fences would be installed along the promenade and all pathways. Habitat fencing would be approximately 3 feet high with swing gates where necessary to allow for walkways to be closed at night and as needed seasonally to protect wildlife.

The proposed Project would include the implementation of habitat terraces at the edge of the Eucalyptus Grove to extend beyond the existing embankment edge creating a gradient of upland, transition, and wetland ecologies. The proposed Project would implement a large overlook that extends out over the habitat terraces with posted educational signage (refer to Figure 2-11). Within areas where the overlook projects out over Silver Lake Reservoir, guardrails approximately 42 inches high would be installed according to current California Building Code regulations. Seating terraces and observation platform are proposed along the southern edge of the Eucalyptus Grove adjacent to the promenade.



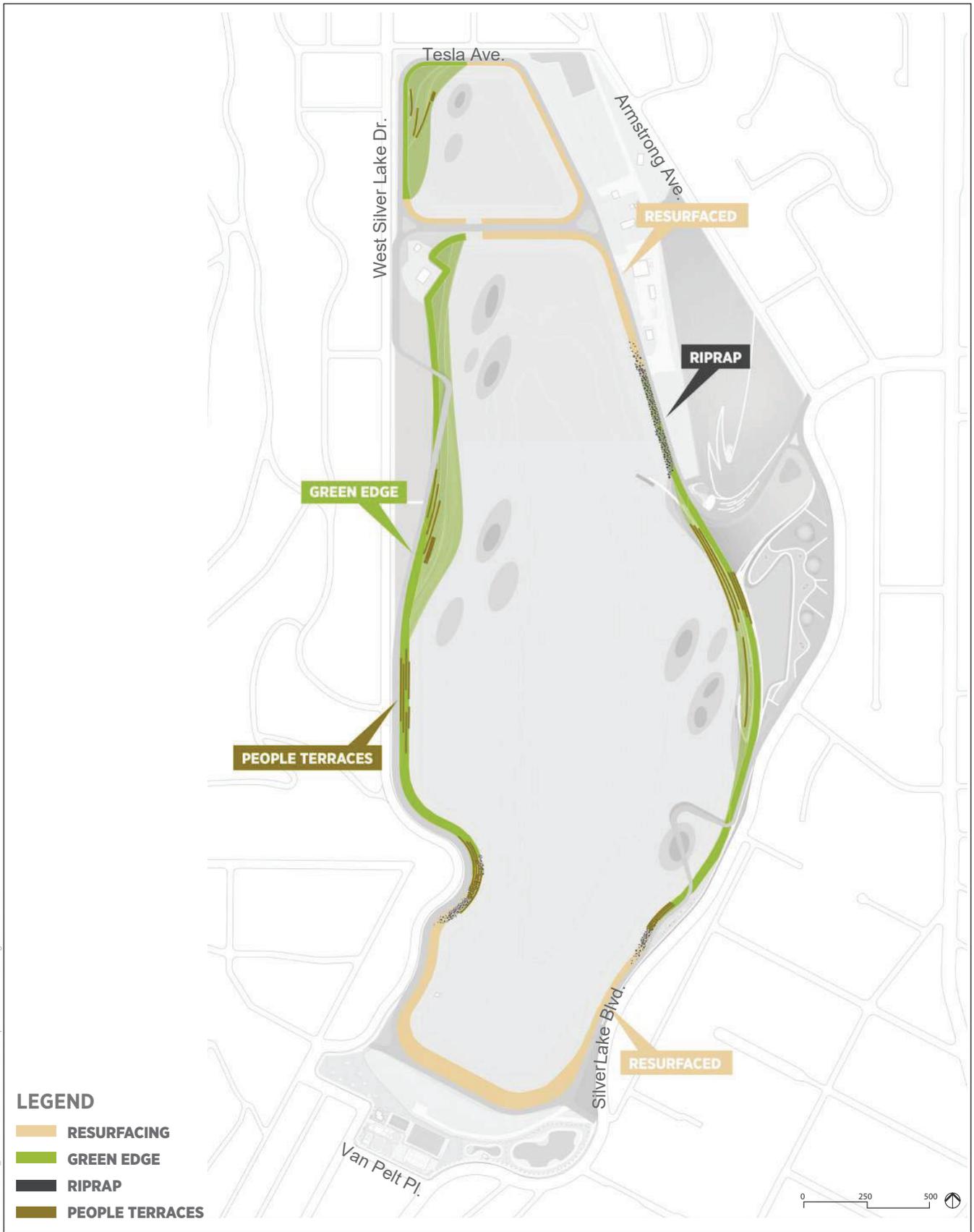
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SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-9
Proposed Ivanhoe Reservoir Renderings





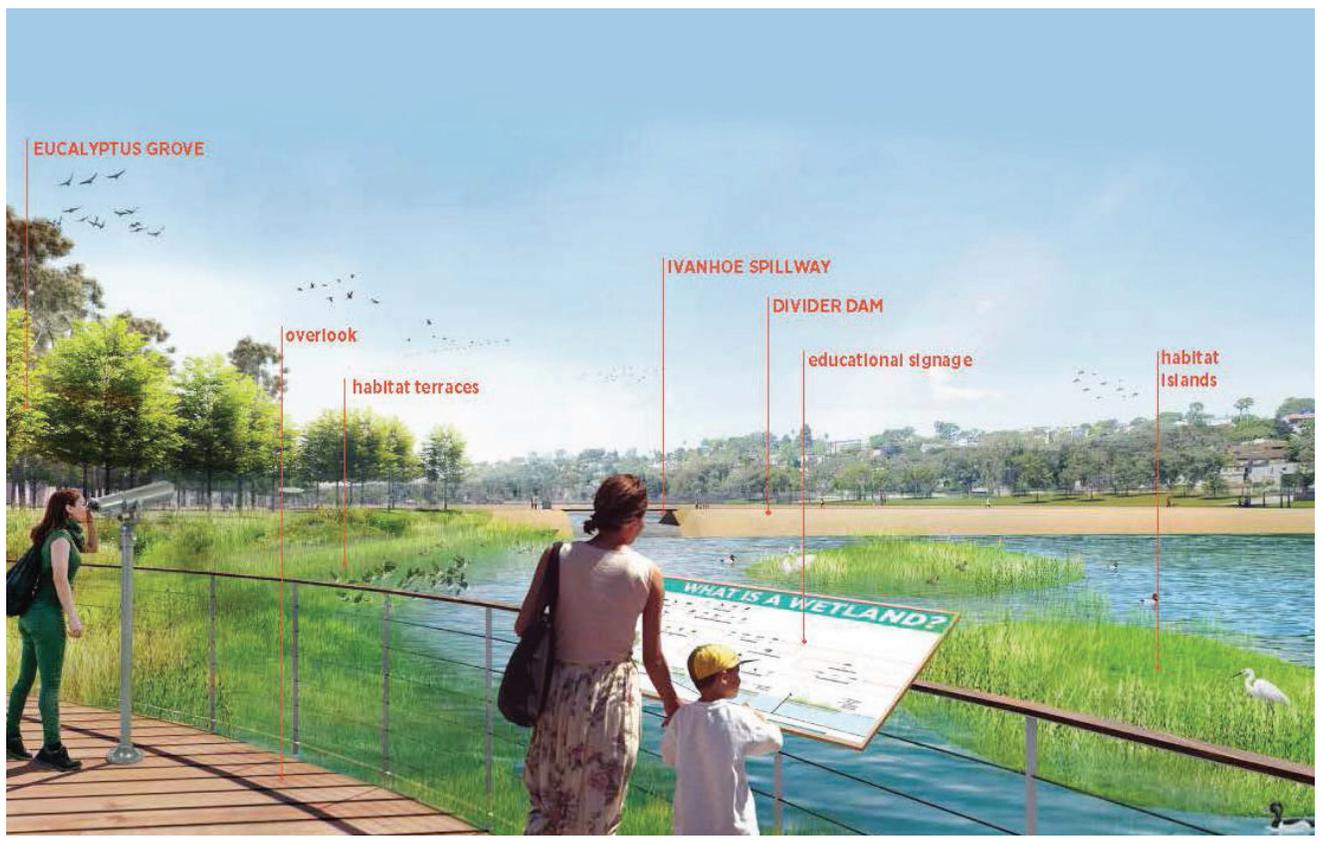
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SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-10
Proposed Embankment Edge Diagram





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SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-11
Proposed Eucalyptus Grove Renderings



No lighting would be proposed within the habitat-sensitive areas of the Eucalyptus Grove. Lighting would only be added along the western boundary where the existing public sidewalk is located along West Silver Lake Drive (refer to Figure 2-8).

The East and West Narrows

The existing area consists predominantly of a pathway that is currently restricted to LADWP access only. At the top of the Silver Lake Dam is a shared pathway (see Figure 2-4) that connects to sidewalks at West Silver Lake Drive and Silver Lake Boulevard. This shared path is gated and closed to the public at night.

The proposed East and West Narrows zone would be approximately 6.4 acres in size and would run along the south edges of the Silver Lake Reservoir embankment. The primary feature proposed for these linear corridors would be the implementation of the promenade, which would include overlooks and seating terraces.

A varying 3- to 4-foot-grade separation from the road to the top of the embankment exists along the East Narrows at Silver Lake Boulevard. These concrete retaining walls would be incorporated into the promenade allowing for a continuous seating wall. Where the promenade widens along the East Narrows, a fitness circuit would be implemented, creating a connection to the existing Recreation Center and new improvements in the South Valley zone (described below).

Figure 2-12 provides an artist's rendering of the proposed improvements to this area. In addition, the proposed Project would include an elevated overlook bridge (refer to Figure 2-12). Within areas where the overlook projects out over Silver Lake Reservoir, guardrails approximately 42 inches high would be installed according to current California Building Code regulations.

The West Narrows would include seating terraces embedded into the embankment and a path lined with trees along the promenade to provide shade and shelter. Lighting would be added along the proposed promenade lining the East and West Narrows (Figure 2-8).

The South Valley

The South Valley encompasses the area south of Silver Lake Dam along the southern portion of the SLRC. It includes an existing Recreation Center building, which is approximately 3,280 sf, including a small gym and support spaces, tot-lot, informal play field, basketball court, fenced Dog Park, open lawn, and picnic area. The Recreation Center is operated from 9:00 a.m. to 9:00 p.m. on weekdays and 9:00 a.m. to 5:00 p.m. on Saturdays, and is closed on Sundays. Operational hours for the South Valley facilities would not change with implementation of the proposed Project. See Figure 2-4 to locate the South Valley within the SLRC.



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SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-12
Proposed East and West Narrows Renderings



The proposed South Valley improvement zone would encompass approximately 4.2 acres. The proposed Project would construct a new Multi-Purpose Facility and would update the existing Recreation Center on the corner of Van Pelt Place and West Silver Lake Drive. The new Multi-Purpose Facility would be approximately 5,800 sf in size and the proposed architecture would be designed to be compatible with the existing Recreation Center's style. This facility would also be an all-electric facility, and be LEED rated. The proposed Multi-Purpose Facility would house one indoor basketball court and provide an entrance off a new plaza along Van Pelt Place. To accommodate the new Multi-Purpose Facility, the existing basketball court and playfield would be relocated to the north (**Figure 2-13**). The existing picnic area would be relocated to the west sloping lawn and additional trees would be added to provide shade.

The existing Recreation Center may require improvements to meet current seismic and energy code requirements. In addition, the proposed Project would re-design the mezzanine to create more space for office, storage, and other related uses.

The existing Dog Park covers approximately 48,790 sf of space and would be expanded to approximately 56,400 sf of space and renovated to include two separate spaces for both small and large dogs. The area would be regraded and surface materials would be updated from decomposed granite to synthetic turf or other dog-friendly surfacing. Integrated seating, benches, lighting, and shade structures would be added to provide dog owners and visitors with shaded seating areas. Refer to **Figure 2-14** for a rendering of the proposed Dog Park. Currently the Dog Park is open every day from 6:00 a.m. to 10:00 p.m., closing on Wednesdays from 6:00 a.m. to 8:30 a.m. for maintenance. Operational hours for the Dog Park would not change with implementation of the proposed Project. See Figure 2-4 to locate the South Valley within the SLRC.

The proposed South Valley zone would contain medium-level lighting within the proposed Dog Park vicinity, around the proposed Multi-Purpose Facility, and along the southern boundary of the public sidewalk along Van Pelt Place. High-level lighting would be implemented only within the basketball court and playfield area where active recreational uses would be available to the public at night. Additional accent lighting would be included within this recreational area as well, similar to existing conditions (refer to Figure 2-8).

Habitat Islands

The proposed Project would construct approximately 3.5 acres of floating habitat islands. The proposed habitat islands would introduce wetland plants to the open water area and provide nesting and foraging habitat for birds with minimal disturbance from humans and predatory wildlife on land. See Figure 2-4 to locate the proposed habitat islands within the SLRC.



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SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-13
Proposed South Valley Renderings





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SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-14
Proposed Dog Park Rendering



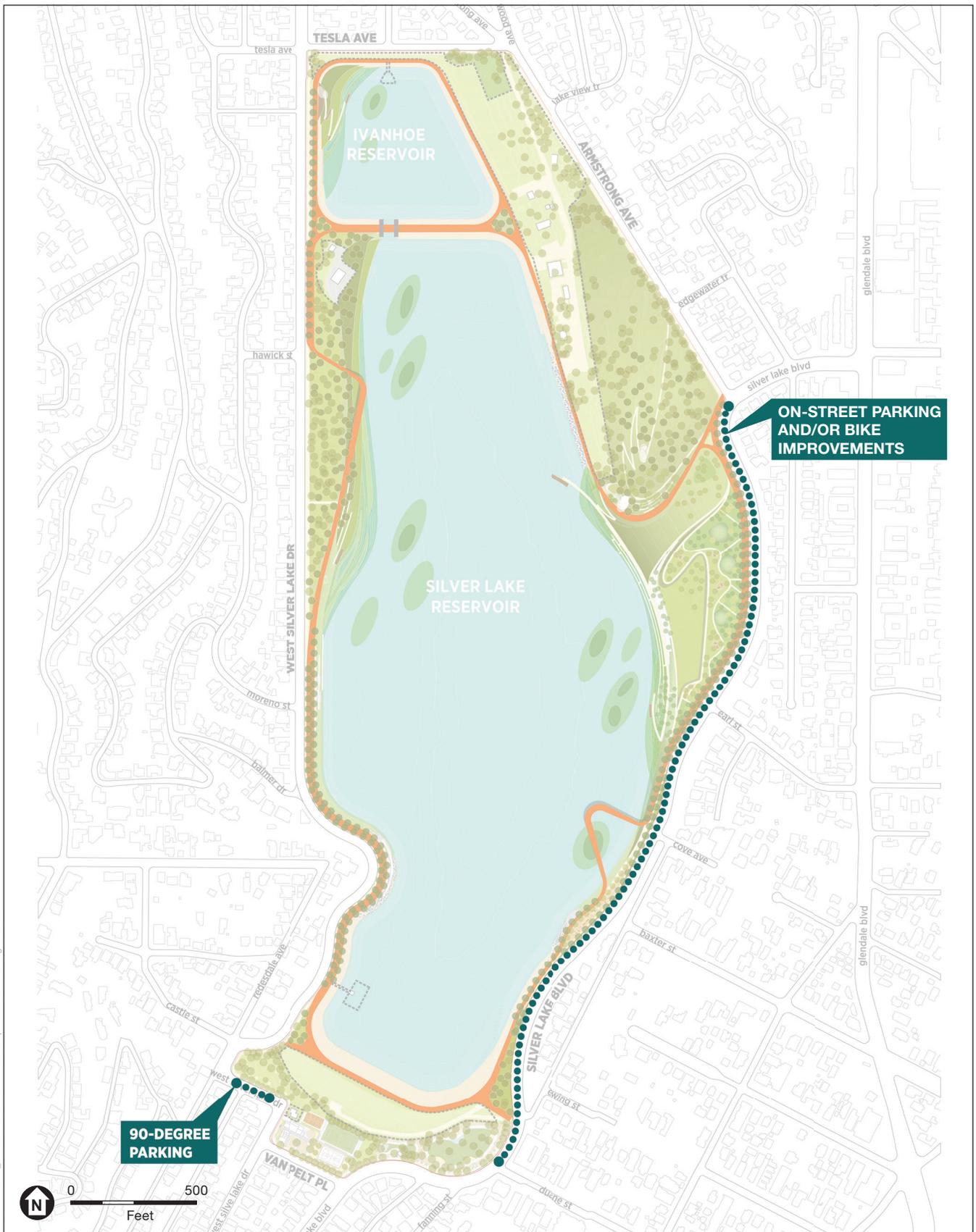
Two floating habitat islands would be added to the Ivanhoe Reservoir, just southeast of the proposed wetland terraces and footpaths (refer to Figure 2-4). Up to ten habitat islands would be added to the Silver Lake Reservoir near the Eucalyptus Grove and the Meadow (refer to Figures 2-4, 2-6, and 2-11 for conceptual renderings). The proposed habitat islands would vary in size and would add shallow wading areas to provide foraging habitat for waterfowl and refuge areas for fish. Habitat islands would be located at least 50 feet from the embankment, and would not be accessible to the public. No lighting would be included within or adjacent to the proposed islands (refer to Figure 2-8). As a habitat enhancement feature, Silver Lake Reservoir would be stocked with fish species that would provide food supply for wading birds. Introduced fish species may include piscivorous (predator) fish such as small bass, and planktivorous (prey) fish such as minnows and crappies. In addition, marine invertebrates would also be introduced to the reservoir. Fish would likely be introduced at a ratio of three prey fish for every predator fish.

2.5.2 Offsite Improvements

The proposed Project would include offsite improvements along areas surrounding the SLRC in areas shown on **Figure 2-15**. One improvement would include the addition of 90-degree parking along the north side of West Silver Lake Drive, east of Redesdale Avenue adjacent to the Silver Lake Recreation Center. Trees would be avoided along this area and parking would be added in a way that it would not encroach on existing trees. Currently, there are 10 parallel parking spaces along this segment of West Silver Lake Drive. By converting to 90-degree parking, a total of approximately 25 parking spaces would be added, resulting in a net increase in parking of 15 spaces at this location. Two of the new parking spaces would be dedicated to electric vehicle (EV) parking.

Additionally, offsite improvements would occur along Silver Lake Boulevard, between Armstrong Avenue and Duane Street for a length of approximately 3,000 feet. Two options for improvement are proposed along this portion of the proposed Project. Option 1 would include an improved southbound bike lane on the west side of the road, closest to the SLRC, and relocate an existing northbound bike lane to the west side of the road. The bike lanes would be buffered by a 5-foot wide sidewalk running the length of this segment, followed by the addition of parallel parking on the west side of the road. Currently, there is only parallel parking along the eastern side of Silver Lake Boulevard and the proposed design in Option 1 would add approximately 135 new parking spaces to the western side of the road. Please refer to **Figure 2-16** for a cross section of the potential configuration of this option. Option 2 would include restriping along Silver Lake Boulevard with improvements to the bike lanes, relocating the existing northbound bike lane to the western side of the road and adding a 4-foot buffer. No additional parking is included in this option. Please refer to Figure 2-16 for a cross section of the potential configuration for Option 2.

Additional offsite improvements would include two new pedestrian-activated flashing beacon crossings added along West Silver Lake Drive and near the corner of Silver Lake Boulevard and Armstrong Avenue as shown on **Figure 2-17**.



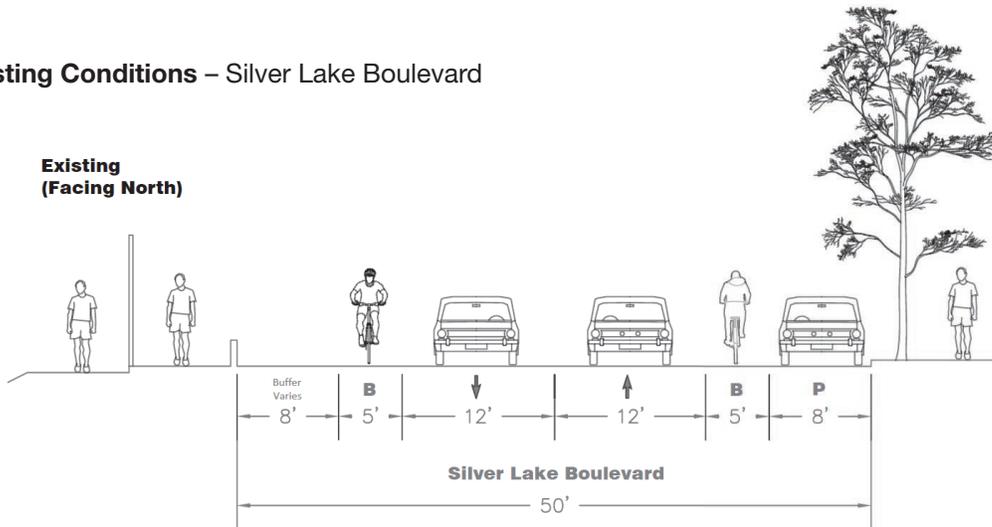
SOURCE: Silver Lake Reservoir Complex Master Plan 2020

Silver Lake Reservoir Complex Master Plan Project

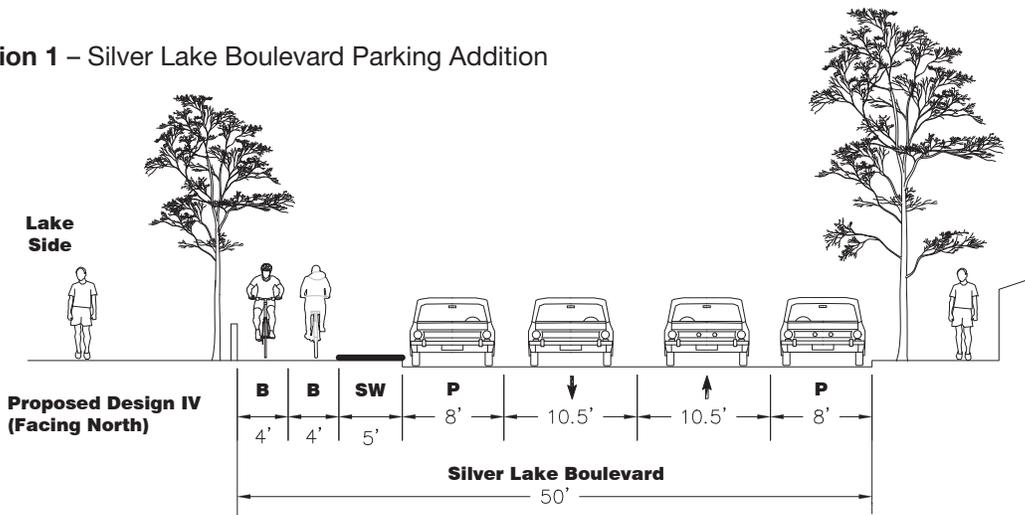
Figure 2-15
Proposed Offsite Improvement Location



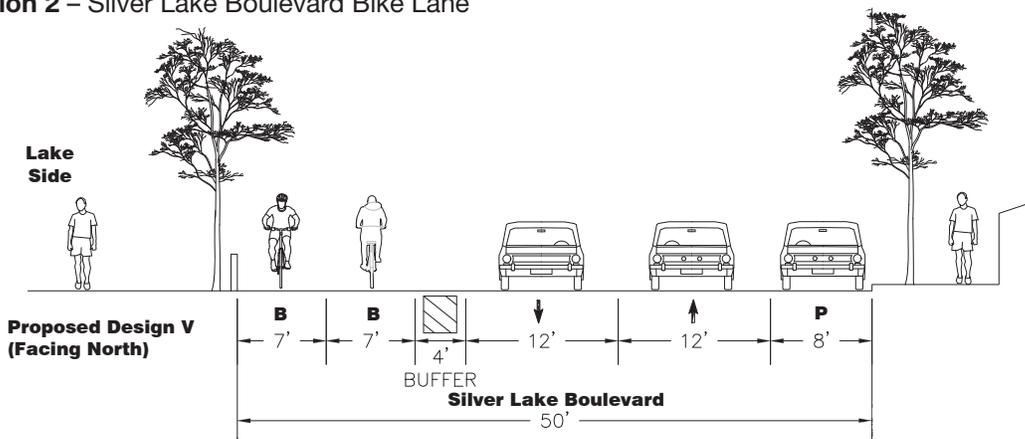
Existing Conditions – Silver Lake Boulevard



Option 1 – Silver Lake Boulevard Parking Addition



Option 2 – Silver Lake Boulevard Bike Lane



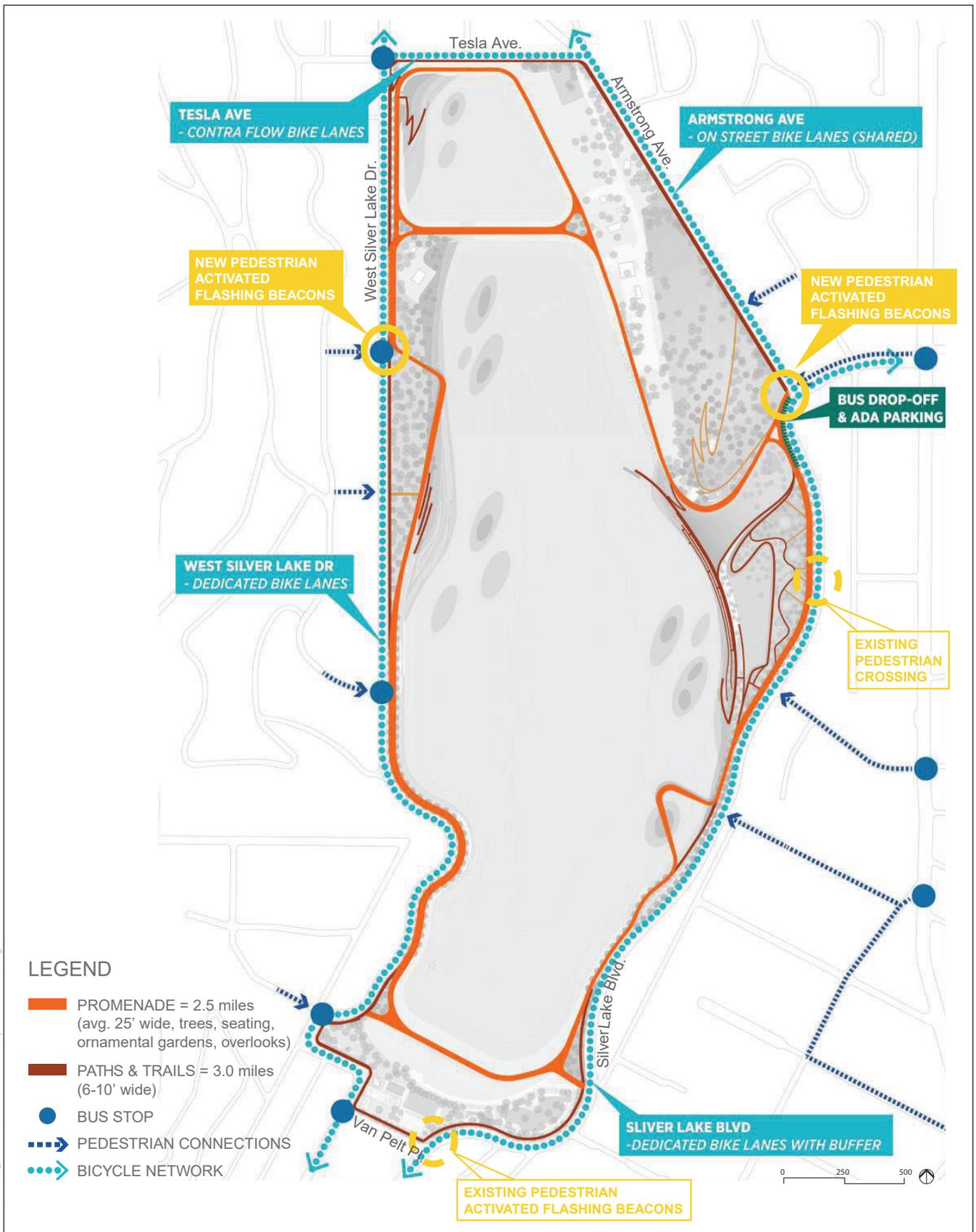
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SOURCE: Jano Baghdanian & Associates (JBA), 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 2-16
Potential Configuration for Offsite Improvements





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SOURCE: Hargreaves Jones Landscape Architects, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-17
Proposed Circulation Diagram



Portions of the low concrete wall that surrounds the SLRC would need to be removed to provide pedestrian access points into the site that align with street connections. On the eastern side of the reservoir, openings could be created every 100 feet along a 3,000-foot area located between Armstrong Avenue and Duane Street, to allow more entry points into the park if Option 1 is selected. Wall openings would be approximately 5 feet in length at each location.

2.5.3 Lighting Plan

New lighting would be added throughout the proposed Project area to allow the public to use the public park spaces after dark and for safety (see Figure 2-8). New proposed park hours would be from 5:00 a.m. to 10:30 p.m. High-level lighting (2 foot-candle [fc]) would only be used at the park facilities in the South Valley, where lighting already exists. Medium-level lighting (0.5 fc) would be implemented along the proposed Promenade, on select primary paths and within the proposed seating terraces at the water's edge. Low-level of lighting (0.25 - 0.5fc) would be introduced along many of the proposed paths between the park and neighborhood. No lighting would be implemented for paths within habitat areas or in areas that are not intended to be used at night by the public. All lighting would be shielded and pointed away from the surrounding neighborhood or wildlife areas.

2.5.4 Exposed Reservoir Edge Treatment

For safety purposes, the reservoir embankments would be improved to remove the steep, slippery surface of the existing reservoir to the maximum extent possible and replace it with a combination of soft vegetation, riprap, and seating terraces to minimize risk of people getting in the water. No public access to water activities would be allowed, except through guided kayak and/or canoe tours conducted by an ecologist for educational purposes. Signage would state these public access restrictions, including no swimming. The proposed Project design would maintain a consistent 6- to 12-inch curb around the edge of the reservoir to provide a barrier between the walking path and edge of slope. Consideration in the new reservoir edge treatment would be given for emergency egress elements to provide ways to exit the water. Wherever possible, an approximate 5-foot planted buffer with integrated seating would be maintained between the path and the edge of slope.

To improve the reservoir's embankment edges, the proposed Project would use four different edge treatments, depending on the specific site conditions. Figure 2-10 shows the areas where improvements could occur. The reservoir embankment improvements would vary by location and include the following treatment types:

- **Resurfacing.** Embankment areas would be resurfaced with smooth concrete with a slip-resistant finish.
- **Green Edge.** Native groundcover would be planted along the embankment slope and within habitat terraces.
- **Riprap.** Riprap would be incorporated in transitional areas between resurfacing and green edges.
- **People Terraces.** Seating terraces would be embedded into the embankments at key locations (Meadow, East and West Narrows, Eucalyptus Grove).

2.5.5 Planting

The planting design for the proposed Project would be aligned with the City's New Green Deal goals of increasing tree canopy and protecting native biodiversity. The proposed Project would include eight planting zones ranging from gardens within the promenade, ornamental gardens, and embankment slope planting, to habitat areas.

All habitat plant communities would be composed of native species representative of four distinct regional ecological zones: southern oak woodland; riparian woodland; coastal sage scrub; and freshwater wetland. The ornamental garden areas would be a combination of native and drought-tolerant species appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses, discussed in the operations section, below. See **Figure 2-18** for a preliminary plan of the Project's proposed planting zones.

2.5.6 Circulation

The proposed Project includes a total of approximately 33 acres of redeveloped useable space, including approximately 10 acres for active and passive recreation and approximately 5.5 miles of walking paths and trails to provide public access throughout the Project area. Connections to the proposed Project area from the surrounding neighborhood were informed by the existing bus stop locations along West Silver Lake Drive and Glendale Boulevard as well as the existing pedestrian pathways in the neighborhood. This network is depicted in Figure 2-17 and Figure 3.16-1 in Section 3.16, *Transportation*.

To allow for public access to park amenities as well as accommodate larger group education programs, an accessible vehicle and bus parking area would be located at the corner of Silver Lake Boulevard and Armstrong Avenue. During special events, a special events permit would be obtained and would require shuttles be available to the Project site if deemed necessary. Multi-modal transportation would be encouraged through the inclusion of mobility hub elements such as bikeshare and drop-off locations for ride share services.

To create safe points of entry into the proposed Project area, new pedestrian-activated flashing beacon crossings would be added along Silver Lake Boulevard and West Silver Lake Drive. In addition, strategic openings would be proposed along the low concrete wall that currently surrounds the SLRC in order to create additional entry points into the proposed Project site. The proposed pathways described in **Table 2-2** and shown on Figure 2-17, would be implemented as pedestrian-only with bike circulation around the perimeter. Bike parking and/or bike share stations would be located at all key pedestrian connection points shown in Figure 2-17.



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SOURCE: Silver Lake Reservoir Complex Master Plan, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 2-18
Proposed Planting Diagram



**TABLE 2-2
PROPOSED CIRCULATION PATHWAYS**

Proposed Pathway	Pathway Description*
The Promenade	The promenade would be a 2.5-mile continuous walking/running loop connecting all the park zones to one another and the reservoirs. The promenade is envisioned as both place and connector. On average, it would be 25 feet wide with seating and 5-foot-wide ornamental planting bands along its edges. These would double as rain gardens during winter months. At a minimum, the promenade would maintain a 15-foot clear pathway for LADWP maintenance and operations.
The Primary Paths	The primary paths would be a minimum of 10 feet wide and would connect major destinations and link edges (at street intersections) to the promenade.
The Secondary Paths	Secondary paths, which are the smallest pathways, at 6 feet in width, would provide casual circulation within the gardens, terraces, and habitat areas.
Within the Meadow	At the Meadow, the promenade would run along Silver Lake Boulevard before turning west to follow the base of the Knoll. The clear path would remain consistent at 15 feet wide with 5-foot bioswale buffers on either side. Trees would line both sides of the promenade.
Within the Narrows	At the narrowest locations within the Project area, the promenade emphasizes inward views of the water and makes space for small overlooks and terraced seating. On the southwest end, a grade change between Silver Lake Boulevard and the reservoir would allow for a small seat wall to be integrated and act as a buffer between the promenade and the road. Where it widens, a small fitness circuit would be incorporated. The clear path would be 15 feet wide at its narrowest and 20 feet wide at its widest in this section.
Within the Eucalyptus Grove	Within the Eucalyptus Grove, the promenade would be designed to have minimal impact on the restored habitat. At the south end of the Eucalyptus Grove, the promenade leaves the road and follows the embankment edge to an overlook. Here it would be 25-feet wide with a seating band which provides a buffer between the promenade and habitat area. As it returns to the road from the overlook, crossing through the Eucalyptus Grove, the path would narrow to 15-feet wide with habitat fences on either side to provide maximum protected habitat. At the north end of the Eucalyptus Grove, a 7-foot bioswale planting strip and trees would buffer pedestrians from the street.

* All pathway sizes are approximate

2.5.7 Sustainability Design Features

The proposed Project includes many features that align with the City of Los Angeles' major sustainability initiatives included in the Green New Deal Sustainable City pLAN 2019. These are outlined below:

Green New Deal Sustainable City pLAN 2019

The proposed Project would align with the following initiatives and goals outlined in the Green New Deal.

Local Water

Conserving our water and sourcing it locally.

- The proposed Project would include approximately 12,000 sf of demonstration rain gardens as well as 1-acre of stormwater infiltration planters along the reservoirs to protect reservoir water quality.

- As an education tool and demonstration feature, the proposed Education Center would include rainwater harvesting features.
- The proposed Project would include hydration stations.
- Landscape guidelines will encourage use of drought-tolerant and native plants.
- The proposed Project would recommend installing the infrastructure needed to irrigate with recycled water when it is available in the Silver Lake neighborhood in the future.

Clean and Healthy Buildings

Drawing an emissions-free blueprint for L.A.'s buildings:

- The proposed Education Center would be built to be environmentally sustainable. The building would be clad in recycled wood, and optimizes natural ventilation, and daylighting, while minimizing heat island effects with shade trees. In addition, all new buildings would be all-electric.

Mobility and Public Transit

Changing and expanding how L.A. gets around:

- The proposed Project would improve existing bike lanes along Silver Lake Boulevard and provide on-site bike parking.
- The proposed Project would provide drop-off space for micro-mobility initiatives such as Metro Micro, should service be extended to Silver Lake in the future.
- EV charging stations would be added to the parking areas

Waste and Resource Recovery

Making L.A. the largest U.S. city to achieve zero waste:

- The proposed Project would include recycling and compost receptacles throughout the park.

Urban Ecosystems and Resilience

Creating a cooler city with more green space for people and habitat:

- The proposed Project would increase tree canopy at the site by approximately 50% and plant approximately 500 trees.
- The proposed Project would restore and expand upland habitat and create new wetland habitats
- The proposed Project would include pollinator gardens
- The proposed Project would include a Wildlife Management Plan
- The proposed Project would include an Environmental Education Center and other outdoor educational features to provide immersive educational programs for K-12 schools

Prosperity and Green Jobs

Growing jobs and a strong, inclusive economy

- The proposed Project would support the creation of approximately 5 jobs to support park operations
- Total number of construction workers required per phase/activity for construction at each zone ranges from 6 to 30 construction workers and is shown on Table 2-4.

Envision™

Envision™ is a rating system and best practice resource to help ensure sustainability features and elements are successfully implemented in infrastructure projects. Envision™ measures the sustainability of an infrastructure project from design through construction and maintenance across five categories: Quality of Life, Leadership, Resource Allocation, Natural World, and Climate and Resilience.

At minimum, the proposed Project will target an Envision Gold Rating.

Leadership in Energy and Environmental Design (LEED)

At a minimum, the project will target achieving a Gold LEED Certification Rating for new buildings.

2.5.8 Project Design Features

Project Design Features (PDFs) generally consist of regulatory compliance measures and standard construction conditions and procedures. The following PDFs would be implemented as part of the project:

PDF-BIO-1: Ornamental Native Plants. If the proposed Project impacts native planted species within the Community Restoration Area, including Nevin's barberry, showy island snapdragon, and Coulter's matilija poppy, these species will be replanted onsite at a 1:1 ratio.

PDF-BIO-2: Nesting Birds. If construction and vegetation removal is proposed between February 1 and August 31, a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds and raptors 30 days prior to the start of construction, and then weekly, within 300-feet of the construction limits (or to the outer limits of the park area bounded by West Silver Lake Drive, Van Pelt Place, and Silver Lake Boulevard) to determine and map the location and extent of breeding birds that could be affected by the Project. Nesting bird surveys shall be conducted at appropriate nesting times and concentrate on potential roosting or perch sites. Weekly surveys will take place with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work.” If Project activities are delayed or suspended for more than 7 days after the last survey, surveys shall be repeated before work can resume.

If an active nest is located, clearing and construction within appropriate buffers as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting.

Due to the urbanized nature of the Project site, 300-feet for raptors and 150-feet for passerine birds could suffice for nesting bird buffers however it will be at the discretion of the qualified biologist. The buffer zone from the nest shall be established in the field with flagging and stakes. The qualified biologist shall retain the ability to increase buffers if needed to protect the nesting birds. Temporary fencing and signage shall be maintained for the duration of the Project. Construction personnel shall be instructed on the sensitivity of the area and be advised not to work, trespass, or engage in activities that would disturb nesting birds near or inside the buffer. On-site construction monitoring may also be required to ensure that no direct or indirect impacts occur to the active nest. Project activities may encroach into the buffer only at the discretion of the qualified biologist.

PDF-BIO-3: Wildlife Fencing Signage. Interpretive signage will be installed near all wildlife friendly fencing to educate the public on wildlife and habitat sensitivity, and to encourage the public to not enter the restricted areas.

PDF-BIO-4: Tree Protection Fencing. Establish tree protection fencing around the tree protection zone (TPZ). This area will be marked and avoided during all construction activities near the protected trees. This area will be kept clear of any construction material, debris, equipment, portable toilets, and foot or equipment traffic. Fencing will be installed prior to construction at the edge of the TPZ and remain in place until the entire project is complete. The fence will be chain link and a minimum of five feet in height.

PDF-BIO-5: Grading/Trenching in TPZ. Grading/trenching will be restricted to areas outside the TPZ of the trees. All grubbing and clearing within the TPZ of a tree will be done manually. All soil removal will be done with hand tools, using an air spade or comparable equipment that will excavate soil without damaging the roots. Jack hammers will not be used to remove the soil. When a root is encountered, soil removal will be done without chipping, marring, or damaging the root bark in any way (damaging the root bark will open up the bark barrier so that disease can enter the tree, allowing rot to develop or fungus to take over, and can result in root death).

PDF-BIO-6: Avoiding Root Damage. If tree roots must be cut, cuts will be less than one inch. If any roots over one inch in diameter are damaged, they will be clean-cut with a sharp and sterilized hand tool. Any roots permanently exposed from grading or scraping of topsoil will be cleanly cut just below the new soil grade.

PDF-BIO-7: Soil Grade. Soil levels will be returned to the original grade, at which trees' roots were first established. Existing fill soil above that original grade will be removed to the extent possible; no additional fill soil will be placed over the original grade. If soil is filled back to the original grade, compaction will be done manually only (no equipment will be used). Compaction will be done in layers of three to six inches depending on soil structure. No gaps or pockets will remain in the soil.

PDF-BIO-8: Irrigation. During construction, trees will only be watered under the guidance of the project arborist. Where it is needed, temporary irrigation (drip, leaking tube, or other) will be installed at intervals throughout the fenced protection zone to allow periodic deep watering during construction. The entire TPZ of the trees will be watered to a soil depth of four feet. This may require slow irrigation for 8-24 hours or more, or may require repeat waterings of shorter duration to promote saturation. The soil will be

allowed to dry out completely before watering is repeated. The period between waterings may be a month or more. The project arborist will monitor the protected trees and provide recommendations on the effectiveness and duration of temporary irrigation.

PDF-BIO-9: Landscaping Around Native Trees. Landscaping near protected trees will be drought-tolerant only unless trees are already accustomed to current landscape irrigation (to be confirmed by arborist). Irrigation overspray or runoff, as a result of lawn or ornamental irrigation, will be avoided in the TPZ of any protected tree with the noted exception above. All landscaping will be kept away from the trunk of any protected tree by a minimum of two feet.

PDF-BIO-10: Tree Pest Inspection. Prior to tree removal, the City will have a certified arborist evaluate the trees to ensure they are free of pests.

PDF-BIO-11: Development of Pest Management Plan. If the certified arborist determines trees are impacted by infectious pests or diseases, the City will work with the certified arborist to prepare an Infectious Tree Disease Management Plan or develop a detailed, robust, enforceable, and feasible list of preventative measures. A plan/list will provide measures relevant for each tree pest or disease observed. To avoid the spread of infectious tree pests and diseases, infected trees should not be transported from the Project site without first being treated using best available management practices described Infectious Tree Disease Management Plan or the list of preventative measures.

PDF-BIO-12: Prevention of Pathogen Spread. All tree material, especially infected tree material, will be left on site, chipping the material for use as ground cover or mulch. Cleaning and disinfecting pruning and power tools before use will be completed to prevent introducing pathogens from known infested areas, and after use to prevent spread of pathogens to new areas.

PDF-BIO-13: City Tree Ordinance. Any tree or shrub covered under the City Tree Ordinance which may be impacted by proposed Project construction, either through removal or encroachment within the TPZ, shall be replaced with nursery stock at a minimum 4:1 mitigation ratio of like species and 15-gallon in size. The City will work with a certified arborist and/or tree specialist to acquire appropriately sized, locally sourced trees from a local native plant nursery that implements Phytophthora/Clean Nursery Stock protocols. This may reduce the probability of introducing replacement trees contaminated with pests, diseases, and pathogens that could spread and infect native trees or habitats. A certified arborist and/or tree specialist should inspect and potentially quarantine nursery stock before bringing them into the Project site. Replacement tree plantings shall be located in areas protected by the habitat fencing to ensure their protection from the public.

PDF-BIO-14: RAP Tree Policy. Any tree or shrub covered under the RAP Tree Policy which may be impacted by the proposed Project construction, either through removal or encroachment within the TPZ, shall be replaced with nursery stock. The City at a minimum will be required to replace impacted trees at a 1:1 ratio for trunk diameter. The impacted trees' aggregate diameter, measured at DSH (multi-trunk trees are to be measured immediately below the lowest trunk) shall be replaced at an equal or greater rate of caliper of new trees. Each one-inch DSH of existing tree shall be replaced with a minimum one-inch caliper new tree.

PDF-CR-1: Archaeological Resource Discovery During Construction. If archaeological resources are discovered during excavation, grading, or construction activities, work shall cease in the area of the find until a qualified archaeologist has evaluated the find in accordance with State and local guidelines, including those set forth in California PRC Section 21083.2. Personnel of the proposed Project shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of the Project site. The found deposits would be treated in accordance with State and local guidelines, including those set forth in California PRC Section 21083.2. If the discovery proves significant under CEQA (Section 15064.5f; PRC 21082), additional work such as testing or data recovery may be warranted. Should any Native American artifacts be encountered, additional consultation with NAHC-listed tribal groups should be conducted immediately. The process for contacting the tribal group and the timing of the contact should be addressed in the management plan.

PDF-CR-2: Human Remains Discovery During Construction. If human remains are encountered unexpectedly during construction demolition and/or grading activities, Section 7050.5 of the California Health and Safety Code requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California PRC 5097.98. Remains suspected to be Native American are treated under CEQA at CCR 15064.5; PRC 5097.98 illustrates the process to be followed if remains are discovered. If human remains are discovered during excavation activities, the following procedure shall be observed:

- Stop immediately and contact the County Coroner:
 1104 N. Mission Road
 Los Angeles, CA 90033
 323-343-0512 (8 am to 5 pm Monday through Friday) or
 323-343-0714 (After hours, Saturday, Sunday, and Holidays)
- If the remains are determined to be of Native American descent, the Coroner has 24 hours to notify the NAHC.
- The NAHC will immediately notify the person it believes to be the MLD of the deceased Native American.
- The MLD has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods.
- If the owner does not accept the MLD's recommendations, the owner or the MLD may request mediation by the NAHC.

PDF-NOISE-1: Haul Route. Prior to commencement of construction and operational maintenance activities, the City shall establish approved truck haul routes that avoid or minimize, to the extent feasible, unnecessary truck travel on local roadways through residential neighborhoods or adjacent to schools, and prioritize travel on collector and arterial streets.

PDF-NOISE-2: Construction Noticing and Community Liaison. Prior to commencement of construction activities, the City shall notify in writing adjacent residents and businesses along the Project route or worksite of proposed construction activities and the tentative schedule. The City shall require the construction contractor to

designate a community liaison to respond to any issues and/or concerns related to construction activities, including any noise or vibration complaints. The community liaison shall maintain a log of communications and resolutions of issues or concerns and share the log with the City. Notices and construction signs will include a hotline and website address which will be updated quarterly and will include project-related information.

PDF-PS-1: Construction Security Measures. During construction, on-site security measures will include security lighting and a construction security fence with gated and locked entry around active construction areas.

PDF-PS-2: Operational Security Measures. For Special Events that occur during the nighttime hours, security lighting will be provided.

PDF-TRA-1: Construction Traffic Management Plan. A Construction Traffic Management Plan will be prepared for the phases of the proposed Project that affect offsite components or require increased vehicle access consistent with the LADOT Construction Traffic Control Guidelines. This plan will address the planned Project construction phasing, sequence of construction activities, access, and circulation. In addition, the plan would include planned detour routes and BMPs, as well as coordination with and advance notice to local emergency providers.

PDF-TRA-2: Construction Staging Plan. A construction staging plan shall be developed to reduce impacts related to noise, dust, traffic, and other health hazards. In addition, construction site BMPs (e.g., fencing, signs, and detours) shall be implemented to minimize hazards and prevent safety issues on the roadways and sidewalks surrounding the construction site.

PDF-TRA-3: Construction Traffic. Construction-related trips shall be scheduled with increased frequency during off-peak hours to minimize impacts to commuters.

PDF-TRA-4: Access to Parcels. It is not anticipated that access to existing parcels outside of the proposed Project impact areas would be impacted. However, if access to any existing parcels is removed during proposed construction activities, temporary access shall be provided, and/or new points of access shall be constructed.

PDF-TRA-5: Site-Specific Traffic Control and Transit Plan for Large Events. Large event permittees shall develop a site-specific traffic control plan to provide information on parking and circulation and highlight transit options for event attendees to minimize congestion and vehicle miles traveled. Traffic control strategies for events will include inbound/outbound flex lanes and sheriff-controlled intersections. Traffic control plans will also identify nearby public parking facilities and identify passenger pick-up/drop-off locations. Permittees will be required to consider the cumulative traffic impacts of their event in relation to other events in the Project Area. The traffic control plans will also identify emergency services egress and access.

PDF-TRA-6: Expand Public Transit Connections. The future site operator and relevant City departments (LADOT, Recreation and Parks Department, City Planning, etc.) shall work together to explore options for expanding public transit connections to the Project site to expand community access and reduce VMT.

PDF-UTIL-1: Drought-Tolerant Landscaping. The Project will use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses.

PDF-UTIL-2: Water-Efficient Irrigation. Irrigation water would be pumped from the reservoirs to wetland habitat areas which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. Recycled water may also be used to irrigate ornamental planting, should such water supplies become available in the future.

PDF-UTIL-3: Decentralized Drainage Strategy. To prevent untreated surface runoff from entering the reservoir waters, proposed Project will implement decentralized drainage facilities to capture and filter or infiltrate stormwater runoff from the developed portions of the Project site.

PDF-WF-1: Fire Code. The Project Manager is responsible for compliance with applicable LAMC Fire Code Section 57 et seq. for construction sites on, adjacent to or in the immediate vicinity of a VHFHSZ as designated through LAMC Sections 57.4908.1.1 through 57.4908.1.3 and identified on City maintained databases such as NavigateLA and Zone information and Map Access System (ZIMAS) (which maintain digitalized LA General Plan and zoning maps).

PDF-WF-2: Open Flame. Pursuant to LAMC Section 57.4908.5 open flame is prohibited upon any road, street, or fire road with the VHFHSZ.

PDF-WF-3: Smoking Prohibited. No smoking is allowed where conditions are such as to make smoking a hazard and in spaces where flammable or combustible materials are stored or handled per Section 310.2 of the California Fire Code. Further, it shall be unlawful for any person to light, ignite or smoke any cigar, cigarette, tobacco in a pipe or other form of smoldering substance within the VHFHSZ compliant with LAMC Section 57.4908.6. The Section also prohibits open flame upon any road, street, or fire road within the VHFHSZ.

PDF-WF-4: Signage. No person, except one authorized and acting within the scope of his official duties, shall remove, deface, mar, mutilate, or change the position of any sign, installed by the Chief pursuant to this article, designating “CLOSED AREA,” “NO SMOKING,” “NO OPEN FIRES,” “RESTRICTED ENTRY,” or other sign or device installed to give warning and to regulate persons’ actions within the VHFHSZ as stated in Section 57.4908.9.1.

PDF-WF-5: Brush Clearance Activities. Pursuant to Ordinance No. 185789 which added Sections 57.305.5.2, 57.305.5.2.1, 57.322.1.1.10 and 57.322.1.1.10.1, and amended Section 57.322.1.1 to Article 7, Chapter V of the LAMC, the applicable

requirements for brush clearing activities in the VHFHSZ would apply including, but not limited to:

- Use of metal cutting blades for grass or brush clearance shall be limited to those which are nonferrous/non-sparking.
- Brush clearance cannot be done on red flag days, when fire weather conditions are at their peak.
- Individuals engaged in brush clearance operations shall not engage in any other activities during their actual clearance of grass or brush.
- Individuals engaged in grass or brush clearance operations shall use an appropriate extinguishing agent immediately to extinguish a fire.
- All fires, regardless of size, shall be reported immediately via the 9-1-1 system to the Fire Department.
- An approved fire extinguisher, or a pressurized garden hose with attached nozzle shall be within 10 feet of any grass or brush clearance operation, to quickly extinguish a small fire before it burns out of control.
- Where a gasoline container is present at the site of the grass or brush clearance operation, a minimum 4A 60 BC dry chemical fire extinguisher shall be within 10 feet of the brush clearance operation.
- A cell phone capable of dialing 9-1-1 shall be charged and readily accessible to the grass or brush clearance operation.
- A safety strap shall be used at all times for any tool or appliance with hot exhaust. Hot exhaust shall not come in contact with any brush, grass, flash fuels, or other flammable material.

2.6 Project Construction

2.6.1 Construction Schedule

Construction work hours would comply with Bureau of Engineering Master Specification and/or as allowed by LAMC § 41.10 - Construction Noise.

Table 2-3 lists total construction durations for each proposed park zone. Construction of the proposed park zones may occur simultaneously or sequentially. Since construction sequence is currently unknown, for purposes of this environmental analysis, it is assumed that construction of certain park zones would need to occur before other park zones to maximize usage of the proposed Project site during construction. For example, the Ivanhoe Overlook and Eucalyptus Grove would need to be constructed before the East and West Narrows to avoid potential damage to any of the new facilities (e.g., new pathways). For the purposes of the environmental analysis, the following park zones are assumed to be constructed simultaneously within two groupings, where the second grouping would be construction sequentially after the first:

1. Ivanhoe Reservoir (Ivanhoe Overlook), The Eucalyptus Grove, Habitat Islands, the Knoll, the Meadow (1st half)

2. The East and West Narrows, the South Valley, Ivanhoe Reservoir (Ivanhoe Spillway and Promenade), the Meadow (2nd half), and offsite improvements.

In order to analyze the worst-case scenario during proposed Project construction, the analysis within this EIR assumes a 2-phased approach as outlined above with the shortest construction duration occurring within a 5-year period. The proposed Project's construction schedule could result in delays due to nesting bird avoidance or other wildlife impacts during construction.

TABLE 2-3
TOTAL CONSTRUCTION DURATION BY PARK ZONE

Proposed Park Zone	Construction Activity Duration
The Meadow	30 months
The Knoll	18 months
Ivanhoe Reservoir	36 months
The Eucalyptus Grove	30 months
The East and West Narrows	24 months
The South Valley	18 months
Habitat Islands	12 months
Offsite Improvements	Intermittently over 12 months

SOURCE: BOE 2021

2.6.2 Construction Activities

The following describes construction activities required for the proposed Project. **Table 2-4** outlines what activities would occur at each proposed park zone. As noted above, this Draft EIR assumes simultaneous construction activities would occur in two phases, however, dependent on funding availability construction activities could occur in succession, as each proposed park zone is funded and constructed: the Meadow; the Knoll; Ivanhoe Reservoir; the Eucalyptus Grove; the East and West Narrows; the South Valley; and Habitat Islands. Construction activities would require the use of heavy-duty equipment and construction workers, which would be shared between different park zones when construction at different park zones occur at the same time. Total number of construction workers required per phase/activity for construction at each zone is shown on Table 2-4.

TABLE 2-4
CONSTRUCTION EQUIPMENT

Construction Phase/Activities	Equipment List	No. of Construction Workers
The Meadow		
Demolition	Backhoe (1), Jackhammer (1), Loader (1), Rubber-Tired Dozer (1)	10
Site Grubbing/Prep	Backhoes (2), Loaders (2), Rubber-Tired Dozer (1)	10
Mass Grading/Excavation	Backhoes (2), Excavator (1), Grader (1), Loader (2), Off-Highway Truck (1), Rubber-Tired Dozer (1), Rubber-Tired Loader (1)	20

Construction Phase/Activities	Equipment List	No. of Construction Workers
Drainage/Utilities Trenching	Forklift (1), Grader (1), Loader (1), Trencher (1)	10
Foundation/Concrete Pads	Cement/Mortar Mixers (2), Paving Equipment (1), Pump (1)	10
Building/Structure Construction	Backhoe (1), Crane (1), Forklifts (2), Generator Set (1), Loader (1), Tractor (1), Welder (1)	10
Asphalt Paving	Cement/Mortar Mixers (2), Paver (1), Paving Equipment (1), Pump (1), Roller (1)	10
Landscaping or Other Finishing	Backhoe (1), Crane (1), Forklift (1)	30
Waterside Construction (Piles)	Bore/Drill Rig (1), Crane (1), Loader (1), Pile Driver (Vibratory) (1)	10
The Knoll		
Demolition	Backhoe (1), Loader (1), Rubber-Tired Dozer (1)	10
Site Grubbing/Prep	Backhoes (2), Loaders (2), Rubber-Tired Dozer (1)	10
Mass Grading/Excavation	Backhoes (2), Excavator (1), Grader (1), Loader (2), Off-Highway Truck (1), Rubber-Tired Dozer (1), Rubber-Tired Loader (1)	20
Drainage/Utilities Trenching	Forklift (1), Grader (1), Loader (1), Trencher (1)	10
Foundations/Concrete Pads	Cement/Mortar Mixers (2), Paving Equipment (1), Pump (1)	10
Building/Structure Construction	Backhoe (1), Crane (1), Forklifts (3), Generator Set (1), Loader (1), Tractor (1), Welder (1)	20
Asphalt Paving	Cement/Mortar Mixers (2), Paver (1), Paving Equipment (1), Pump (1), Roller (1)	10
Architectural Coating	Air Compressor (1)	10
Landscaping or Other Finishing	Backhoe (1), Crane (1), Forklift (1)	20
Waterside Construction (Piles)	Bore/Drill Rig (1), Crane (1), Loader (1), Pile Driver (Vibratory) (1)	10
Ivanhoe Reservoir		
Demolition	Backhoes (2), Jackhammers (2), Loaders (4), Rubber-Tired Dozers (2)	20
Site Grubbing/Prep	Backhoe (1), Loader (1)	10
Mass Grading/Excavations	Backhoe (1), Excavator (1), Grader (1), Rubber-Tired Dozer (1)	10
Foundations/Concrete Pads	Cement/Mortar Mixers (4), Paving Equipment (3), Pumps (3)	20
Building/Structure Construction	Backhoes (2), Crane (1), Forklifts (2), Generator Set (1), Tractor (1), Welder (1)	10
Asphalt Paving	Cement/Mortar Mixers (4), Pavers (2), Paving Equipment (2), Pumps (2), Rollers (2)	20
Architectural Coating	Air Compressor (1)	10
Landscaping or Other Finishing	Backhoe (1), Crane (1), Forklift (1)	10
Waterside Construction (Piles)	Bore/Drill Rig (1), Crane (1), Loader (1), Pile Driver (Vibratory) (1)	10
The Eucalyptus Grove		
Demolition	Backhoe (1), Jackhammer (1), Loaders (2), Rubber-Tired Dozer (1)	10
Site Grubbing/Prep	Backhoes (2), Loaders (2), Rubber-Tired Dozer (1)	10
Mass Grading/Excavation	Backhoes (2), Excavator (1), Grader (1), Loaders (2), Off-Highway Truck (1), Rubber-Tired Dozer (1), Rubber-Tired Loader (1)	20
Building/Structure Construction	Backhoe (1), Crane (1), Forklift (1), Generator Set (1), Loader (1), Tractor (1), Welder (1)	10

Construction Phase/Activities	Equipment List	No. of Construction Workers
Asphalt Paving	Cement/Mortar Mixers (2), Paver (1), Paving Equipment (1), Pump (1), Roller (1)	10
Landscaping or Other Finishing	Backhoe (1), Crane (1), Forklift (1)	30
Waterside Construction (Piles)	Bore/Drill Rig (1), Crane (1), Loader (1), Pile Driver (Vibratory) (1)	10
The East and West Narrows		
Demolition	Backhoe (1), Jackhammer (1), Loaders (2), Rubber-Tired Dozer (1)	10
Site Grubbing/Prep	Backhoes (2), Excavators (2), Loaders (2), Rubber-Tired Dozer (1)	10
Mass Grading/Excavation	Backhoes (2), Excavators (2), Grader (1), Loaders (2), Rubber-Tired Dozer (1)	10
Foundations/Concrete Pads	Cement/Mortar Mixers (2), Paving Equipment (1), Pump (1)	10
Building/Structure Construction	Backhoe (1), Crane (1), Forklift (1), Generator Set (1), Loader (1), Tractor (1), Welder (1)	10
Asphalt Paving	Cement/Mortar Mixers (2), Paver (1), Paving Equipment (1), Pump (1), Roller (1)	10
Landscaping or Other Finishing	Backhoe (1), Crane (1), Excavator (1)	15
Waterside Construction (Piles)	Bore/Drill Rig (1), Crane (1), Loader (1), Pile Driver (Vibratory) (1)	10
The South Valley		
Demolition	Excavator (1), Loader (1), Saw cutter (1), Crane (1), Forklift (1), Loader (1), Hauling Truck (1)	10
Site Grubbing/Prep	Backhoe (1), Compactor (1), Grader (1)	10
Mass Grading/Excavation	Backhoe (1), Excavator (1), Grader (1), Loader (1), Rubber-Tired Dozer (1)	10
Drainage/Utilities Trenching	Forklift (1), Trencher (1)	10
Foundations/Concrete Pads	Backhoe (1), Excavator (1)	10
Building/Structure Construction	Backhoe (1), Crane (1), Forklifts (3), Generator Set (1), Loader (1), Tractor (1), Welder (1)	20
Asphalt Paving	Cement/Mortar Mixers (2), Paver (1), Paving Equipment (1), Pump (1), Roller (1)	10
Architectural Coating	Air Compressor (1)	10
Landscaping or Other Finishing	Backhoe (1), Crane (1), Forklift (1)	20
Habitat Islands		
Waterside Construction (Landscaping)	Air Compressor (1), Concrete/Industrial Saw (1), Crane (1) Forklifts (2), Loaders (2), Off-highway Truck (1), Welder (1)	20
Offsite Improvements		
Demolition	Excavator (1), Backhoe (1), Air Compressor (1), Jackhammer (4)	11
Base Placement	Vibrating Plate (3)	7
Form/ Rebar Placement and Pour	Pump (1),	20
Striping	Paint Striper (1), 3 Ton Flatbed (1), Heating Kettle (1)	6
SOURCE: BOE 2021.		

Staging and Stockpiling Activities

During construction, several staging areas would be located within the SLRC. Staging areas would be determined once the final design is completed but would likely be located within the larger open space areas, such as the Meadow, the Eucalyptus Grove, and the South Valley. Construction ingress and egress areas would be located along Silver Lake Boulevard/Armstrong Avenue between the Meadow and Knoll zones, and Silver Lake Boulevard/Duane Street along the eastern portion of the South Valley zone. It is assumed that all staging of materials and vehicles would be accommodated within the SLRC, and no on-street parking would be impacted for construction of the proposed park zones within the SLRC. Construction of offsite improvements would require partial road closures and equipment may be staged near the proposed work areas along Silver Lake Boulevard and West Silver Lake Drive, as needed. Final ingress and egress locations would be determined once final design is completed. Typical construction-related activities would occur within proposed staging areas, including the following:

- Stockpiling material
- Staging of construction equipment and cement
- Delivery of fuel and fueling/maintenance of construction equipment (daily)
- Construction administration and meetings (project trailers) (daily)
- Worker restrooms
- Visitor parking and sign-in area
- Temporary storage for other equipment and materials (concrete forms, scaffolding, etc.) (daily)

Demolition

Various proposed park zones that would require the demolition of hardscaped areas include the Meadow, the Knoll, Ivanhoe Reservoir, the Eucalyptus Grove, and the East and West Narrows. Additionally, the South Valley requires the demolition of 8,200 sf of building material.

Netting would be installed and other best management practices would be used to contain soils and materials from dumping or spreading into the reservoirs. All demolition phases for each proposed park zone would use a rig-mounted hammer for efficiency.

Site Grubbing/Preparation

Construction and staging areas would be cleared and grubbed of the vegetation present, debris, and large rocks, as necessary, using backhoes and other ground-clearing equipment. Existing paved roads/walkways would be used for hauling and transporting materials within the proposed Project area.

Earthwork

Park zones that would require mass grading and excavation include the Meadow, the Knoll, Ivanhoe Reservoir, the Eucalyptus Grove, and the South Valley. The proposed Project would be designed to attempt to balance the amount of earthwork material in order to minimize the off-haul

or import of soil. In addition, construction materials such as concrete and structure support would be imported and exported on and off-site and would constitute the import and export materials shown in **Table 2-6** and described in Section 2.6.4 *Truck and Worker Commute Trips*.

Drainage/Utilities Trenching

Trenching for local drainage and underground utilities would be required for all proposed park zones other than the Habitat Islands.

Foundations/Concrete Pads

After all drainages and utilities are in place, concrete foundations would be placed on top of newly graded areas to allow for mobility/pedestrian access across the proposed Project area and new proposed buildings and structures.

Building/Structure Construction

The proposed Project would include new structures such as the new Education Center at the base of the Knoll, the new Multi-Purpose Facility and the upgraded Recreation Center within the South Valley, and new shade pavilions within the Ivanhoe Reservoir and at the Knoll, which are further described in the section below. All buildings and structures could be designed as an architectural ensemble that relate in form to the proposed floating habitat islands and the mid-century modern architecture of the Silver Lake neighborhood. The scale of these proposed structures would be consistent with the residential character of the surrounding neighborhood. These proposed structures would be constructed with sustainably sourced materials as evaluated with the LEED assessment tool.

Education Center

The proposed Education Center would be implemented at the base of the Knoll within the Meadow. The proposed Education Center would consist of a 3,760 sf, residential-scale building and seating terraces that would be integrated into the topography of the Knoll. The proposed Education Center would contain two interior classrooms with a view of the water through a partially glazed, operable facade that open the teaching spaces to the exterior. The building would be made of sustainably sourced materials, and would optimize natural ventilation, daylighting, and rainwater harvesting while minimizing heat gain with shade trees and other architectural elements.

Shade Pavilions

A shade pavilion would be constructed at the top of the Knoll and at the Ivanhoe Overlook. The pavilion would be designed and positioned as a gateway to footpaths that descend through proposed wetland terraces and down to the Ivanhoe Reservoir where visitors would be able to touch the water and observe the flora and fauna up-close. The forms and materials of the proposed shade pavilions would be consistent with the architecture of the proposed Education Center.

Multi-Purpose Facility

In the South Valley, a new Multi-Purpose Facility (building) would be implemented to expand the existing Silver Lake Recreation Center. The proposed Multi-Purpose Facility would be

5,800 sf in size. The design of the Multi-Purpose Facility would address the street frontage in inviting ways. The proposed architecture would be designed to relate to the existing recreation center. The proposed building design would be environmentally sustainable by using sustainably sourced materials and optimize natural ventilation and daylighting.

Existing Recreation Center Upgrades

The exterior of the existing Recreation Center would be preserved and repainted to the extent possible while its interior would be remodeled to create new spaces. The windows and doors may have to be replaced to meet current energy code requirements, and the building structure may have to be upgraded to meet current seismic code. Four glass skylights, approximately 4 feet by 8 feet, could be added to the roof of the existing gymnasium in order to be repurposed.

All restrooms would be upgraded, and the existing gymnasium would be transformed into a series of activity spaces with uses to be defined as the project is initiated. A mezzanine would be added, served by a new exterior stair and elevator, to house a new Art Studio or similar function which would overlook a new two-story tall Studio space below. The kitchen could be relocated under the mezzanine and improved with new counters, cabinets and equipment. Next to the kitchen could be a new game room. The space vacated by the kitchen could be converted into a storage room.

Asphalt Paving

The proposed Project would require some asphalt paving areas. **Table 2-5** summarizes the total acreage of asphalt paving that would occur for each proposed park zone.

**TABLE 2-5
ASPHALT ACREAGE BY PARK ZONE**

Proposed Park Zone	Asphalt Paving Area (Acres)
The Meadow	2.7
The Knoll	0.6
Ivanhoe Reservoir	3.3
The Eucalyptus Grove	1.2
The East and West Narrows	2.8
The South Valley	0.9
Habitat Islands	None
Offsite Improvements	None

SOURCE: BOE 2021.

Architectural Coating

The Knoll, Ivanhoe Reservoir, and the South Valley would require architectural coatings for proposed buildings/structures, shade pavilions, and other small wooden structures. Architectural coating activities would include the use of handheld paint application devices, such as brushes, rollers, and sprays.

Landscaping or Other Finishing

Landscaping and finishing activities would include the delivery of plants and planting medium to the park zones and the use of some small-scale equipment such as forklifts to transport the plants and medium to the appropriate locations within each park zone.

Waterside Construction (Piles)

Various proposed park zones include structures and other facilities to be located within the reservoirs, such as overlooks, terraces, and a proposed floating dock. To support these proposed structures within the water, piling must occur. The primary purpose of pile foundations would be to strengthen the soil layers within the reservoir beds to make them stable enough for the foundation of a structure and to support the weight of pedestrians. Piles would be installed using drilling and/or vibratory pile drivers using construction equipment listed in **Table 2-6** as shown on Section 2.6.4 *Truck and Worker Commute Trips*.

Waterside Construction (Landscaping)

Proposed Habitat Islands would require “landscaping” within the Silver Lake and Ivanhoe Reservoirs. Islands would likely be preloaded with plant materials prior to placement into the reservoirs. Some equipment such as forklifts, cranes, and boats would be needed to transport the plant materials to the appropriate locations on each Habitat Island. The islands would be tethered to ballasts to keep islands from drifting.

Offsite Improvements

The addition of parking and/or bike lanes along Silver Lake Boulevard would require at a minimum restriping along the area between Armstrong Avenue and Duane Street. If the parking option with the sidewalk is chosen (Option1), then additional demolition would be required. Construction would require the following: removal of asphalt along Silver Lake Boulevard, approximately one foot of excavation, placement and compaction of base material, then forming and pouring of concrete. This work would require partial road closures along Silver Lake Boulevard for a total of approximately 2.5 weeks.

2.6.3 Construction Equipment

Table 2-4 summarizes equipment required for each individual proposed park zone by construction activity. Construction equipment and construction workers would be shared between different park zones when construction occurs at multiple park zones at the same time.

2.6.4 Truck and Worker Commute Trips

Construction traffic to and from the proposed Project area would consist of round-trips by haul trucks and round-trips by personal vehicles. Peak construction traffic would depend on the number of activities performed concurrently and the length of time construction materials would be delivered to the site(s). As shown on Table 2-4, approximately 20 to 130 daily construction workers would be anticipated for each individual proposed park zone construction area. However, park zones that are adjacent to each other and would be constructed simultaneously, would share construction equipment and workers. Therefore, a conservatively estimated maximum number of

workers, assuming simultaneous construction of park zones as described above and assuming simultaneous demolition, site grubbing, grading and excavation, drainage and utilities trenching, foundations and concrete pad, facility construction, paving, architectural coating, and landscaping activities would be approximately up to 250 workers (or 500 worker vehicle round trips) by personal vehicles. This amount of personal vehicle trips reflects the assumption that the maximum number of workers required for each construction phase would be on-site each day. This conservative scenario is unlikely as the various construction activities would not all occur on the same day.

Truck haul trips and export/import material amounts are summarized by proposed park zone and specific construction activity/phase in **Table 2-6**. All exported material would be disposed of at local disposal sites such as Sunshine Canyon or within the Azusa/Irwindale area, which would be approximately 20 miles away from the proposed Project area to the northwest and northeast, respectively.

**TABLE 2-6
TOTAL CONSTRUCTION TRUCK HAUL TRIPS**

Construction Phase	Import or Export	Total No. of Truck Trips	Total Material Amount (cubic yards)
The Meadow			
Demolition	Export	141	1,410
Site Grubbing/Prep	Export	500	5,000
Mass Grading/Excavation	Export	3,571	50,000
	Import	3,571	50,000
Drainage/Utilities Trenching	Export	286	4,000
Foundations/Concrete Pads	Import	375	3,374
The Knoll			
Demolition	Export	21	210
Site Grubbing/Prep	Export	200	2,000
Mass Grading/Excavation	Export	1,072	15,000
	Import	357	5,000
Drainage/Utilities Trenching	Export	215	3,000
Foundations/Concrete Pads	Import	3	25
Ivanhoe Reservoir			
Demolition	Export	459	4,590
Site Grubbing/Prep	Export	257	2,564
Mass Grading/Excavation	Import	158	2,200
Drainage/Utilities Trenching	Export	374	5,222
Foundations/Concrete Pads	Import	252	2,264
The Eucalyptus Grove			
Demolition	Export	519	5,190
Site Grubbing/Prep	Export	50	500
Mass Grading/Excavation	Export	286	4,003
	Import	454	6,325

Construction Phase	Import or Export	Total No. of Truck Trips	Total Material Amount (cubic yards)
Drainage/Utilities Trenching	Export	460	6,435
Foundations/Concrete Pads	Import	612	5,500
The East and West Narrows			
Demolition	Export	519	5,190
Site Grubbing/Prep	Export	20	200
Drainage/Utilities Trenching	Export	406	5,675
Foundations/Concrete Pads	Import	101	907
The South Valley			
Demolition	Export	414	4,140
Site Grubbing/Prep	Export	300	3,000
Mass Grading/Excavation	Export	1,429	20,000
	Import	1,429	20,000
Drainage/Utilities Trenching	Export	429	6,000
Foundations/Concrete Pads	Import	74	658
Habitat Islands			
Mass Grading/Excavation	Import	232	3,240
Offsite Improvements			
Demolition	Export	27	378
Placing Base	Import	20	280
Form/Place Rebar and Pour	Import	32	280

SOURCE: BOE 2021.

2.7 Project Operations and Maintenance

Operations and maintenance activities related to the proposed Project would require a total of approximately 5 new full-time staff daily. These new staff would perform routine operation and maintenance activities, horticulture maintenance and water management, and security as outlined below.

2.7.1 Operation and Maintenance Plans

Once an operator has been determined, the operator and the City would prepare an Operations and Maintenance Plan with detailed guidance on the operational needs for the proposed Project site. This Plan would include a section on Wildlife Management, Wetlands Management, Tree Succession Plan, Brush Clearance, and Security. The Operations and Maintenance Plan would be consistent with the RAP and LAFD protocol and requirements related to safety, including evacuation plans. At a minimum, the following information would be included as part of each of these plans.

Wildlife Management Plan. A Wildlife Management Plan would be created to protect wildlife during landscape maintenance activities or any type of events that have the potential to impact wildlife. At a minimum the Wildlife Management Plan will include a vegetation maintenance

schedule, require biological monitoring during nesting bird season by a qualified biologist, and recommendations for potential closures and/or the establishment of environmentally sensitive buffers to protect wildlife during maintenance activities. The plan would also include a timeline for fish stocking requirements. Areas of primary concern include created transition, upland, and wetland native habitat areas.

Wetlands Management Plan. The Wetlands Management Plan would outline methods and frequency for the maintenance of the shoreline wetland areas and floating habitat islands. The plan would also include at a minimum oversight of algal growth, signs of pollution, invasive vegetation clearing methods, replanting triggers and methods, wildlife avoidance measures, nesting bird avoidance measures, debris removal and disposal methods and frequency, points of contact for responsible parties, and reporting methods and frequencies. In addition, the plan will address drought contingency and recovery.

Tree Succession Plan. A Tree Succession Plan would be developed to gradually remove mature trees to avoid temporary elimination of habitat value within the SLRC and replant areas primarily vegetated with non-native trees with native trees and understory. The plan would be prepared by a qualified arborist. The plan would be implemented over a 15-year period, allowing time for new tree plantings and understory to become well established and maintaining habitat for avian and bat species. The Tree Succession Plan would identify trees to be removed in the initial year of construction giving priority to trees that are dead, in poor health, and/or pose a safety risk to the public, including those with fungal and/or pest infestations. The plan would identify a sequence of phased removals for selected trees on a schedule throughout the 15-year period. Additionally, it would include the replacement of 80 percent of existing non-native trees over a 15-year timeline and the attainment of 75 percent canopy coverage within 20 years.

Brush Clearance Plan. The proposed Project area is located within a Very High Fire Hazard Severity Zone (VHFHSZ). Per requirements of Los Angeles Municipal Code owners of property located in the VHFHSZ shall maintain their property in accordance with the Fire Code (L.A.M.C. 57.322). Year-round compliance shall be maintained as described below on all native brush, weeds, grass, trees and hazardous vegetation within 200 feet of any structures/buildings, whether those structures are on the owner's property or adjoining properties, and within 10 feet of any combustible fence or roadway/driveway used for vehicular travel.

Areas within 200 feet of structures and/or 10 feet of roadside surfaces or combustible fence: Grass shall be cut to three inches in height. Native brush shall be reduced in quantity to three inches in height. This does not apply to individual native shrubs spaced a minimum of 18 feet apart, provided such shrubs are trimmed up from the ground to 1/3 of their height with all dead material being removed (see diagram below).

- For trees taller than 18 feet, trim lower branches so no foliage is within six feet of the ground and remove all dead material. For trees and shrubs less than 18 feet, remove lower branches to 1/3 of their height, and remove all dead material (see diagram below).
- All roof surfaces shall be maintained free of substantial accumulation of leaves, needles, twigs and any other combustible matter. Maintain five feet of vertical clearance between roof surfaces and portions of overhanging trees (see diagram below).

- All cut vegetation and debris shall be removed in a legal manner. Cut vegetation may be machine processed (i.e., chipped) and spread back onto the property at a depth not to exceed three inches within 30 feet of structures and six inches beyond 30 feet of structures. In addition, spread material shall not be placed within 10 feet of any usable roadside (in accordance with Fire Prevention Bureau Procedure No. 25)

In addition, as approved by the Los Angeles City Council under Ordinance No. 185789, the following safety measures have been established to mitigate the occurrence of fires when residents or property owners are conducting brush clearance activities. At a minimum the following shall occur:

- Use of metal cutting blades for grass or brush clearance shall be limited to those which are non-ferrous/non-sparking.
- Brush clearance cannot be done on red flag days, when fire weather conditions are at their peak.
- Individuals engaged in brush clearance operations shall not engage in any other activities during their actual clearance of grass or brush.
- An approved fire extinguisher, or a pressurized garden hose with attached nozzle shall be within 10 feet of any grass or brush clearance operation, to quickly extinguish a small fire before it burns out of control.
- A cell phone capable of dialing 9-1-1 shall be charged and readily accessible to the grass or brush clearance operation.

The Brush Clearance Plan would be prepared in coordination with the L.A. Fire Department.

Security Plan. The Operations and Maintenance Plan for the proposed Project would incorporate a security program to ensure the safety of park visitors, which could include the use of security staff, emergency call boxes, and other public safety devices. Staff would provide oversight over the area's large acreage and address safety concerns related to the reservoir space and unsafe behavior. The Security Plan would be implemented in connection with the removal of the perimeter fence, as each proposed park zone is constructed.

2.7.2 Routine Operations and Maintenance

The routine operations and maintenance of the proposed Project would be guided by the Operations and Maintenance Plan prepared for the Project, which would include the routine cleaning and maintenance of park spaces and park facilities, clearing paths and walkways, trash removal, graffiti removal, and cleaning of park facilities such as the proposed Education Center, Multi-Purpose Facility, and restrooms as outlined in the Project-specific Operations and Maintenance Plan to be prepared by the City with guidance from RAP. The SLRC would be open to public access from 5:00 a.m. to 10:30 p.m. RAP would continue to operate and manage the Silver Lake Recreation Center including the proposed Multi-Purpose Facility similar to existing conditions and closed on Sundays, as well as the enhanced Dog Park. Current RAP operations include a total of approximately 5 full-time and 12 seasonal staff, which would not be altered by the proposed Project enhancements and additions at the South Valley. Overall maintenance of new proposed Project areas not managed by RAP, could be governed and operated by an

independent, special-purposed, non-profit organization, by another City department, or by a vendor. The non-profit organization or other Project operator would have to comply with the Project-specific Operations and Maintenance Plan.

The proposed Project would include the enhancement and addition of recreational facilities within the SLRC. The Education Center could be most active during the week, hosting school groups and could host college or research focused individuals during the weekend. **Table 2-7** existing and proposed facility area/size and the total assumed increase in attendance at each proposed park zone during the weekend and **Table 2-8** shows the increases during the weekday. In addition, both tables show the arrival, departure, and total vehicle trips associated with each park use within the proposed park zones. Assumptions for attendance increases are outlined in the project's Transportation Impact Assessment included as Appendix K.

TABLE 2-7
ESTIMATED POTENTIAL WEEKEND VEHICLE TRIPS GENERATED BY EACH PARK USE

Park Use	Existing Area/Size	Proposed Area/Size	Increase in Park Attendance	Peak Use Vehicle Trips		
				Arrive	Depart	Total
The Meadow						
Silver Lake Lawn	87,120 sq. ft.	Enhanced	50 people	8	8	16
Great Lawn	56,628 sq. ft.	Enhanced				
Observation Platform	N/A	500 sq. ft.	15 People	2	2	4
Ornamental Gardens	N/A	1.5 Acre	20 People	3	3	6
Picnic Grove & Upper Lawn	N/A	12,000 sq. ft.	25 People	4	4	8
Seating Terraces	N/A	23,400 sq. ft.	15 People	2	2	4
Wetland Terraces	N/A	61,200 sq. ft.	5 People	0	0	0
Promenade	8,000 sq. ft.	Enhanced	No Change	0	0	0
The Knoll						
Floating Dock	N/A		All internal capture	0	0	0
Overlook Shade Pavilion/Outdoor Classroom	N/A	1,200 sq. ft.	10 People	2	2	4
Education Center*	N/A	3,760 sq. ft.	15 People	0	0	0
Ivanhoe Reservoir						
Shadow Pavilion/Outdoor Classroom*	N/A	1,200 sq. ft.	0	0	0	0
Habitat Terrace*	N/A	N/A	0	0	0	0
The Eucalyptus Grove						
Seating and Viewing Terraces	N/A	Benches	20 People	3	3	6
The East and West Narrows						
East Narrows Seating Terraces	N/A	Benches	15 People	2	2	4
West Narrows Seating Terraces	N/A	Benches	15 People	2	2	4
Fitness Circuit	N/A	Fitness Equipment	15 People	2	2	4

Park Use	Existing Area/Size	Proposed Area/Size	Increase in Park Attendance	Peak Use Vehicle Trips		
				Arrive	Depart	Total
The South Valley						
Playground	N/A	Enhanced	No Change	0	0	0
Renovated Recreation Center*	3,279 sq. ft.	Enhanced	30 people	5	5	10
Picnic Grove	No Change	No Change	No Change	0	0	0
Relocated Basketball Court	3,108 sq. ft.	No Change	No Change	0	0	0
Dog Park	56,400	Enhanced	30 People	6	6	12
Multi-Purpose Facility /Indoor basketball Court*	N/A	5,800 sq. ft.	25 People	4	4	8
New Plaza	N/A	Enhanced	All internal capture	0	0	0
Silver Lake Perimeter						
Walking/Jogging Paths	N/A	Enhanced	85 People	21	21	42
TOTAL FOR ALL PARK USE AREAS			390 People	66	66	132

SOURCE: JBA 2022

* No internal captures.

**TABLE 2-8
ESTIMATED POTENTIAL WEEKDAY VEHICLE TRIPS GENERATED BY EACH PARK USE**

Park Use	Existing Area/Size	Proposed Area/Size	Increase in Park Attendance	Peak Use Vehicle Trips		
				Arrive	Depart	Total
The Meadow						
Silver Lake Lawn	87,120 sq. ft.	Enhanced	25 people	4	4	8
Great Lawn	56,628 sq. ft.	Enhanced				
Observation Platform	N/A	500 sq. ft.	13 People	2	2	4
Ornamental Gardens	N/A	1.5 Acre	20 People	3	3	6
Picnic Grove & Upper Lawn	N/A	12,000 sq. ft.	20 People	3	3	6
Seating Terraces	N/A	23,400 sq. ft.	10 People	2	2	4
Wetland Terraces	N/A	61,200 sq. ft.	3 People	1	1	2
Promenade	8,000 sq. ft.	Enhanced	No Change	0	0	0
The Knoll						
Floating Dock	N/A		All internal capture	0	0	0
Overlook Shade Pavilion/Outdoor Classroom	N/A	1,200 sq. ft.	15 People	2	2	4
Education Center*	N/A	3,760 sq. ft.	85 Students	(4 buses) 12	(4 buses) 12	(8 buses) 24
Ivanhoe Reservoir						
Shadow Pavilion/Outdoor Classroom*	N/A	1,200 sq. ft.	30 Students	(2 buses) 6	(2 buses) 6	(4 buses) 12
Habitat Terrace*	N/A	N/A	10 students	(1 bus) 3	(1 bus) 3	(2 buses) 6

Park Use	Existing Area/Size	Proposed Area/Size	Increase in Park Attendance	Peak Use Vehicle Trips		
				Arrive	Depart	Total
The Eucalyptus Grove						
Seating and Viewing Terraces	N/A	Benches	10 People	2	2	6
The East and West Narrows						
East Narrows Seating Terraces	N/A	Benches	10 People	2	2	4
West Narrows Seating Terraces	N/A	Benches	10 People	2	2	4
Fitness Circuit	N/A	Fitness Equipment	10 People	2	2	4
The South Valley						
Playground	N/A	Enhanced	No Change	0	0	0
Renovated Recreation Center*	3,279 sq. ft.	Enhanced	30 people	5	5	10
Picnic Grove	No Change	No Change	No Change	0	0	0
Relocated Basketball Court	3,108 sq. ft.	No Change	No Change	0	0	0
Dog Park	56,400	Enhanced	15 People	3	3	6
Multi-Purpose Facility /Indoor basketball Court*	N/A	5,800 sq. ft.	25 People	4	4	8
New Plaza	N/A	N/A	All internal capture	0	0	0
Silver Lake Perimeter						
Walking/Jogging Paths	N/A	Enhanced	42 People	11	11	22
TOTAL FOR ALL PARK USE AREAS			383 People	69	69	140

SOURCE: JBA 2022.

* No internal captures.

The proposed Project would also allow for large, scheduled public events, including outdoor concerts, movie nights, or luncheons, and requiring amplified sound. It is anticipated that up to approximately 600 visitors would attend such events, with a mixture of approximately 70 percent of attendees coming from the immediate neighborhood by walking or other non-vehicle means, and 30 percent driving in to attend the event. The proposed Project is anticipated to be a local serving recreational Project. However, the proposed Project could have a regional draw during special events. For purposes of this analysis, a special event would be assumed to occur weekly during the three months of summer vacation (presumably June, July, and August), for a total of 12 events annually. These events would require a permit from the City and would be staffed appropriately. Allowable event hours would be from noon to 10:00 p.m. The L.A. City Municipal Code prohibits the use of amplified sound within 500 feet of any residential zone from 10:00 p.m. to 7:00 a.m. (City of LA 2021b). The estimated increase in attendance and the peak use vehicle trips are shown on **Table 2-9**.

**TABLE 2-9
ESTIMATED WEEKEND PROJECT TRIP GENERATION DURING SPECIAL EVENTS/LIVE PERFORMANCE**

Park Use	Existing Area/Size	Proposed Area/Size	Increase in Park Attendance	Peak Use Vehicle Trips		
				Arrive	Depart	Total
The Meadow						
Silver Lake Lawn/ Great Lawn	87,120 sf	Enhanced	600 People	134	134	268

SOURCE: JBA 2022

The proposed Project would be designed to include minimal vegetation along the south end of the reservoir, where water could be drawn from via helicopter by the City and the County of Los Angeles Fire Departments in order to continue to support the use of the reservoir for firefighting needs.

2.7.3 Horticulture Maintenance and Water Management

The wetland and upland habitat areas and ornamental gardens maintenance would include grass cutting and tree pruning, and specialized maintenance of plantings and vegetation, including wetland habitats. Water management would include water quality permitting, monitoring, and compliance as well as activities in the reservoir, such as debris removal and maintaining the floating wetland habitat islands.

Upland Habitat and Ornamental Gardens

Long-term operations and maintenance activities of upland habitat would include replanting over time to replace and supplement existing eucalyptus trees with native species along the Knoll and the Eucalyptus Grove. Invasive species removal would be required periodically within the ornamental garden areas and would be performed by either hand-pulling or the spot use of herbicides (herbicide application would not include the use of neonicotinoids nor would the proposed Project install any plants that have been treated with neonicotinoids). These areas would also be annually inspected by a trained professional to evaluate their health and development.

Both upland habitat and ornamental garden areas would require little maintenance once fully established. However, any newly planted landscape within an urban park could require some or all of the following:

- Deep waterings in times of drought (after establishment period)
- Invasive species removal
- Tree pruning to incrementally open and lift canopy
- Periodic pruning of groundcover plantings/selective pruning and annual cut back
- Plant replacement as necessary
- Light applications of compost or fertilizer (optional)
- Regular removal of litter and other debris

Wetland Habitat and Open Water

Table 2-10 provides the frequency and description of wetland habitat maintenance activities required for the proposed Project.

**TABLE 2-10
PROPOSED MAINTENANCE OF WETLAND HABITAT**

Frequency	Description
Monthly or More Frequently	Look for invasive vegetation and schedule removal.
	Check the condition and health of the wetland vegetation and identify areas that require special attention. Schedule replanting as needed.
	Remove litter and debris from wetlands.
	Remove dead plant material.
	During initial plant establishment on the floating treatment wetlands, check the health and development of the plants and note any remedial actions needed.
	Ensure floating treatment wetlands are properly anchored.
	Inspect for trash and debris accumulation in wetlands.
Semi-Annual or After Significant Storms	Check for algal growth; signs of pollution such as oil sheens, discolored water, or unpleasant odors; and signs of flooding.
	Perform vector control, if necessary.
	Repair undercut areas and erosion to banks or slopes.
Annually	Inspect wetland structures and identify needed repairs.
	Repair and replace wetland structures as necessary.
Once or As Needed	Work with Greater Los Angeles County Vector Control District.
	During initial plant establishment of the floating treatment wetlands, perform any necessary remedial actions, such as replanting bare spots.

LADWP currently uses small boats to routinely inspect structures and maintain the reservoirs. It is anticipated that LADWP would continue to access the reservoirs via boat. Maintenance activities associated with the proposed Project could require the use of small boats. Water quality would be regularly monitored and maintained to a minimum standard to support wetland plantings and wildlife. Common and routine maintenance activities could include:

- Invasive species removal on vegetated embankments
- Erosion control of vegetated embankments
- Horticultural maintenance (edge plantings, aquatic plantings)
- Removal of floating or submerged debris
- Bi-monthly (or after significant storms) water quality sampling and monitoring to ensure water quality goals are being met

The proposed habitat islands would not only provide habitat for wildlife, they would also help meet water quality goals. To sustain their function as water quality treatment wetlands, proposed habitat islands must be maintained properly. The maintenance needs of wetland gardens can be rather intensive. Water quality would be regularly monitored and maintained to a minimum standard to support proposed habitat islands and wildlife.

Park Water Systems

Reservoir Water Replenishment

The proposed Project, through LADWP, would continue to replenish reservoir water as needed through the existing Pollock Well No. 3, similar to existing conditions. To achieve habitat and water quality goals, the proposed Project would be designed to accommodate operational water level fluctuations and to support varied shallow wading habitat for waterfowl within the proposed wetland terraces. To help maintain this wetland habitat, water level monitoring would be required and would be described in the proposed Project's Wetlands Management Plan. However, as noted in LADWP's WSCP, during drought conditions or other emergencies identified by local, state, or federal agencies, water levels in the reservoirs are subject to reduction to conform with drought or other emergency water conservation requirements.

Irrigation Water System

Irrigation water would be pumped from the reservoirs to the proposed wetland habitat zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette proposed under the proposed Project. This irrigation strategy would be validated by reservoir water quality testing and soil analysis under proposed operations.

Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. If recycled water is available in the future, it could be used to irrigate ornamental planting and lawn areas.

Surface Stormwater Drainage

To protect the reservoir waters from untreated surface runoff within the proposed Project area, a decentralized drainage strategy would be employed. Areas adjacent to the reservoir, such as the great lawn and seating terraces, would be designed for surface runoff to move thorough the proposed habitat island areas before entering the reservoirs. In other areas, stormwater runoff would be treated by infiltration gardens located throughout the SLRC. For example, the proposed picnic grove and ornamental gardens would drain to depressions in the landscape which would filter stormwater before it's collected and piped into the reservoirs. At the proposed Knoll park zone, runoff from slopes would be collected in swales adjacent to the proposed Education Center and treated before entering Silver Lake Reservoir. Along the proposed promenade, biofiltration planting would be incorporated to treat stormwater runoff from its paving surfaces.

2.7.4 Drought and Other Emergency Contingencies

Under certain drought conditions or other emergencies declared by local, state, or federal agencies, water levels in Silver Lake and Ivanhoe Reservoirs may be lowered to conform to emergency water conservation requirements. The Water Shortage Contingency Plan (WSCP) included in the 2020 Urban Water Management Plan outlines a set of actions the City may take in the event of a declared water supply shortage or other emergency situations (LADWP 2021). Shortage response actions include a mix of prohibitions on end uses, consumption reduction methods, supply augmentation, and operational change measures. Supply augmentation and operational changes imposed under the WSCP could affect the availability of local groundwater supplies at Pollock Wellfield used to fill the Silver Lake and Ivanhoe Reservoirs.

LADWP's water distribution system operations are highly flexible and contain system redundancies. However, planned shut-downs, periodic maintenance, degraded water quality events, hydraulic limitations, and unplanned outages due to earthquakes or other emergency conditions may limit water availability. LADWP evaluates system capabilities and constraints annually and adjusts water supply availability to account for these constraints. The assessment estimates water demand, the availability of locally-controlled water supplies (e.g., groundwater), and the availability of purchased water to determine if supplies are sufficient to meet demands. The results from the annual assessment process determine how the City manages water supplies each year. In the event that demands cannot be met without depleting available supplies, LADWP would implement the appropriate response actions outlined in the WSCP and may declare a water shortage emergency in accordance with California Water Code Chapter 3, Division 1. Operational flexibility based on demands, available supplies, and constraints, is key to managing SLRC operations.

The proposed Project would include a suggested water level elevation range for optimal wetland habitat growth and sustainability once final design is determined; however, operational constraints may require reductions to the water levels corresponding to overall system needs, including the need to prioritize use of local groundwater to augment potable water supplies during periods of drought, or the need for water for other emergencies such as fires or responses to earthquakes.

2.8 Reviews and Approvals

A summary of the potential reviews and approvals for siting, constructing, and operating the proposed Project is provided in **Table 2-11** and described below.

**TABLE 2-11
DISCRETIONARY PERMITS AND APPROVALS POTENTIALLY REQUIRED**

Agency	Permits and Authorizations Potentially Required
State Agencies	
California Department of Water Resources, Division of Safety of Dams (DSOD)	<ul style="list-style-type: none"> Construction within the Division of Safety of Dams boundary would require additional review and approval for improvements in and around the three dams.
State Water Resources Control Board, and LA Regional Water Quality Control Board	<ul style="list-style-type: none"> Coverage Under National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity (General Permit) Water Quality Order 2009-00089-DWQ Waste Discharger Requirements for discharge into Water of the State pursuant to Porter Cologne Act
California Department of Fish and Wildlife	<ul style="list-style-type: none"> Lake or Streambed Alteration Agreement, Fish and Game Code 1602
Regional/ Local Agencies	
City of Los Angeles, City Council	<ul style="list-style-type: none"> Certification of the EIR and related findings Project approval
City of Los Angeles, Board of Public Works	<ul style="list-style-type: none"> Protected tree removal permits Street tree removal permits
City of Los Angeles, Board of Recreation and Parks Commissioners	<ul style="list-style-type: none"> Approvals related to RAP property, Project MOU with site operator Recreation and Parks tree removal permits
City of Los Angeles Department of Building and Safety	<ul style="list-style-type: none"> Building Permits Haul route permit
City of Los Angeles, Department of Transportation	<ul style="list-style-type: none"> Traffic Control Plan and Traffic Signal Plan for temporary traffic or transportation-related issues
City of Los Angeles Planning Department	<ul style="list-style-type: none"> Site Plan Review, Planning Entitlements Road encroachment/traffic control permits
City of Los Angeles Department of Water and Power	<ul style="list-style-type: none"> Property access
City of Los Angeles, Bureau of Engineering	<ul style="list-style-type: none"> Public Right of Way Encroachment Permit

2.9 References

California Building Code, Title 8, Section 3209.

City of Los Angeles, 2004. Silver Lake-Echo Park-Elysian Valley Community Plan. Available online at: https://planning.lacity.org/odocument/e87507ac-8c40-49a0-aa1c-21df963f2298/Silver_Lake-Echo_Park-Elysian_Valley_Community_Plan.pdf, accessed January 2022.

City of Los Angeles 2021. Map Gallery Citywide. Available online at: <https://ladcp.maps.arcgis.com/apps/View/index.html?appid=bb34a3ae0beb4574aa6051c928899e01>, accessed September 2021.

City of Los Angeles Municipal Code 2021. Chapter XI Noise Regulation, Article 5 Amplified Sound, Section 115.02. Current through December 31, 2021.

City of Los Angeles Bureau of Engineering (BOE). 2021. Silver Lake Reservoir Complex Master Plan. Available online at: <https://eng.lacity.org/silver-lake-reservoir-complex-master-plan/master-plan>.

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Hargreaves Jones Landscape Architects et al., 2020. *Silver Lake Reservoir Complex Master Plan*. December 30, 2020.

Mia Lehrer + Associates et. Al, 2000. *Silverlake Master Plan*. November 1, 2000.

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United States Environmental Protection Agency (USEPA), 2006. Ground Water Rule. Available: <https://www.epa.gov/dwreginfo/ground-water-rule#rule-summary>.

CHAPTER 3

Environmental Setting, Impact Analysis, and Mitigation Measures

3.0 Introduction to the Analysis

In compliance with the *California Environmental Quality Act (CEQA) Guidelines* Section 15125 and 15126, Chapter 3 of this Draft Environmental Impact Report (EIR) provides an analysis of the potential significant environmental effects of the Silver Lake Reservoir Complex Master Plan Project (proposed Project).

The following environmental topics are assessed in detail in this chapter in accordance with *CEQA Guidelines* Appendix G and supplemented by the 2006 L.A. CEQA Thresholds Guidelines as appropriate:

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology, Soils, and Mineral Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise and Vibration
- Population and Housing
- Public Services
- Recreation and Parks
- Transportation
- Tribal Cultural Resources
- Utilities and Service Systems
- Wildfire

Format of the Environmental Analysis

This Draft EIR provides analysis of impacts for all environmental topics covered under Appendix G of the *CEQA Guidelines* and that have the potential to result in significant effects due to proposed Project implementation. “Significant effect” is defined by *CEQA Guidelines* Section 15382 as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.”

Sections 3.1 through 3.19 discuss the environmental impacts that may result with approval and implementation of the proposed Project. The format of the environmental analysis for each environmental topic included in Sections 3.1 through 3.19 includes an environmental setting, regulatory setting, and impact analysis and mitigation measures (if required).

Environmental Setting

The assessment of each environmental topic begins with the relevant baseline setting information that is needed to provide context for the impact analysis that follows. Extraneous setting information that does not shed light on the impact analysis is not included in this Draft EIR (*CEQA Guidelines* Section 15125[a]).

In accordance with *CEQA Guidelines* Section 15125(a), the environmental setting contains a description of the regional and local physical environmental conditions in the Project vicinity at the time of the publication of the Notice of Preparation (NOP). This environmental setting constitutes the baseline physical condition against which the implementation of the proposed Project is assessed in order to determine whether a significant environmental impact would occur (*CEQA Guidelines* Section 15126.2[a]).

This Draft EIR uses January 2022 as the baseline year against which proposed Project impacts are compared. This baseline was selected to reflect the physical environmental conditions at the time the Notice of Preparation (NOP) was published.

Regulatory Framework

Where the Project area and its surroundings fall within the jurisdiction of federal, State, and local regulatory agencies, the proposed Project would be subject to the laws, rules, regulations, and policies of those agencies. These regulations are intended to guide development, reduce adverse effects on sensitive resources, and/or offer general guidance on the protection of such resources. The regulatory setting summarizes the applicable laws, rules, regulations, and policies for the proposed Project. These rules may also set the standards, in the form of significance criteria or thresholds of significance as discussed below, by which the potentially significant impacts of the proposed Project are evaluated.

Significance Threshold and Criteria

This section presents the significance criteria against which potential impacts are evaluated. As defined by *CEQA Guidelines* Section 15064.7(a), thresholds of significance are an identifiable quantitative, qualitative, or performance standard for the assessment of a particular environmental impact. Significance criteria are included for each environmental topic.

Determining the severity of Project impacts is fundamental to achieving the objectives of CEQA. The level of significance for each impact examined in this Draft EIR was determined by considering the predicted magnitude of the impact to baseline environmental conditions against the applicable threshold. Thresholds were developed using criteria from the *CEQA Guidelines* and Appendix G Checklist and supplemented by the 2006 L.A. City Thresholds Guide. A Thresholds

Memorandum has been prepared for the proposed Project to substantiate thresholds used in the Draft EIR (ESA, 2022).

Impact and Mitigation Measures

Impact Analysis

This Section provides an analysis of the potential environmental impacts that could result from implementation of the proposed Project. This Draft EIR addresses the direct and indirect impacts associated with implementation of the proposed Project, including short-term and long-term impacts. The impact analysis may include a summary or description of methodologies used.

The level of significance for each environmental impact examined in this Draft EIR is determined by considering the predicted magnitude of the impact in relation to the baseline environmental setting and assuming implementation of applicable regulatory requirements, measured against the significance criterion. Based on the significance criterion, the significance of each potential environmental impact is determined according to the following categories:

- **Significant and Unavoidable:** A significant and unavoidable impact is a substantial adverse effect on the environment that cannot be reduced to below a significance threshold given reasonably available and feasible mitigation measures. A project with significant and unavoidable impacts could still proceed, but the City would be required to prepare a Statement of Overriding Considerations, pursuant to *CEQA Guidelines* Section 15093, explaining why the City would proceed with the Project in spite of the potential for a significant environmental impact. In addition, *CEQA Guidelines* Section 15126.6 requires an analysis of project alternatives, including the no-project alternative as well as other feasible alternatives, that would avoid or substantially lessen any of the significant effects of a project.
- **Less-than-Significant Impact with Mitigation:** A potentially significant impact occurs if the proposed Project could result in a potentially substantial adverse change in the physical conditions of the environmental topic being evaluated. If such a determination is made, reasonably available and feasible mitigation measures must be considered if they would avoid or substantially reduce the significant impact. An impact that can be reduced to below the significance threshold with such mitigation measures is considered less than significant with mitigation. Such an impact requires findings to be made under Section 15091 of the *CEQA Guidelines*.
- **Less-than-Significant Impact:** A less-than-significant impact is an impact that may be adverse, but does not exceed the significance threshold and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **No Impact:** A no impact determination would occur if the Project would not result in a substantive change to the environmental topic that is being evaluated.

Mitigation Measures and Significance Determination

Mitigation measures are recommended for any identified potentially significant impacts as a result of the proposed Project. The significance determination provides the level of significance after the implementation of recommended mitigation measures, if applicable, based on the categories described above.

Cumulative Impacts

The CEQA Guidelines require that an EIR discuss cumulative impacts of a project, taken together with other past, present, and probable future projects producing related impacts. The goal of this analysis is twofold: first, to determine whether the impacts of all such projects would be cumulatively significant; and, second, to determine whether proposed project would itself cause a “cumulatively considerable” (and thus significant) incremental contribution to any such cumulatively significant impacts. The definition of cumulatively considerable is provided in Section 15065(a)(3) of the CEQA Guidelines: “‘Cumulatively considerable’ means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”

CEQA Requirements

CEQA Guidelines Section 15130(b) provides the following parameters relative to cumulative impact analysis: the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified related projects contribute, rather than the attributes of other projects that do not contribute to the cumulative impact.

CEQA Guidelines Section 15130 allows for the use of two alternative methods to determine the scope of projects to analyze cumulative impacts.

List Method: 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.

Projection Method: A summary of projects contained in an adopted general plan or related planning document, or in a prior environmental document, that have been adopted or certified, which describe or evaluate regional or area-wide conditions contributing to the cumulative impact.

Related Projects

The geographic area that could be affected by implementation of proposed Project in combination with other projects varies depending on the type of environmental resource being considered. For instance, cumulative aesthetics or noise impacts are more localized; whereas, cumulative air quality and greenhouse gas emissions impacts occur on a broader regional or global scale.

Table 3-1 describes the geographic scope of cumulative impact analysis for each environmental resource category. Also described is the method of evaluation for each category.

**TABLE 3-1
GEOGRAPHIC SCOPE AND METHOD OF EVALUATION FOR CUMULATIVE IMPACTS**

Section No.	Environmental Resource	Geographic Area	Method of Evaluation
3.1	Aesthetics	Immediate vicinity	List
3.2	Agricultural and Forest Resources	Immediate vicinity	List
3.3	Air Quality	Immediate vicinity and South Coast Air Basin	List and Projections
3.4	Biological Resources	Immediate vicinity	List
3.5	Cultural Resources	Immediate vicinity	List
3.6	Energy	Regional	List and Projections
3.7	Geology, Soils, and Mineral Resources	Immediate vicinity	List
3.8	Greenhouse Gas Emissions	South Coast Air Basin	List and Projections
3.9	Hazards and Hazardous Materials	Immediate vicinity	List
3.10	Hydrology and Water Quality	Regional	List and Projections
3.11	Land Use and Planning	City of Los Angeles	List and Projections
3.12	Noise	Immediate vicinity	List
3.13	Population and Housing	Regional	List and Projections
3.14	Public Services	City of Los Angeles	List and Projections
3.15	Recreation and Parks	Regional	List
3.16	Transportation	Regional	List and Projections
3.17	Tribal Cultural Resources	Immediate vicinity	List
3.18	Utilities and Service Systems	Regional	List and Projections
3.19	Wildfire	Immediate vicinity	List

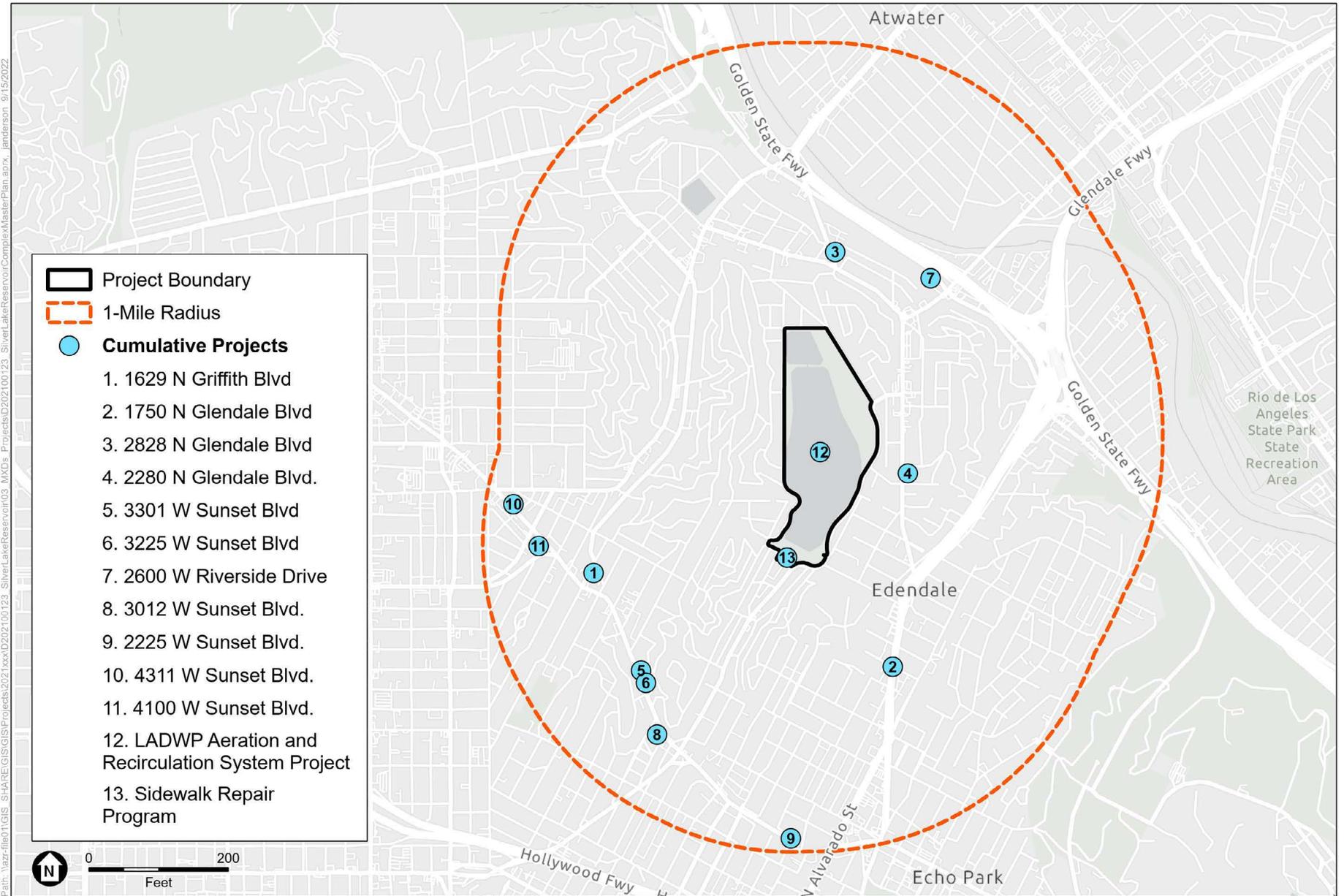
Table 3-2 and **Figure 3-1** include all of the approved, under construction, or proposed development projects within one-mile of the proposed Project. The list of development projects is derived from lists provided by the City of Los Angeles Department of Transportation, Department of City Planning, and Department of Public Works. For those environmental resources that were evaluated based on the projections approach, the projections take into consideration future projects that are not included in the below list of related projects.

**TABLE 3-2
RELATED PROJECTS**

No.	Location	Project Description - Land Use	Project Type	Project Status
1	1629 N Griffith Blvd	The project is a planned conversion of a historic (1932) church into a 26-room hotel with associated pool, restaurant, and lounge, located approximately 3,200 feet from the Project Site. This project is located in the City of Los Angeles and would consist of 26 hotel rooms; 3,784 sf of restaurant use; and 2,497 sf of lounge space.	Commercial	In construction

No.	Location	Project Description - Land Use	Project Type	Project Status
2	1750 N Glendale Blvd	This project is located in the City of Los Angeles and would consist of a 5-story apartment building with 70 residential units totaling 61,000 square feet, located approximately 2,200 feet from the Project Site. The project would include 3 bike racks and 6 parking spots.	Residential	In construction
3	2828 N Glendale Blvd	This project is the planned conversion of a three-story church and an adjacent three-bedroom house into a childcare center for up to 175 children. The project is located approximately 1,400 feet from Project Site.	Child Care Facility	Complete
4	2280 N Glendale Blvd	Construction of 6 condominium units across 3 lots	Residential	On hold
5	3301 W Sunset Blvd	This project is located 3,100 feet from the project site in the City of Los Angeles and would consist of 104 residential units and 9,048 sf of commercial space.	Residential; Commercial	Approved in 2019
6	3225 W Sunset Blvd	This project is located in the City of Los Angeles and would consist of 86 residential units; 2,500 sf of retail; 2,900 sf of restaurant use; and 4,600 sf of office space; and 8,353 sf of ground floor commercial space.	Residential; Commercial	Approved in 2022
7	2600 W Riverside Drive	This project is located approximately 4,400 feet from the Project Site in the City of Los Angeles and would consist of 120 residential units.	Residential	In construction
8	3012 W Sunset Blvd	This project includes the demolition of an existing surface parking lot and construction of a 5-story 74-unit residential apartment building.	Residential	Approved in 2021
9	2225 W Sunset Blvd	This project includes demolition of the existing residential and commercial buildings and construction of a new multi-family residential building with 176 units (18 units reserved for Extremely Low Income).	Residential	Approved in 2021, in permitting process with Building and Safety
10	4311 W Sunset Blvd	The mixed-use project includes 108 residential units (10 Very Low-Income Units), 4,500 sf of fitness center uses, and 999 sf of restaurant uses in a four-story mixed-use building over two levels of subterranean parking.	Residential; Commercial	Approved in 2022
11	4100 W Sunset Blvd	This mixed-use project includes 91 residential units (8 Very Low-Income units) and 10,000 sf of commercial uses in a five-story building over four levels of subterranean parking.	Residential; Commercial	Approved in 2022
12	LADWP Aeration and Recirculation System Project	Silver Lake and Ivanhoe Reservoirs require an aeration and recirculation system to ensure that reasonable water quality parameters are met for visual aesthetics and controlling odors. The proposed project would include the installation of a bubble plume aeration system and a recirculation pipe system to ensure oxygenation and destratification of the reservoirs.	Water infrastructure	In construction
13	Sidewalk Repair Program	The project includes sidewalk repairs south of the Silver Lake Recreation Center, adjacent to West Silverlake Drive, Van Pelt Place, Silverlake Blvd, and at the intersection of Duane Street and Silverlake Boulevard.	Infrastructure repair	In construction throughout the City

SOURCE: City of Los Angeles Department of Transportation, 2021, City of Los Angeles Department of City Planning, 2022



SOURCE: ESRI, 2022; County of Los Angeles, 2022; ESA, 2022.

Silver Lake Reservoir Complex Master Plan Project

Figure 3-1
Cumulative Projects

References

Environmental Science Associates. 2022. Thresholds Memorandum.

3.1 Aesthetics

This section addresses the potential impacts to aesthetic resources associated with the construction and implementation of the proposed Project. This section includes: a description of the existing aesthetic and visual resources in the proposed Project area; a summary of applicable regulations related to aesthetic resources; and an evaluation of the potential impacts of the proposed Project related to aesthetic resources in and around the proposed Project area. Impacts to visual resources, related to light and glare, are less than significant with implementation of Mitigation Measures **AES-1: Shielded Fixtures** and **AES-2: Non-Glare Materials**.

3.1.1 Environmental Setting

Regional Setting

The proposed Project would be located the Silver Lake neighborhood of the City of Los Angeles (City) within the Silver Lake Reservoir Complex (SLRC). Visual resources consist of natural landscapes and scenic views, including landforms, vegetation, and water features, as well as unique or historic elements of the built environment. Regional visual resources within the proposed Project vicinity include long range views of the San Gabriel Mountains, Verdugo Mountains, and local hillsides surrounding the reservoirs. **Figure 3.1-1** provides some of these views with the reservoirs in the foreground and mountains in the distance.

Scenic Views and Vistas

Scenic views or vistas include panoramic public views of natural features, including views of the ocean, striking or unusual natural terrain, or unique urban or historic features (City of Los Angeles 2001). Scenic views and vistas within the proposed Project vicinity include views of the San Gabriel Mountains, Griffith Park, and local hillsides of Glendale and Eagle Rock. In addition, views across the SLRC with the reservoirs as foreground features of the long-range surrounding hillsides and distant mountains may be considered scenic views from public rights-of-way within and around the SLRC. These views are accessible to the public generally from park lands, privately and publicly owned sites, and public rights-of-way. Much of the proposed Project area is densely surrounded with residential hillsides, but there are some long-range scenic views of distant mountains and hillsides from the public areas within the SLRC. Recreational users and motorists traveling north along West Silver Lake Drive and Silver Lake Boulevard have partial views of the ridgelines along Griffith Park with the reservoirs in the foreground and San Gabriel Mountains in the background. Additionally, various viewpoints throughout the SLRC, particularly near the South Valley area looking north, provide views of the local hillsides of Glendale and Eagle Rock and San Gabriel Mountains in the background. **Figure 3.1-2** provides some short-range views with the reservoirs from local streets and walkways.



Looking north at southeast corner of Silver Lake Reservoir



Looking north from Silver Lake Dam

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SOURCE: ESA, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 3.1-1
Views of SLRC





Looking south on Silver Lake Drive



Looking northeast on Silver Lake Dam Pedestrian Path

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SOURCE: ESA, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 3.1-2
Views of SLRC



Scenic Resources within Adopted or Potentially Eligible Scenic Highways

Within Los Angeles County, there are two adopted state scenic highways: Angeles Crest Highway Route 2 (approximately 9.5 miles northeast of the proposed Project area); and the Topanga Canyon State Scenic Highway between the communities of Topanga and Pacific Palisades (approximately 18 miles west of the proposed Project area). In addition, the only National Scenic Byway located within Southern California is the Arroyo Seco Historic Parkway – Route 110 in Los Angeles County, this portion of the highway would be located approximately 2.2 miles southeast of the proposed Project area (Caltrans 2021). These scenic highways do not have the SLRC within their viewsheds.

The California Scenic Highway Mapping System identifies eight highway segments in Southern California that are potentially eligible for future designation as scenic highways (Caltrans 2021). The closest potentially eligible segment would be along Interstate (I) 210 from State Route (SR) 134 to SR-5 near Tunnel Station, which would be located approximately 7 miles northeast of the proposed Project area. These potentially eligible scenic highways do not have the SLRC within their viewsheds.

In the City, many iconic streets are designated as City scenic highways, including streets and corridors located within historic neighborhoods of the city, such as Downtown Los Angeles, Hollywood, and Griffith Park. As provided in the Mobility Plan 2035 and its predecessor plans, these City-designated scenic highways include those in fully developed areas, which are designated for purposes such as private recreational driving and/or enhancing public transit facilities. Within the immediate proposed Project area, Silver Lake Boulevard from Duane Street to Armstrong Avenue, which runs along the eastern side of the SLRC is identified as a scenic highway by the Silver Lake-Echo Park-Elysian Valley Community Plan and Mobility Plan 2035 (City of Los Angeles, 2016).

Existing Visual Character and Quality

The SLRC, hillside terrain and unique residential homes make up the existing visual character of the proposed Project area. The SLRC was built as part of a city-wide system of water storage and delivery and has become a focal point of the Silver Lake Community, serving as both a source of its identity and a valuable recreational asset (City of Los Angeles 2004). Over the years, residential neighborhoods developed around the SLRC with views oriented towards the reservoirs and surrounding hillsides (City of Los Angeles 2004). Residential neighborhoods surrounding the SLRC are known for their collection of Modernist homes and structures designed by renowned architects. Inspired by the landscape and its incorporation in design, the Modernist architects designed homes that conformed to the hilly terrain surrounding the proposed Project area (City of Los Angeles 2004).

Light and Glare

There are two primary anthropogenic sources of light: light emanating from building interiors passing through windows, and light originating from exterior sources (e.g., street lighting, building illumination, security lighting, parking lot lighting, landscape lighting, and signage).

Anthropogenic sources of light can be a nuisance to adjacent residential areas, diminish the view of the clear night sky, and if uncontrolled, can cause disturbances for motorists traveling in the area. Land uses such as residences and hotels are considered light sensitive, since occupants have expectations of privacy during evening hours and may be subject to disturbances by bright light sources.

Light that falls beyond the intended area is referred to as light trespass. Types of light trespass include spill light and glare. Nighttime lighting is necessary to provide and maintain safe, secure, and attractive environments; however, these lights have the potential to produce spill light and glare, and if designed incorrectly, could be considered unattractive. Spill light can adversely affect light sensitive uses at nighttime, especially residences. Light dissipates with increased distance from the source.

Glare is caused by the reflection of sunlight or artificial light by highly polished surfaces such as window glass or reflective materials and, to a lesser degree, from broad expanses of light-colored surfaces or vehicle headlights. Perceived glare is the unwanted and potentially objectionable sensation as observed by a person as they look directly into the light source of a luminaire. Daytime glare generation in urban areas is typically associated with buildings with exterior facades largely or entirely comprised of highly reflective glass. Glare can also be produced during evening and nighttime hours by the reflection of artificial light sources, such as automobile headlights. Glare generation is typically related to either moving vehicles or sun angles, although glare resulting from reflected sunlight can occur regularly at certain times of the year. Glare-sensitive uses include residences, and transportation corridors. Potentially affected viewers in the local viewshed include motorists, residents, and recreational visitors.

The majority of light and glare in the proposed Project area would be generated by residential uses, light commercial uses, and streets. Vehicle headlights, street lighting at intersections and along the streets, glare produced from building windows, and building lighting, would contribute to the existing light setting of the proposed Project area.

3.1.2 Regulatory Framework

Federal

National Scenic Byways Program

The National Scenic Byways Program is part of the U.S. Department of Transportation, Federal Highway Administration. The program was established under the Intermodal Surface Transportation Efficiency Act of 1991 and was reauthorized in 1998 under the Transportation Equity Act for the 21st Century. Under the program, the U.S. Secretary of Transportation recognizes certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities.

State

Caltrans State Scenic Highway Program

In 1963, the California legislature created the Scenic Highway Program to protect scenic highway corridors from changes that could diminish the aesthetic value of lands adjacent to the highways. The state regulations and guidelines governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. A highway is designated under this program when a local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway. When a city or county nominates an eligible scenic highway for official designation, it defines the scenic corridor, which is land generally adjacent to and visible to a motorist on the highway.

Local

City of Los Angeles

Municipal Code

Applicable lighting regulations in the Municipal Code include Section 93.0117(b), which limits the maximum amount of illuminance from an exterior light source at the property line of the nearest residentially-zoned property.

General Plan

Generally scenic resources within the City of Los Angeles consist of coastline, ridgelines, hillsides, and other visual resources. The City of Los Angeles General Plan, Conservation Element contains policies for aesthetics and scenic resources. The *Land Form and Scenic Vistas Section*, of the Conservation Element, encourages and/or requires all property owners to develop property in a manner that will, to the greatest extent possible, retain significant existing landforms and unique scenic features, and/or make possible public views or other access to unique features or scenic vistas (City of Los Angeles 2001). Relevant objectives and policies are listed below.

Objective: protect and reinforce natural and scenic vistas as irreplaceable resources and for the aesthetic enjoyment of present and future generations.

Policy: continue to encourage and/or require property owners to develop their properties in a manner that will, to the greatest extent practical, retain significant existing landforms (e.g., ridge lines, bluffs, unique geologic features) and unique scenic features (historic, ocean, mountains, unique natural features) and/or make possible public view or other access to unique features or scenic views.

Further, the General Plan's Mobility Element contains policies for scenic highways within the city. The *Scenic Highways Guidelines* within the Mobility Element discusses the preservation and enhancement of scenic streets and their scenic resources within the City of Los Angeles (City of Los Angeles 2016) and is a component of the General Plan.

Silver Lake-Echo Park-Elysian Valley Community Plan

The Land Use Element of the Los Angeles General Plan is divided into 35 community plans. The proposed Project area is governed by the Community Plan, which sets forth goals, objectives,

policies, and implementation programs for the Community Plan Area. Broader issues, goals, objectives, and policies are provided by the Citywide General Plan Framework. The following issues, goals, objectives, and programs are relevant to scenic resources and highways within the proposed Project area.

Recreational and Park Facilities

Goal 4: Adequate recreation and park facilities which meet the needs of the residents in the plan area and create links to existing facilities to expand recreational opportunities citywide.

Objective 4-1: To conserve, maintain and better use existing recreation and park facilities.

4-1.4: Implement plans to develop a dedicated running path around the Silver Lake Reservoir and other open space and recreational uses per the Silver Lake Reservoir Master Plan dated November 1, 2000.

Program: Re-designate Silver Lake Boulevard as an Avenue II allowing for a roadway with only one travel lane in each direction to accommodate the proposed 6-foot landscape buffer and 8-foot pedestrian path while preserving the parking lane on the east side of the street and existing commuter bike lanes. Retain the scenic highway designation for the segment of Silver Lake Boulevard from Duane Street to Armstrong Avenue.

Neighborhood Character

Issues: Promotion of design in hillside neighborhoods that is sensitive to topography and substandard hillside streets, compatible with existing development and protects scenic vistas.

Open Space

Issues: Preservation of physical and scenic resources including topographic features and ridge protection.

5-1.4: Recognize the Plan area's considerable urban forest, in both the public and private realms, as a feature which greatly contributes to its character and the quality of life enjoyed by residents by encouraging streetscape, greenways and the incorporation of green space within the urban form, as feasible.

Program: Work with other City departments and private developers to promote parkways, landscaped medians, sidewalks with landscape buffers, community gateways and other elements that maintain and enhance these defining neighborhood features.

Chapter 5, Urban Design of the Community Plan identifies broad, general policies for projects and community design elements. Specifically, this Chapter establishes public open space standards to guide the design of new public plazas and open spaces and refers to the Silver Lake Reservoir Master Plan design guidelines:

1. Install and maintain a landscape buffer between the public street and a planned continuous running/walking path should consist of low shrubs and street trees to maintain views and whenever possible use drought tolerant species such as those suggested in the Silver Lake Reservoir Master Plan.

2. Establish gateways to the open space resources around the reservoir that provide seating options, interpretive information and drinking fountains.
3. While still being used for water operations, use hardware such as the gates that control access to the limited-access grounds of the reservoir to reinforce community history and identity by inviting local artists to create designs that tie in unifying themes in design elements around the reservoir.
4. Encourage regular maintenance of fences as well as trimming and pruning of overgrown shrubs and trees to preserve views.
5. To further preserve views, encourage the use of smaller native trees and shrubs and space larger trees to prevent the formation of a solid wall of foliage and use species that are more narrow and columnar in character and do not create a hedge effect.
6. Preserve, as prescribed by the Master Plan, existing trees in the eucalyptus grove, the Recreation and Parks area, the olive grove and the knoll.
7. Tree plantings in parkways should consist of low plantings that are dense, evergreen and low maintenance.
8. Implement Master Plan recommendations including the planting of canopy street trees along commercial streets with single story buildings. Generally encourage streetscape enhancements that includes street trees, paved surfaces, street furniture banner programs and light fixtures as recommended by the plan.
9. Implement recommendations for each of Silver Lake’s distinct commercial districts as envisioned by the Plan, the identified Rowena District, Silver Lake Village District and the Glendale Boulevard District and their respective gateways as identified in the Community Context, Cultural Resource and Urban Design chapter (Section VII of the Master Plan) and illustrated in the “Community Connections/Context” drawing in Section X of the Master Plan (11" x 17" Drawings and Diagrams).
10. Develop and enhance gateways to the community such as the bridge overpass at Sunset and Silver Lake Boulevards and other entry points to the community.
11. Ensure that streetscape and other design improvements comply with Silver Lake Boulevard’s Scenic Highway designation, including the prohibitions on signs and the undergrounding or screening of utilities.
12. Sustainable design practices should be employed whenever possible including the use of drought-tolerant plantings, use of recycled materials and use of lighting with low-energy requirements.

3.1.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to aesthetics are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Have a substantial adverse effect on a scenic vista. (Refer to Impact 3.1-1)
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (Refer to Impact 3.1-2)
- Conflict with applicable zoning and other regulations governing scenic quality? (Refer to Impact 3.1-3)

- Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area. (Refer to Impact 3.1-4)

In accordance with the CEQA Guidelines, the analysis focuses on public views rather than private views.¹

The L.A. CEQA Thresholds Guide holds that the determination of significance shall be made on a case-by-case basis after considering the following factors:

- Effects on a scenic vista (Refer to Impact 3.1-1).
 - The amount or relative proportion of existing features or elements that substantially contribute to the valued visual character or image of a neighborhood, community, or localized area, which would be removed, altered, or demolished;
 - The amount of natural open space to be graded or developed;
 - The degree to which proposed structures in natural open space areas would be effectively integrated into the aesthetics of the site, through appropriate design, etc.;
 - The degree of contrast between proposed features and existing features that represent the area's valued aesthetic image;
 - The degree to which a proposed zone change would result in buildings that would detract from the existing style or image of the area due to density, height, bulk, setbacks, signage, or other physical elements;
 - The degree to which the project would contribute to the area's aesthetic value; and
 - Applicable guidelines and regulations.
- Scenic resources within a state scenic highway (Refer to Impact 3.1-2).
 - The nature and quality of recognized or valued views (such as natural topography, settings, man-made or natural features of visual interest, and resources such as mountains or the ocean);
 - Whether the project affects views from a designated scenic highway, corridor, or parkway;
 - The extent of obstruction (e.g., total blockage, partial interruption, or minor diminishment); and
 - The extent to which the project affects recognized views available from a length of a public roadway, bike path, or trail, as opposed to a single, fixed vantage point.

¹ Note that the analysis addresses public views and not private views, since obstruction of private views is not generally regarded as a significant environmental impact. (See *Citizens for Responsible and Open Government v. City of Grand Terrace* [2008] 160 Cal.App.4th 1323, 1337-38; *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477, 492-93). CEQA case law has established that protection of public views is the appropriate EIR analysis. For example, in *Association for Protection etc. Values v. City of Ukiah* (1991) 2 Cal.App.4th 720 [3 Cal. Rptr.2d 488], the Court held that “we must differentiate between adverse impacts upon particular persons and adverse impacts upon the environment of persons in general.” As recognized by the court in *Topanga Beach Renters Assn. v. Department of General Services* (1976) 58 Cal.App.3d 188 [129 Cal.Rptr. 739]: “[A]ll government activity has some direct or indirect adverse effect on some persons. The issue is not whether [the Project] will adversely affect particular persons, but whether [the Project] will adversely affect the environment of persons in general.”

- New sources of light or glare and existing day and nighttime views (Refer to Impact 3.1-4).
 - The change in ambient illumination levels as a result of project sources; and
 - The extent to which project lighting would spill off the project site and effect adjacent light-sensitive areas.

Therefore, each impact analysis is evaluated under both Appendix G and the 2006 LA City CEQA Thresholds Guide.

3.1.4 Project Design Features

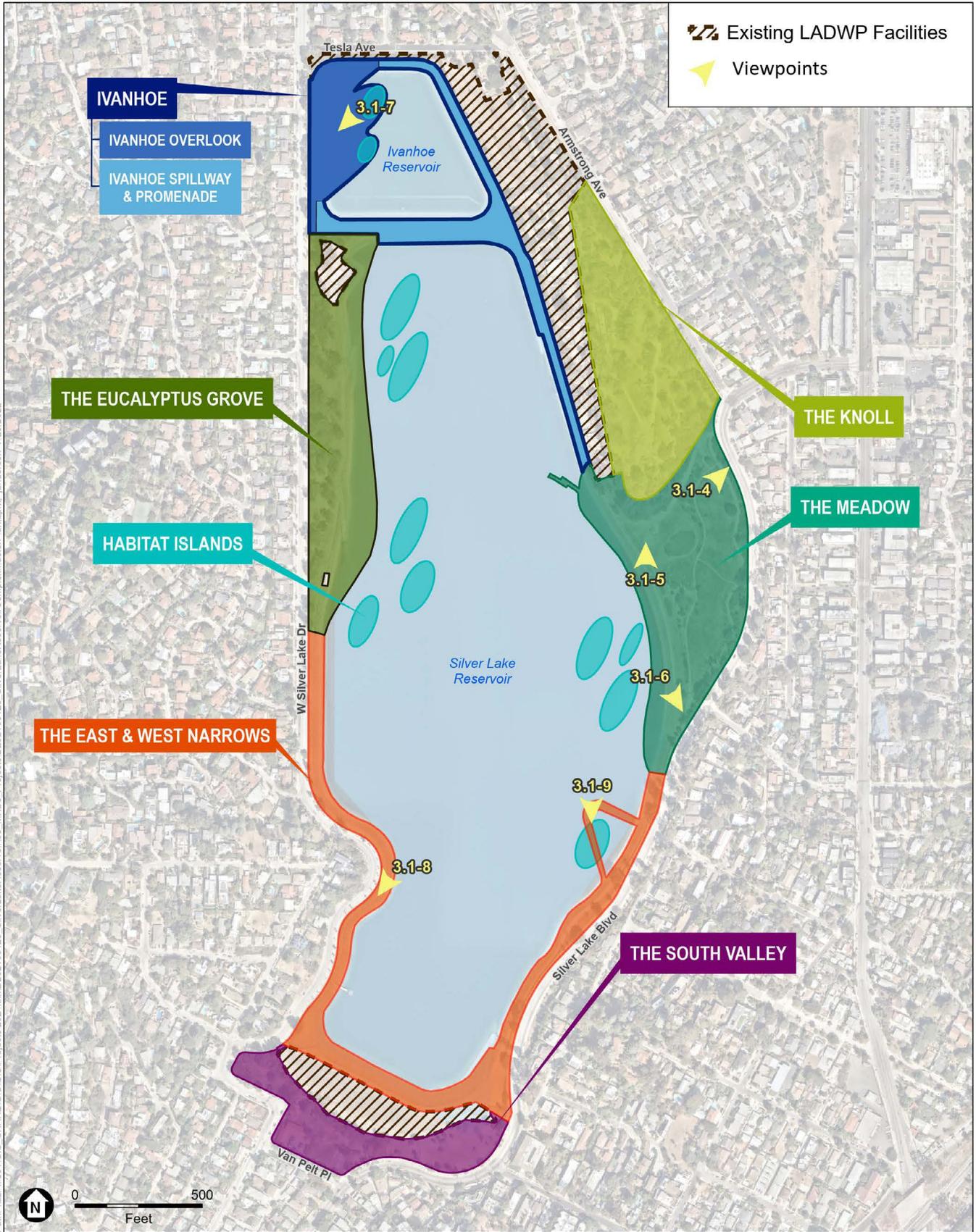
No specific project design features are proposed with regard to aesthetics.

3.1.5 Impacts and Mitigation Measures

Scenic Vistas

Impact 3.1-1: Would the proposed Project have a substantial adverse effect on a scenic vista?

Scenic views and vistas within the proposed Project vicinity include long-range views of the San Gabriel Mountains, Griffith Park, and local hillsides of Glendale and Eagle Rock. In addition, views across the SLRC with the reservoirs as foreground features of the long-range surrounding hillsides and distant mountains may be considered scenic views from public rights-of-way within and around the SLRC. The current view of the foreground is obscured by the chain-link fence that circumnavigates and encloses the SLRC, preventing public access. The open water is enclosed by the asphalt and concrete reservoir sides. Although much of the proposed Project area is surrounded with residential uses, long-range scenic views and vistas of the San Gabriel Mountains, Griffith Park, and local hillsides of neighboring communities with the reservoirs in the foreground can be seen by recreational users/pedestrians and motorists traveling along both West Silver Lake Drive and Silver Lake Boulevard. **Figures 3.1-3** shows a key viewpoint map and **Figures 3.1-4** through **3.1-9** present before and after comparisons of various views across the reservoirs, using artistic renderings of the Project site. These renderings are used to evaluate the effects of the proposed Project on long-range and short-range views and scenic vistas.



SOURCE: Nearmap, 2021; Hargreaves Jones Landscape Architects, 2020; ESA, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 3.1-3
Viewpoint Key Map

BEFORE



AFTER



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SOURCE: Hargreaves Jones Landscape Architects, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 3.1-4 Looking Southwest across the Meadow



BEFORE



AFTER



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SOURCE: Hargreaves Jones Landscape Architects, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 3.1-5 Looking South on Eastern Edge of Reservoir



BEFORE



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SOURCE: Hargreaves Jones Landscape Architects, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 3.1-6 Looking North on Eastern Edge of Reservoir



BEFORE



AFTER



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SOURCE: Hargreaves Jones Landscape Architects, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 3.1-7 Looking Northeast across Ivanhoe Reservoir



BEFORE



AFTER



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SOURCE: Hargreaves Jones Landscape Architects, 2020

Silver Lake Reservoir Complex Master Plan Project

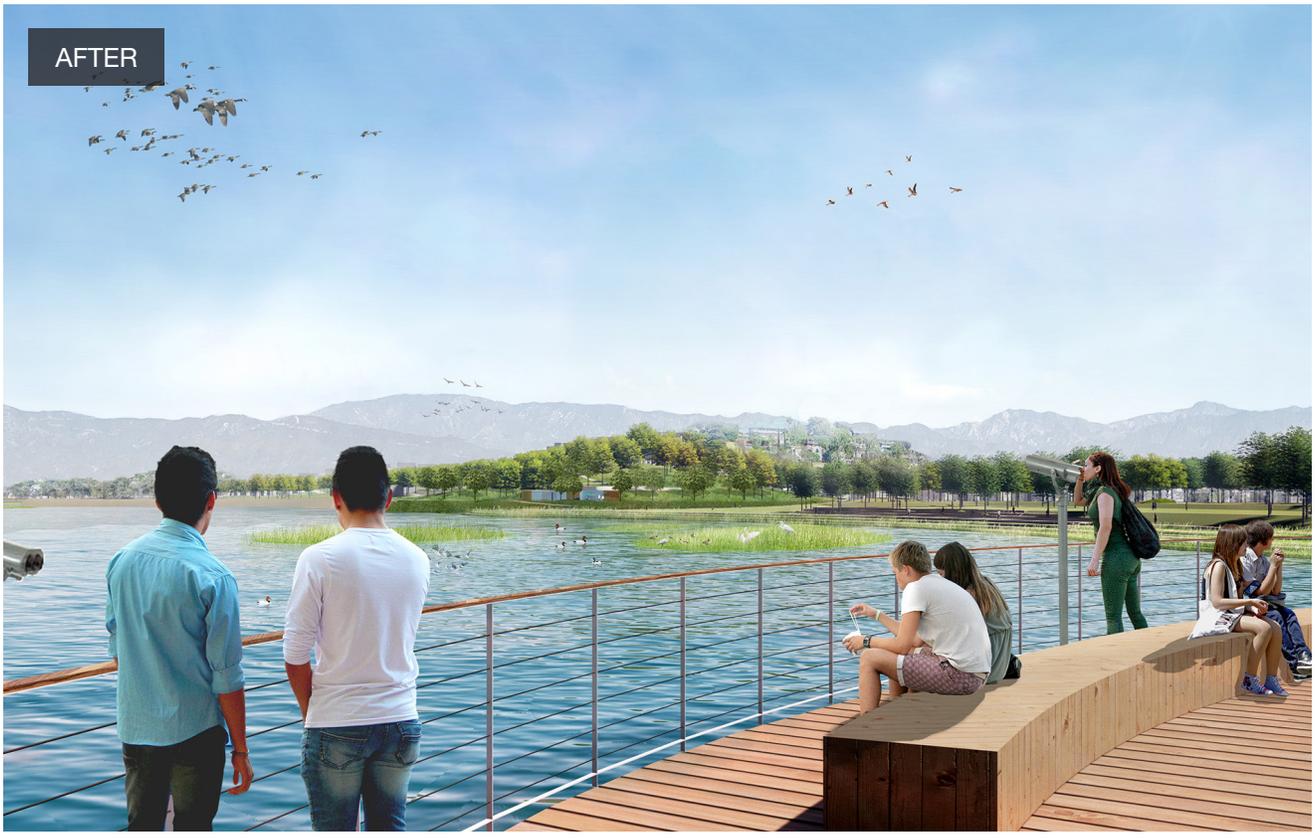
Figure 3.1-8 Looking North across Reservoir



BEFORE



AFTER



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SOURCE: Hargreaves Jones Landscape Architects, 2020

Silver Lake Reservoir Complex Master Plan Project

Figure 3.1-9 Looking Northwest across Reservoir



Construction

Construction of the proposed Project would include the use of construction equipment and staging of equipment and materials that could temporarily alter views of the SLRC and San Gabriel Mountains and local hillsides. For example, tall construction equipment including cranes that could be up to 40 feet tall could temporarily block or change scenic vistas when viewed from public vantage points within and adjacent to the proposed Project area. As a result, site disturbance and the presence of construction equipment and materials during construction of the proposed Project could temporarily introduce contrasting elements into scenic views and vistas. The effect to the SLRC would occur over five years or longer, depending on the final construction schedule. Some components would be completed while other areas would remain affected by construction, resulting in a prolonged effect while the project is under construction. During construction, some areas would exhibit exposed dirt and construction vehicles operating or parked within the viewshed. Although these construction site views would contrast with the scenic qualities of the area temporarily introducing contrasting elements into the scenic vistas, none of the equipment or activities would block views of scenic vistas entirely. Long-range views would remain visible from the walking paths and city streets. As project elements are completed, the impact would diminish. As a result, construction impacts on scenic views and vistas would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

The proposed Project would include a contemporary design of park zones with hybrid infrastructure that blends vegetated areas with public spaces. Proposed Project components would include landscaping improvements, walking paths and recreational facilities, seated terraces, education center, and floating wetlands. The new landscaping and re-vegetation would be designed to soften the views of the reservoir sides and surroundings, converting the industrial features of the SLRC to a more publicly accessible open space park appearance, while maintaining the infrastructure necessary for safe operation of the facility. As a result, the landscaping improvements would increase the scenic value of the short-range views as well as the foreground of the longer-range views. Figures 3.1-4 through 3.1-9 provide artist renderings of the short-range and long-range views before and after the proposed Project is implemented.

With respect to the amount or relative proportion of the existing features to be altered or graded, the proposed Project would modify approximately 75 percent of the total SLRC acreage, not including the open water. Walking paths and communal areas would be added to some areas, and the path circumnavigating the reservoirs would remain. The addition of public access to some areas of the SLRC that has been closed to the public would modify the views with park amenities. These improvements would soften the short-range views compared to existing conditions. In addition, the chain-link fence that currently obscures the views of the open water would be

removed. Removing the fence would increase the value of the short-range scenic views of the reservoirs, backed by hillsides and distant mountains.

With respect to the degree to which the proposed Project would integrate into the aesthetics at the site or contrast with the surrounding area, Figures 3.1-4 through 3.1-9 illustrate the intentions of the proposed designs to integrate and improve views of the open space facility. Seated terraces that blend into the existing landscape/grading would be implemented throughout the proposed Project area. The proposed shade pavilions would be located at the top of the Knoll and at the Ivanhoe Overlook. The proposed shade pavilions would be designed to provide views of the Silver Lake and Ivanhoe Reservoirs.

The proposed Project would build new structures and buildings including seated terraces, two shade pavilions, a new Education Center, and a new Multi-Purpose Facility. These proposed structures and buildings would vary in size, with the largest building being the proposed Multi-Purpose Facility which would be approximately 5,800 square feet in size (Figure 2-13) and would be constructed adjacent to the existing Recreation Center building. These facilities would be designed to blend in with the natural landscape and re-vegetation as shown in the visual simulations (Figure 2-13). These facilities would be consistent with the current zoning requirements. No changes in zoning are proposed.

The proposed Project would construct a new Multi-Purpose Facility adjacent to the existing Recreation Center and playground along the South Valley. The exterior of the Recreation Center would be preserved to the extent possible and repainted. The proposed Multi-Purpose Facility's architecture would be designed to be compatible with the existing Recreation Center and would be similar in scale to the surrounding structures.

The proposed Education Center would be located at the Knoll and would be built into the side of the existing hillside with sliding glass panels that open to allow the classrooms to extend out into the landscape (Figure 2-7). The proposed shade pavilions and new Education Center would be designed to relate in form of the proposed habitat islands and mid-century modern architecture of the Silver Lake community. Their architectural design would be low profile and rely on materials to blend into the surrounding landscape.

The floating habitat islands and landscaped reservoir perimeter would soften the views of the reservoirs compared to existing conditions. The wetlands would attract wildlife and promote a more natural appearance.

While the proposed structures and buildings may be visible from public vantage points, they would be implemented within areas already containing similar structures and buildings within an area surrounded by residential development. The proposed Project structures and buildings would not significantly exceed the scale and massing of other structures within and adjacent to the SLRC. In addition, the proposed structures and buildings would not obstruct distant views of the San Gabriel Mountains or local hillsides.

The Project would modify the existing views by creating more park space and natural vegetation as well as provide for greater public access to the reservoir shorelines. The perimeter fence would

be removed softening the views from the current industrial nature, to more of a park, open space experience for the visitor. As illustrated in the proposed project renderings, the objective of the project would be to enhance views with nature-based themes and design. As a result, impacts to scenic views and vistas would be modified toward a more natural view to improve the existing condition. This impact to scenic vistas would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Scenic Resources

Impact 3.1-2: Would the proposed Project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Construction

As described above in Section 3.1.1, *Environmental Setting*, there are no designated or eligible state scenic highways in the proposed Project vicinity. No impacts to scenic resources including trees, outcroppings, or historic buildings would occur within a state-designated scenic highway during construction. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Operation

As described above in Section 3.1.1, *Environmental Setting*, there are no designated or eligible state scenic highways in the proposed Project vicinity. The SLRC is not visible from a State-designated Scenic highway and therefore the proposed Project would have no impact to State-designated scenic highways.

Although the City identifies Silver Lake Boulevard from Duane Street to Armstrong Avenue as a Local Scenic highway in the Silver Lake-Echo Park-Elysian Valley Community Plan, it is not a state-designated scenic highway. The proposed Project would modify the views from Silver Lake Boulevard, removing non-native trees, increasing native vegetation, and reducing the industrial nature of the existing view. The proposed Project would not substantially damage scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway corridor. No impacts would occur within a state designated scenic highway.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Consistency with Regulations Governing Scenic Quality and Visual Character/Quality

Impact 3.1-3: Would the proposed Project conflict with applicable zoning and other regulations governing scenic quality?

Construction

Construction activities associated with the proposed Project would require the use of construction equipment and storage of materials onsite, thus introducing contrasting features into the visual landscape that would affect the visual character or quality of the proposed Project area. Contrasting features would include excavated areas, stockpiled soils and other materials generated and stored onsite during construction. These features would occur over the duration of the five-year construction period. These visual effects would not conflict with zoning or regulations. Impacts would be considered less than significant.

During construction some mature trees would be removed from the proposed Project site. **Appendix D, Figures 7a** through **7c** identify areas where existing mature trees would be removed. (Impacts related to tree removal are discussed further in Section 3.4, *Biological Resources*.) Some of these trees are mature trees that provide shade and ornamentation circumnavigating the reservoirs. Although these trees would be removed during construction, the proposed Project is intended to improve the future aesthetic of the SLRC with re-designed plantings resulting in a more natural landscaping. As described in the Section 3.4, tree removals would be subject to City of Los Angeles Tree and Shrub Ordinance that requires replanting protected trees. See also consistency with applicable zoning and other regulations governing scenic quality below in Operational Impacts. As a result, construction would not conflict with zoning or other regulations and impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

The Silver Lake community primarily consists of residential uses, with some smaller commercial areas and some existing public access in and around the SLRC that allows park uses. The SLRC is a focal point in the City of Los Angeles, known for its views of the open water and recreational amenities. The area supports park activities, a dog park, walking paths, and a recreational center. It is an important amenity to the local neighborhood and to the entire City of Los Angeles. The proposed Project provides for a re-design of the park amenities to improve public access and enjoyment as outlined in the Silver Lake Master Plan included in Appendix B. As noted in the Silver Lake Reservoir Complex Master Plan of 2020 (page 31), the intent of the proposed Project is to update the goals of the Silver Lake Master Plan of 2000. The proposed Project builds on the

vision of the 2000 Master Plan regarding community-based designs, increased access to open space, and commitment to public engagement. The proposed Project would not alter the land use designation or zoning in a way that would promote uses that could be incompatible with the existing character. The entirety of the proposed Project area is zoned as Open Space (OS) and consists of the existing LADWP facilities, reservoirs, and some recreational areas. The proposed Project includes the addition and expansion of existing natural areas, recreational facilities, and structures/buildings, all of which are existing uses within the proposed Project area. The proposed Project park zones would be implemented within the already-developed SLRC in an urban area and would be consistent with existing and allowable uses for the area. The proposed Project would modify the visual and recreational quality of the proposed Project area, remaining consistent with goals and objectives of the Silver Lake-Echo Park-Elysian Valley Community Plan. The proposed Project park zones would feature more natural/vegetated areas such as the proposed floating wetlands.

The 2000 Plan was part of a mitigation document for a proposed Water Quality Treatment Facility at that time. Now, the reservoirs are no longer part of the City’s drinking water supply making the vast majority of the SLRC, including both water bodies, available for public use. A number of projects identified in the 2000 Master Plan have been implemented, including the installation of numerous paths, native gardens and meadows, and other improvements. **Table 3.1-1** includes the type of applicable zoning and other regulations governing scenic quality within the Project area.

As set forth above, the proposed Project is consistent with applicable zoning and other regulations governing scenic quality. As a result, the proposed Project would result in a less than significant impact.

Furthermore, even though the proposed Project is entirely within an urbanized area (the City of Los Angeles) the proposed Project natural landscapes and habitat improvements within the Open Space designated park would add to the overall visual quality and character of the proposed Project area. See analysis above in Impact 3.1-1 relating to effect on a scenic vista. Therefore, the proposed Project would also result in a less than significant impact to the visual character and quality of the area.

**TABLE 3.1-1
 CONSISTENCY WITH APPLICABLE ZONING AND OTHER REGULATIONS GOVERNING SCENIC QUALITY**

Goal or Objective	Consistency
Zoning	
Entirety of proposed Project – Open Space (OS)	Consistent. The proposed Project includes the addition and expansion of existing natural areas, recreational facilities, and structures/buildings, all of which are existing uses within the proposed Project area. The proposed Project park zones would be implemented within the already-developed SLRC in an urban area and would be consistent with existing and allowable uses for the area.

Goal or Objective	Consistency
Silver Lake-Echo Park-Elysian Valley Community Plan	
<p>Objective 4-1.4 Implement plans to develop a dedicated running path around the Silver Lake Reservoir and other open space and recreational uses per the Silver Lake Reservoir Master Plan dated November 1, 2000.</p> <p>Program: Re-designate Silver Lake Boulevard as an Avenue II allowing for a roadway with only one travel lane in each direction to accommodate the proposed 6-foot landscape buffer and 8-foot pedestrian path while preserving the parking lane on the east side of the street and existing commuter bike lanes. Retain the scenic highway designation for the segment of Silver Lake Boulevard from Duane Street to Armstrong Avenue</p> <p>Program: Retain the designation of West Silver Lake Drive as a collector street, reduce the width of the roadway to a standard collector and retain all remaining right-of-way for the proposed 8-foot running path and 6-foot landscape buffer that will separate recreationists from the street. Implementation of the Silver Lake Reservoir Master Plan will only affect the segment of West Silver Lake Drive from Tesla Avenue to Van Pelt Place.</p> <p>Program: Chapter V Urban Design of this Plan incorporates the design and streetscape elements for the Silver Lake Reservoir and adjacent rights-of-way, as outlined in the Silver Lake Reservoir Master Plan. (this is further expanded on pages V-16 and V-17 of the Community Plan.)</p>	<p>Generally Consistent. The dedicated path around the Silver Lake Reservoir and other recreational uses specified in the 2000 Master Plan have already been implemented. In addition, the project includes an option to add parking on the west side of Silver Lake Boulevard which is currently designated as an Avenue II and is designed with one travel lane in each direction. The proposed Project would consist of seven park zones connected by a tree-lined promenade. The promenade would be a 2.5-mile continuous walking/running loop connecting all the park zones to one another and the reservoirs. The promenade is envisioned as both place and connector, consistent with Objective 4-1.4.</p>
<p>Objective 16-1 Ensure that the community's historically significant resources are protected, preserved and/or enhanced.</p> <p>Program: Endorse the implementation of the Silver Lake Reservoir Master Plan, recognizing the Silver Lake Reservoir as not only a functional resource but also as a cultural, aesthetic and recreational asset in the community.</p>	<p>Consistent. The complex's footprint and shape will remain intact; its significant landscape features (Knoll and the Eucalyptus Grove) will be preserved; and no significant view sheds will be detrimentally affected as a result of the proposed Project's new construction or alterations. While there will be some changes to the grading and orientation of these open spaces, the overall footprint, feeling, and setting will remain intact. These spaces will remain green open spaces for passive recreation. The existing mature trees and plants will remain, and the overall footprint of these open spaces will not change. Further, the open water views of both Reservoirs will remain intact.</p>
<p>Community Design and Landscaping Guidelines Street Trees</p> <ol style="list-style-type: none"> 1. Select species which: <ol style="list-style-type: none"> a. Enhance the pedestrian character, and convey a distinctive high quality visual image for the streets. b. Are drought-and smog tolerant, fire resistant, and complement existing street trees. c. Do not damage existing infrastructure. 2. Establish a hierarchy for street trees which shall include: <ol style="list-style-type: none"> a. Major Accent Trees These trees should be located at entry locations, intersections, and activity centers. b. Street Trees Select specific species to be the common tree for the street frontages. A single flowering species may be selected for all residential neighborhoods and commercial districts or different species selected to distinguish one neighborhood, district, 	<p>Consistent. The proposed Project would consist of seven park zones connected by a tree-lined promenade. The promenade would be a 2.5-mile continuous walking/running loop connecting all the park zones to one another and the reservoirs. The proposed West Narrows would include seating terraces embedded into the embankment and a path lined with trees along the promenade to provide shade and shelter. The planting design for the proposed Project would be aligned with the City's New Green Deal goals of increasing tree canopy and protecting native biodiversity.</p>

Goal or Objective	Consistency
<p>or street from another. In residential neighborhoods the trees should be full, to provide shade and color. In commercial districts, the trees should provide shade, but be more transparent to promote views of store fronts and signs.</p> <p>c. Ornamental or Special Plantings</p> <p>At special areas along the street frontages, such as linkages to pedestrian walkways and plazas and outdoor dining areas, ornamental trees providing shade and color should be utilized to emphasize and focus attention to those places.</p> <p>Provide for the installation of street trees along public sidewalks defining the types and spacing in accordance with a Street Tree Master Plan.</p>	
<p>Silver Lake Reservoir Master Plan Design Guidelines</p> <ol style="list-style-type: none"> 1. Install and maintain a landscape buffer between the public street and a planned continuous running/walking path should consist of low shrubs and street trees to maintain views and whenever possible use drought tolerant species such as those suggested in the Silver Lake Reservoir Master Plan. 2. Establish gateways to the open space resources around the reservoir that provide seating options, interpretive information and drinking fountains. 3. While still being used for water operations, use hardware such as the gates that control access to the limited-access grounds of the reservoir to reinforce community history and identity by inviting local artists to create designs that tie in unifying themes in design elements around the reservoir. 4. Encourage regular maintenance of fences as well as trimming and pruning of overgrown shrubs and trees to preserve views. 5. To further preserve views, encourage the use of smaller native trees and shrubs and space larger trees to prevent the formation of a solid wall of foliage and use species that are more narrow and columnar in character and do not create a hedge effect. 6. Preserve, as prescribed by the Master Plan, existing trees in the eucalyptus grove, the Recreation and Parks area, the olive grove and the knoll. 7. Tree plantings in parkways should consist of low plantings that are dense, evergreen and low maintenance. 8. Implement Master Plan recommendations including the planting of canopy street trees along commercial streets with single story buildings. Generally encourage streetscape enhancements that includes street trees, paved surfaces, street furniture banner programs and light fixtures as recommended by the plan. 9. Implement recommendations for each of Silver Lake's distinct commercial districts as envisioned by the Plan, the identified Rowena District, Silver Lake Village District and the Glendale Boulevard District and their respective gateways as identified. 10. Develop and enhance gateways to the community such as the bridge overpass at Sunset and Silver Lake Boulevards and other entry points to the community. 	<p>Consistent. The proposed Project would include offsite improvements along areas surrounding the SLRC including the addition of 90-degree parking along the north side of West Silver Lake Drive, east of Redesdale Avenue along the grassy area adjacent to the Silver Lake Recreation Center. The proposed addition of parking and/or bike lanes along Silver Lake Boulevard would require at a minimum restriping along the area between Armstrong Avenue and Duane Street. Design improvements including the addition of a bike lane and street trees are proposed. At the north end of the Eucalyptus Grove, a 7-foot bioswale planting strip and trees would buffer pedestrians from the street. Although the proposed Project would modify the views from Silver Lake Boulevard, views would generally be improved by removing non-native trees, increasing native vegetation, and reducing the industrial nature of the existing view. The proposed Project would implement project design feature PDF-BIO-6 to ensure landscaping near protected trees will be drought-tolerant only unless trees are already accustomed to current landscape irrigation (to be confirmed by arborist). Wall opening along the sanitary wall that surrounds the SLRC would be required in order to allow for access points into the proposed Project site. The placement of three strategic wall openings along the western side of the reservoir would be located in areas where neighborhood streets terminate at the reservoir. On the eastern side of the reservoir openings would be created every 100 feet along a 3,000-foot area that between Armstrong Avenue and Duane Street, to allow more entry points into the park. The routine operations and maintenance of the proposed Project would be guided by the Operations and Maintenance Plan prepared for the project, which would include the routine cleaning and maintenance of park spaces and park facilities, clearing paths and walkways, trash removal, graffiti removal, and cleaning of park facilities such as the proposed Education Center, Multi-Purpose Facility, and restrooms as outlined in the Project-specific Operations and Maintenance Plan to be prepared by the City with guidance from RAP.</p>

Goal or Objective	Consistency
11. Ensure that streetscape and other design improvements comply with Silver Lake Boulevard's Scenic Highway designation, including the prohibitions on signs and the undergrounding or screening of utilities 12. Sustainable design practices should be employed whenever possible including the use of drought-tolerant plantings, use of recycled materials and use of lighting with low-energy requirements.	

Mitigation Measures:

None Required

Significance Determination:

No Impact

Light or Glare

Impact 3.1-4: Would the proposed Project create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?

Construction

Proposed Project construction would not include nighttime construction and would not include lighting with the potential to adversely affect daytime or nighttime views in the area. Therefore, construction activities would not introduce new sources of light into the proposed Project area. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Operation

The proposed Project would include an array of nighttime lighting to illuminate the public areas during the evenings. The proposed lighting would be added for operational and security purposes, consistent with City of Los Angeles park lighting policies. As shown on Figure 2-8, the proposed Project lighting design would include a hierarchy of lighted spaces and connective paths. High level lighting (+2 foot candles (fc)) would be included in active recreation areas in the South Valley; medium level lighting (0.5 fc) would be implemented along the promenade areas, on select primary paths and within the seating terraces near the reservoirs' edges; and low level lighting (0.25-0.50 fc) would be implemented along many of the primary and secondary paths to provide circulation to and between the surrounding neighborhood and proposed Project areas such as the proposed lawns and picnic grove. Lighting would not be included along secondary pathways within habitat areas. Light spill over would occur in close proximity to the lighted areas including sidewalks and streets. However, these areas would be lighted with less intensity than street lights on Silver Lake Boulevard and other major streets in the neighborhood. The timing of

the lighting would be similar to other street lighting in the neighborhood. Within the natural habitat areas, no lighting would be installed to minimize disruption to wildlife.

The existing condition includes nighttime lighting of streets and LADWP facilities. Furthermore, the SLRC is located in an urban area with street lighting and automobile lights throughout the nighttime hours. The new lighting would operate in compliance with Los Angeles City Recreation and Parks (RAP) illuminance level standards for outdoor recreational facilities. RAP illuminance level standards are measured in horizontal foot candles, which refer to the amount of light being received on a horizontal surface. The foot-candle standard accounts for light spill over and the proposed lighting plan shown in Figure 2-8 estimates the intended lighted area using foot-candle intensities.

The proposed Project would adhere to the City's Design Standards and Guidelines, the City's RAP illuminance standard levels, and the provisions in the City's Municipal Code, Chapter 9, Article 3, Section 93.0117. However, the proposed additional lighting and reflective surfacing of new structures could adversely affect nighttime views in the area. Implementation of **Mitigation Measure AES-1** would require any permanent exterior lighting to be shielded and directed downward to avoid light intrusion onto surrounding land uses such as residential areas and the nursery school at the north end of the SLRC, and other sensitive uses. Further, implementation of **Mitigation Measure AES-2** would ensure that all proposed structures and buildings would be designed to minimize glare or reflection. With implementation of Mitigation Measures AES-1 and AES-2, impacts associated with light and glare during operation would be considered less than significant.

Mitigation Measures:

AES-1: Shielded Fixtures. All new permanent exterior lighting shall be shielded and directed downward to avoid any light spill onto surrounding land uses including natural habitat areas, open water, residential areas, or into the night skies.

AES-2: Non-Glare Materials. All new structures and buildings shall be designed to include non-glare exterior materials and coatings to minimize glare or reflection.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

Cumulative

Impact 3.1-5: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively considerable impact to aesthetics?

Table 3-2 in Chapter 3, *Environmental Setting, Impact Analysis, and Mitigation Measures* identifies thirteen related projects that are planned or are under construction within the Project area. The cumulative study area for Aesthetics impacts includes the locations that have clear sightlines to the proposed Project. The proposed development projects listed in Table 3-2 which include mixed-use developments, a childcare facility, infrastructure projects, and commercial uses would not have a clear sightline to the proposed Project. The proposed Project is designed to

complement and improve the aesthetics of the existing Project area. All development projects would be evaluated on whether they are consistent with the City’s design guidelines, policies, and development standards. Since the proposed Project would not block or substantially alter scenic vistas or views and would be designed to enhance the visual character of the SLRC, it would not contribute considerably to any potentially adverse effect to scenic vistas, scenic views, or visual character resulting from the related projects. Furthermore, the related projects would be commercial or mixed-use (commercial with apartments) and would be located within a high ambient lighting area. The related projects would be consistent with existing ambient conditions, and, as with the Project, would be required to comply with LAMC Section 91.6205 M that requires that no sign shall be illuminated in such a manner as to produce a light intensity of greater than three-foot candles above ambient lighting, as measured at the property line of the nearest residentially zoned property. The related projects would also be spread over several blocks and would not form a high intensity, combined light source. Therefore, the Project’s contribution to cumulative impacts would not be cumulatively considerable. As such, cumulative impacts regarding aesthetics would be less than significant.

Mitigation Measures:

None Required

Level of Significance After Mitigation:

Less than Significant Impact

3.1.6 Summary of Impacts

Table 3.1-2 Summarizes the impact significance determinations and lists mitigation measures related to Aesthetic resources.

**TABLE 3.1-2
 SUMMARY OF PROPOSED PROJECT IMPACTS TO AESTHETICS**

Impact	Mitigation Measure	Significance
3.1-1: Scenic Vistas	None Required	LTS
3.1-2: Scenic Resources	None Required	NI
3.1-3: Visual Character/Quality	None Required	NI
3.1-4: Light or Glare	Mitigation Measures AES-1 and AES-2	LTSM
3.1-5: Cumulative	None Required	LTS

NOTES:

- NI = No Impact, no mitigation proposed
- LTS = Less than Significant, no mitigation proposed
- LTSM = Less than Significant Impact with Mitigation Incorporated
- SU = Significant and Unavoidable

3.1.7 References

California Department of Transportation (Caltrans), 2021. California State Scenic Highway System Map. Available at: <https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>, accessed November 2021.

City of Los Angeles, 2001. General Plan, Conservation Element. Available online at: https://planning.lacity.org/odocument/28af7e21-ffdd-4f26-84e6-dfa967b2a1ee/Conservation_Element.pdf, accessed December 2021.

City of Los Angeles, 2004. Silver Lake-Echo Park-Elysian Valley Community Plan. Available online at: https://planning.lacity.org/odocument/e87507ac-8c40-49a0-aa1c-21df963f2298/Silver_Lake-Echo_Park-Elysian_Valley_Community_Plan.pdf, accessed November 2021.

City of Los Angeles, 2016. General Plan, Mobility Plan 2035. Available online at: https://planning.lacity.org/odocument/523f2a95-9d72-41d7-aba5-1972f84c1d36/Mobility_Plan_2035.pdf, accessed December 2021.

Personal communication, City of Los Angeles Planning Department, August 2022.

3.2 Agriculture and Forestry Resources

This section addresses the potential impacts to agriculture and forestry resources associated with implementation of the proposed Project. This section includes: a description of the existing agricultural and forestry uses in the proposed Project area; a summary of applicable regulations related to agriculture and forestry resources; and an evaluation of the potential impacts of the proposed Project related to agriculture and forestry resources in and around the proposed Project area. There would be no impacts to agriculture and forestry resources, and no mitigation is required.

3.2.1 Environmental Setting

Regional Setting

According to the California Department of Conservation's (DOC) *2014–2016 California Farmland Conversion Report*, Southern California had 2,943,269 acres of Important Farmlands in 2016. The Southern California region converted approximately 11,528 acres of agricultural land to Urban and Built-Up Lands between 2014 and 2016, second only to urban conversions in the San Joaquin Valley region. Southern California has continued to experience a decline in farmland as land is converted to non-agricultural use. As of 2016, Southern California had approximately 1,604,189 acres of Urban and Built-Up Land (DOC 2016a). Definitions for DOC's Farmland Mapping and Monitoring Program (FMMP) Important Farmland classifications are provided below in Section 3.2.2, *Regulatory Framework*.

In 2018, Los Angeles County had 288,162 acres of total agricultural land, of which 27,465 acres were classified with an Important Farmland category and 260,697 acres were classified as Grazing Land (DOC 2018, Table A-13). From 2016 to 2018, Los Angeles County experienced a net loss of approximately 1,093 acres of Important Farmland in Los Angeles County and 1,211 acres of Grazing Land, resulting in a net loss of 2,304 acres of agricultural lands (DOC 2018). When considering the conversion of Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance during the period of 2016 to 2018, approximately 95 percent of such lands were converted to Grazing Lands, and approximately 1 percent were converted to Urban and Built-Up Lands. From 2016 to 2018, 4,918 acres were urbanized in Los Angeles County, with 20 acres converted from Important Farmland to Urban and Built-Up Land and 2,904 converted from Grazing Land to Urban and Built-Up Land (DOC 2018, Table A-13).

Project Area Setting

Agriculture

The proposed Project area is located within the Silver Lake Community of the City of Los Angeles within an area containing little to no significant agricultural resources. As such, the City of Los Angeles has no land designated for Agriculture within the proposed Project area (City of Los Angeles 2001, 2004, 2021).

The DOC FMMP maps and ranks important farmland in California. As determined by the DOC's FMMP database, the proposed Project area is designated as Urban and Built-Up Land (DOC 2021a).

Forestry Resources

Contrary to the limited amounts of designated agricultural land, Los Angeles County contains nearly 650,000 acres of forest land between the unincorporated areas of the Angeles National Forest and a small portion of the Los Padres National Forest. The Angeles National Forest stretches across Los Angeles County in two sections encompassing the San Gabriel Mountain Range, and is 1,018 square miles or 25 percent of the land area of Los Angeles County. The U.S. Forest Service is responsible for managing public forest lands; while nearly 40,000 acres are privately-owned, where the County retains responsibility for land use regulation (County of Los Angeles 2015).

The proposed Project area is located approximately 10.5 miles southwest of the Angeles National Forest. The proposed Project area does not overlap with these forest lands (USDA 2021). There is no land designated or zoned as Forest or Timberland within the proposed Project area. Urban forestry resources, including impacts to protected trees are addressed in Section 3.4, *Biological Resources*, of this Draft EIR.

Williamson Act Contracts

Williamson Act contracts, also known as agricultural preserves, create an arrangement whereby private landowners contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. Williamson Act Contracts Land maps depict Williamson Act enrollments throughout the state and are prepared by the DOC in conjunction with local jurisdictions. The 2016 Williamson Act Contract Land map does not identify any lands within the proposed Project area. The nearest Williamson Act Contract Lands are in the northern portion of Simi Valley over 30 miles away (DOC 2016b).

3.2.2 Regulatory Framework

State

California Farmland Mapping and Monitoring Program:

The DOC, under the Division of Land Resource Protection, has established the FMMP, which monitors the conversion of the state's farmland to and from agricultural use. The FMMP maintains an inventory of state agricultural land and updates its "Important Farmland Series Maps" every 2 years. The FMMP map series identifies eight classifications and uses a minimum mapping unit size of 10 acres. The FMMP also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. Important farmlands are divided into the following categories based on their suitability for agriculture:

- **Prime Farmland.** Prime Farmland is land with the best combination of physical and chemical characteristics able to sustain long-term production of agricultural crops. This land has produced irrigated crops at sometime within the 4 years prior to the mapping date.

- **Farmland of Statewide Importance.** Farmland of Statewide Importance is land that meets the criteria for Prime Farmland but with minor shortcomings such as greater slopes or lesser soil moisture capacity.
- **Unique Farmland.** Unique Farmland has even lesser quality soils and produces the state’s leading agricultural crops. This land is usually irrigated, but also includes non-irrigated orchards and vineyards.
- **Farmland of Local Importance.** Farmland of Local Importance is land that is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.
- **Grazing Land.** Grazing Land is land on which the existing vegetation is suited to the grazing of livestock.
- **Other Lands.** This land does not meet the criteria of any of the other categories.

California Department of Conservation, Division of Land Resource Protection

The DOC applies the soil classifications created by the Natural Resources Conservation Service (NRCS) to identify and plan for California’s agricultural land resources. The DOC employs a variety of classification systems to determine the suitability of soils for agricultural use. The two most widely used systems are the Capability Classification System and the California Revised Storie Index. The Capability Classification System classifies soils from Class I to Class VIII based on their ability to support agriculture with Class I being the highest quality soil. The California Revised Storie Index is used mainly for irrigated agriculture and is based on crop productivity data. For the California Revised Storie Index, Grade 1 soils are considered “excellent,” and Grade 2 soils are considered “good” (O’Geen et al. 2008).

Williamson Act

The California Land Conservation Act of 1965, also known as the Williamson Act, is designed to preserve agricultural and open space lands by discouraging their premature and unnecessary conversion to urban uses. Williamson Act contracts, also known as agricultural preserves, create an arrangement whereby private landowners contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. The vehicle for these agreements is a rolling term 10-year contract (DOC 2021b). In return, restricted parcels are assessed for tax purposes at a rate consistent with their actual use, rather than potential market value. To cancel a Williamson Act contract, either the local government or the landowner can initiate the nonrenewal process. A “notice of nonrenewal” starts a 9-year nonrenewal period. During the nonrenewal process, the annual tax assessment gradually increases. At the end of the 9-year nonrenewal period, the contract is terminated. Contracts renew automatically every year unless the nonrenewal process is initiated. Williamson Act contracts can be divided into the following categories: Prime Agricultural Land, Non-Prime Agricultural Land, Open Space Easement, Built Up Land, and Agricultural Land in Non-Renewal.

Public Resources Code Section 21060.1

Public Resources Code Section 21060.1 defines “Agricultural land” for the purposes of assessing environmental impacts using the FMMP. The FMMP was established in 1982 to assess the

location, quality, and quantity of agricultural lands and the conversion of these lands. The FMMP provides guidance for the analysis of agricultural and land use changes throughout California.

California Public Resources Code Section 12220(g)

The Public Resources Code defines “Forest land” under Section 12220(g) as land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. Projects are subject to this code if there are any potentially significant changes to existing areas zoned as forest land.

California Public Resources Code Section 4526

The Public Resources Code defines “Timberland” as land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis after consultation with the district committees and others. Projects may have significant impacts to timberland if the project conflicts with existing zoning.

California Government Code Section 51104(g)

The California Government Code defines “Timberland production zone” under Section 51104(g) as an area which has been zoned pursuant to Sections 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h) of the Government Code 51104. Projects may significantly impact timberland resources if the project conflicts with existing areas zoned for timberland production.

3.2.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to agriculture and forestry resources are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (Refer to Impact 3.2-1)
- Conflict with existing zoning for agricultural use, or a Williamson Act contract. (Refer to Impact 3.2-2)
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)). (Refer to Impact 3.2-3)
- Result in the loss of forest land or conversion of forest land to non-forest use. (Refer to Impact 3.2-4)

- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. (Refer to Impact 3.2-5)

The 2006 L.A. CEQA Thresholds Guide does not include thresholds of significance pertaining to Agriculture and Forestry Resources.

3.2.4 Project Design Features

No specific project design features are proposed with regard to agriculture and forestry resources.

3.2.5 Impacts and Mitigation Measures

Prime Farmland

Impact 3.2-1: Would the proposed Project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Construction / Operation

According to the Department of Conservation's FMMP, the proposed Project area is located within Urban and Built-up Land and does not contain Farmland. As a result, implementation of the proposed Project would not result in the conversion of any Farmland to non-agricultural use. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Williamson Act Contracts

Impact 3.2-2: Would the proposed Project conflict with existing zoning for agricultural use, or a Williamson Act contract?

Construction / Operation

There are no active Williamson Act Contracts within the proposed Project area; therefore, no impacts to Williamson Act Contracts would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Forest Land Zoning

Impact 3.2-3: Would the proposed Project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?

Construction / Operation

The closest forest land to the proposed Project area is the Angeles National Forest located approximately 10.5 miles to the northeast. The proposed Project area would not be located on, or immediately adjacent to forest land, timberland, or timberland zoned Timberland Production. Therefore, the proposed Project would not conflict with existing zoning or cause rezoning of these land uses. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Loss of Forest Land

Impact 3.2-4: Would the proposed Project result in the loss of forest land or conversion of forest land to non-forest use?

Construction / Operation

The proposed Project area would not be located within or adjacent to forest land; therefore, implementation of the proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Farmland Conversion

Impact 3.2-5: Would the proposed Project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Construction / Operation

The proposed Project area would not be located on, or immediately adjacent to, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as defined by the FMMP. Therefore, proposed Project activities would not conflict with existing zoning for agricultural use or a Williamson Act contract. The proposed Project would not result in changes to the existing zoning

or environment that, due to their location or nature, would result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Cumulative Impact

Impact 3.2-6: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively considerable impact to agriculture and forestry resources?

A cumulatively considerable impact on agriculture and forestry resources would result if the project would contribute to a significant cumulative impact related to conversion of farmland to non-agricultural use; a conflict with existing zoning for agricultural use, or a Williamson Act contract; a conflict with existing zoning for forest land or timberland; conversion of forest land to non-forest use; or other changes in the existing environment which, due to their location or nature, could result in conversion of farmland or forest land. As discussed at the beginning of Section 3.2, the Project site would not be located on, or immediately adjacent to, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as defined by the FMMP. The Project site is not currently being used for agriculture and does not contain agricultural resources that meet the Prime and Statewide soil criteria, as defined by the Farmland Mapping and Monitoring Program. Additionally, implementation of the project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use. Therefore, the Project's contribution to cumulative impacts would not be cumulatively considerable.

Mitigation Measures:

None Required

Significance Determination:

No Impact

3.2.6 Summary of Impacts

Table 3.2-1 summarizes the impact significance determinations related to agriculture and forestry resources.

**TABLE 3.2-1
 SUMMARY OF PROPOSED PROJECT IMPACTS TO AGRICULTURE AND FORESTRY RESOURCES**

Impact	Mitigation Measure	Significance
3.2-1: Prime Farmland	None Required	NI
3.2-2: Williamson Act Contracts	None Required	NI
3.2-3: Forest Land Zoning	None Required	NI
3.2-4: Loss of Forest Land	None Required	NI
3.2-5: Farmland Conversion	None Required	NI
3.2-6: Cumulative	None Required	NI

NOTES: NI = No Impact, no mitigation proposed; LTS = Less than Significant, no mitigation proposed;
 LTSM = Less than Significant Impact with Mitigation Incorporated; SU = Significant and Unavoidable

3.2.7 References

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3.3 Air Quality

This section evaluates the Project's potential impacts on air quality. This section estimates the air pollutant emissions generated by demolition of the existing building and whether Project emissions would conflict with or obstruct implementation of the applicable air quality plan; result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard; expose sensitive receptors to substantial pollutant concentrations; or result in other emissions, such as those leading to odors, affecting a substantial number of people. This section relies on information included in the *Air Quality and Greenhouse Gas Technical Documentation (AQ and GHG Technical Documentation)*, provided in Appendix C of this Draft EIR. Impacts to air quality are less than significant with incorporation of mitigation measure **AIR-1: Haul Trucks and Construction Equipment**.

3.3.1 Environmental Setting

Air Quality Background

Air Quality and Public Health

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of an overall endeavor to prevent further deterioration and to facilitate improvement in air quality. The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) have been set at levels considered safe to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly with a margin of safety, and to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings (USEPA 2022). As the scientific methods for the study of air pollution health effects have progressed over the past decades, adverse effects have been shown to occur at lower levels of exposure. For some pollutants, no clear thresholds for effects have been demonstrated. New findings over time have, in turn, led to the revision and lowering of NAAQS which, in the judgment of the U.S. Environmental Protection Agency (USEPA), are necessary to protect public health. Ongoing assessments of the scientific evidence from health studies continue to be an important part of setting and informing revisions to federal and state air quality standards (SCAQMD 2017a). The NAAQS and CAAQS are listed in **Table 3.3-1**.

At the regional level, the South Coast Air Quality Management District (SCAQMD) is the regulatory agency responsible for improving air quality for large areas of Los Angeles, Orange County, Riverside and San Bernardino Counties, including the Coachella Valley (SCAQMD 1999). The City of Los Angeles is located within the South Coast Air Basin (Air Basin) which is a distinct geographic subarea within the SCAQMD's jurisdiction. The SCAQMD, together with the Southern California Association of Governments (SCAG), has the responsibility for ensuring that national and state ambient air quality standards are achieved and maintained for the Air Basin. Failure to comply with these standards puts state and local agencies at risk for penalties in the form of lawsuits, fines, a federal takeover of state implementation plans, and a

loss of funds from federal agencies such as the Federal Highway Administration and Federal Transit Administration.

To meet the air quality standards, regional plans are developed, including the SCAQMD's Air Quality Management Plan (AQMP), which incorporates regional demographic projections and integrated regional land use and transportation strategies from SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). These plans work together to examine multiple pollutants, cumulative effects, and transport issues related to attaining healthful air quality in the region. In addition, a host of regulatory standards at the federal, state, regional, and local level function to identify and limit exposure of air pollutants and toxic air contaminants (TACs).

Local Air Quality and Air Pollution Sources

As mentioned above, the City of Los Angeles is located within the South Coast Air Basin, which is an approximately 6,745-square-mile area bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east; and San Diego County to the south. The Air Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The regional climate within the Air Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Air Basin is primarily influenced by meteorology and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

The Air Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid to late afternoons on hot summer days. Winter inversions frequently break by midmorning.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problem is the accumulation of carbon monoxide (CO) and nitrogen oxides (NO_x) due to low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_x to form photochemical smog.

Air pollutant emissions within the Air Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area

sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Air Pollutant Types

Criteria Pollutants

The six principal pollutants for which national and state criteria and standards have been promulgated, known as “criteria pollutants”, and which are most relevant to current air quality planning and regulation in the Air Basin include ozone (O₃), respirable and fine particulate matter (PM₁₀ and PM_{2.5}, respectively), carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and lead (Pb). These pollutants are referred to as “criteria air pollutants” as a result of the specific standards, or criteria, which have been adopted for them.

Ozone (O₃)

O₃ is a gas that is formed when volatile organic compounds (VOCs) and NO_x—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. O₃ concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of O₃ irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

Particulate Matter (PM₁₀ and PM_{2.5})

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. Respirable and fine particulate matter, PM₁₀ and PM_{2.5}, consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively. Some sources of particulate matter, such as pollen and windstorms, are naturally occurring. However, in areas such as the City of Los Angeles, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities. The human body naturally prevents the entry of larger particles into the body. However, small particles can enter the body and become trapped in the nose, throat, and upper respiratory tract. These small particulates can potentially aggravate existing heart and lung diseases, change the body’s defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM₁₀ and PM_{2.5}. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates can become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Carbon Monoxide (CO)

CO is a colorless, odorless gas primarily emitted from combustion processes and motor vehicles due to incomplete combustion of carbon-containing fuels, such as gasoline or wood. In urban areas, such as the City of Los Angeles, automobile exhaust accounts for the majority of CO emissions. CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, unlike O₃, motor vehicles operating at slow speeds are the primary source of CO in the Air Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Nitrogen Dioxide (NO₂)

NO₂ is a nitrogen oxide compound that is produced by the combustion of fossil fuels, such as in internal combustion engines (both gasoline and diesel powered), as well as point sources, especially power plants. Of the seven types of NO_x compounds, NO₂ is the most abundant in the atmosphere. As ambient concentrations of NO₂ are related to traffic density, commuters in heavy traffic areas, particularly in urban areas such as the City of Los Angeles, may be exposed to higher concentrations of NO₂ than those indicated by regional monitors. NO₂ absorbs blue light and results in a brownish-red cast to the atmosphere and reduced visibility. NO₂ also contributes to the formation of PM₁₀. NO_x irritate the nose and throat, and increase one's susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_x is as a precursor to the formation of O₃.

Sulfur Dioxide (SO₂)

Sulfur oxides (SO_x) are compounds of sulfur and oxygen molecules. SO₂ is the predominant form found in the lower atmosphere and is a product of burning sulfur or burning materials that contain sulfur. Major sources of SO₂ include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Generally, the highest levels of SO₂ are found near large industrial complexes. In recent years, SO₂ concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO₂ and limits on the sulfur content of fuels. Emissions of SO₂ aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. SO₂ potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of SO₂, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Lead (Pb)

Pb is a metal found naturally in the environment as well as in manufactured products. The highest levels of Pb in air are usually found near Pb smelters. The major sources of Pb emissions to the air are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. Pb is also emitted from the sanding or removal of old lead-based paint (LBP). Pb emissions are primarily a regional pollutant. Pb affects the brain and other parts of the body's nervous system.

Exposure to Pb in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

Additional Criteria Pollutants (California Only)

In addition to the national standards, the State of California regulates state-identified criteria pollutants, including sulfates (SO_4^{2-}), hydrogen sulfide (H_2S), visibility-reducing particles, and vinyl chloride. With respect to the state-identified criteria pollutants, most land use development projects either do not emit them (i.e., H_2S [nuisance odor] and vinyl chloride), or otherwise account for these pollutants (i.e., SO_4^{2-} and visibility reducing particles) through other criteria pollutants. For example, SO_4^{2-} are associated with SO_x emissions, and visibility-reducing particles are associated with particulate matter emissions. A description of the health effects of the state-identified criteria air pollutants is provided below.

Sulfates (SO_4^{2-})

SO_4^{2-} are the fully oxidized ionic form of sulfur. SO_4^{2-} occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized during the combustion process and subsequently converted to SO_4^{2-} in the atmosphere. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. SO_4^{2-} are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide (H_2S)

H_2S is a colorless gas with the odor of rotten eggs. The most common sources of H_2S emissions are oil and natural gas extraction and processing, and natural emissions from geothermal fields. Industrial sources of H_2S include petrochemical plants and kraft paper mills. H_2S is also formed during bacterial decomposition of human and animal wastes, and is present in emissions from sewage treatment facilities and landfills (CARB 2019). Exposure to H_2S can induce tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting; additional health effects of eye irritation have only been reported with exposures greater than 50 parts per million (ppm), which is considerably higher than the odor threshold (CARB 2019). H_2S is regulated as a nuisance based on its odor detection level; if the standard were based on adverse health effects, it would be set at a much higher level (CARB 2019).

Visibility-Reducing Particles

Visibility-reducing particles come from a variety of natural and manmade sources and can vary greatly in shape, size and chemical composition. Visibility reduction is caused by the absorption and scattering of light by the particles in the atmosphere before it reaches the observer. Certain visibility-reducing particles are directly emitted to the air, such as windblown dust and soot, while others are formed in the atmosphere through chemical transformations of gaseous pollutants (e.g., SO_4^{2-} , nitrates, organic carbon particles) which are the major constituents of particulate matter. As the number of visibility-reducing particles increases, more light is absorbed and scattered, resulting in less clarity, color, and visual range (CARB 2016). Exposure to some haze-causing

pollutants have been linked to adverse health impacts similar to PM10 and PM2.5, as discussed above (CARB 2016).

Vinyl Chloride

Vinyl chloride is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products and is generally emitted from industrial processes. Other major sources of vinyl chloride have been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents (CARB 2022). Short-term health effects of exposure to high levels of vinyl chloride in the air include central nervous system effects, such as dizziness, drowsiness, and headaches while long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage and has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans (CARB 2022). Most health data on vinyl chloride relate to carcinogenicity; thus, the people most at risk are those who have long-term exposure to elevated levels, which is more likely to occur in occupational or industrial settings; however, control methodologies applied to industrial facilities generally prevent emissions to the ambient air (CARB 2022).

Volatile Organic Compounds (VOCs) and Toxic Air Contaminants (TACs)

Although the SCAQMD's primary mandate is attaining the NAAQS and the CAAQS for criteria pollutants within the district, SCAQMD also has a general responsibility to control emissions of air contaminants and prevent endangerment to public health. As a result, the SCAQMD has regulated pollutants other than criteria pollutants such as VOCs, TACs, greenhouse gases (GHGs), and stratospheric O₃-depleting compounds.

VOCs

VOCs are organic chemical compounds of carbon and are not "criteria" pollutants themselves; however, VOCs are a prime component (along with NO_x) of the photochemical processes by which such criteria pollutants as O₃, NO₂, and certain fine particles are formed. They are therefore regulated as "precursors" to formation of these criteria pollutants. Some are also identified as TACs and have adverse health effects. VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids, internal combustion associated with motor vehicle usage, and consumer products (e.g., architectural coatings).

Toxic Air Contaminants (TACs)

TACs is a term used to describe airborne pollutants that may be expected to result in an increase in mortality or serious illness or which may pose a present or potential hazard to human health, and include both carcinogens and non-carcinogens. The California Air Resources Board (CARB) and the California Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. CARB has listed approximately 200 toxic substances, including those identified by the USEPA, which are identified on the California Air Toxics Program's TAC List. TACs are also not classified as "criteria" air pollutants. The greatest potential for TAC emissions during construction is related to diesel particulate matter (DPM) emissions associated with heavy-duty equipment. During long-term operations, sources of DPM may include heavy duty diesel-fueled delivery trucks and stationary emergency generators. The effects of TACs can be diverse and their health impacts

tend to be local rather than regional; consequently, ambient air quality standards for these pollutants have not been established, and analysis of health effects is instead based on cancer risk and exposure levels.

Air Quality and Public Health

Regional Context

The Southern California region lies in the semi-permanent high-pressure zone of the eastern Pacific that leads to mild climate, moderated by cool sea breezes. The usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The area's natural physical characteristics (weather and topography), as well as man-made influences (development patterns and lifestyle) play a major role in degree and severity of the air pollution problem in the Air Basin where factors, such as wind, sunlight, temperature, humidity, rainfall, and topography, affect the accumulation and dispersion of air pollutants throughout the Air Basin, making it an area of high pollution potential.

The greatest air pollution throughout the Air Basin occurs from June through September that is generally attributed to light winds, shallow vertical atmospheric mixing, as well as the large amount of pollutant emissions. This frequently reduces pollutant dispersion, resulting in elevated air pollution levels. In addition, pollutant concentrations in the Air Basin vary with location, season, and time of day. For instance, O₃ concentrations tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert. While substantial progress has been made in reducing air pollution levels in Southern California, the Air Basin still fails to meet the national standards for O₃ and PM_{2.5} and, therefore, is considered a federal “non-attainment” area for these pollutants. In addition, Los Angeles County still fails to meet the national standard for Pb and, therefore, is considered a federal “non-attainment” area for Pb.

As described above, at the regional level, SCAQMD is the regulatory agency responsible for improving air quality for large areas of Los Angeles, Orange County, Riverside and San Bernardino Counties. Specifically, the SCAQMD has the responsibility for ensuring that all national and state ambient air quality standards are achieved and maintained throughout the Air Basin. To meet the standards, SCAQMD has adopted a series of AQMPs. The 2016 AQMP includes strategies to ensure that rapidly approaching attainment deadlines are met and that public health is protected to the maximum extent feasible where reducing NO_x emissions sufficiently to meet the upcoming O₃ standard deadlines is the most significant air quality challenge in the Air Basin. The 2016 AQMP reported a baseline year 2012 inventory of 512 tons per day (tpd) of NO_x and based on modeling results show that NO_x emissions are estimated to be 214 tpd in the 8-hour O₃ attainment year of 2031, due to continued implementation of already adopted regulatory actions (“baseline emissions”). The 2016 AQMP states that total Air Basin emissions of NO_x must be reduced to 96 tpd by 2031 to attain the 8-hour O₃ standard. However, while existing air regulations and programs will continue to lower NO_x emissions in the region, an additional 55 percent reduction in the year 2031 are necessary to attain the 8-hour O₃ standard (SCAQMP 2017).

The 2016 AQMP's overall control strategy is an integral approach relying on fair-share emission reductions from federal, state, and local levels. In addition, the AQMP is composed of stationary and mobile source emission reductions from traditional regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile source strategies and reductions from federal sources, which include aircraft, locomotives and ocean-going vessels. These strategies are to be implemented in partnership with CARB and USEPA. The 2016 AQMP also includes the transportation programs, measures, and strategies in the 2016–2040 RTP/SCS that are generally designed to reduce VMT (SCAQMP 2017).

The 2016 AQMP also forecasts the 2031 emissions inventories “with growth” based on the 2016–2040 RTP/SCS where the region was projected from baseline year 2012 to see a 12 percent growth in population, 16 percent growth in housing units, 23 percent growth in employment, and 8 percent growth in VMT by year 2031. Appendix IV-C, Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures, of the 2016 AQMP describes the regional land use and transportation strategies and the transportation control measures in RTP/SCS that are included in the 2016 AQMP (SCAQMP 2017).

Despite the projected growth in the region, air quality has improved substantially over the years. This is largely due to the effects of local, state, and federal air quality control programs as described above. As seen in Figure IV.A-1 on page IV.A-18 of the AQMP, the percent change in air quality is shown along with demographic data for the four-county region from the 2016 AQMP where in particular, the trends since 1990 of the 8-hour O₃ levels, the 1-hour O₃ levels, and annual average PM_{2.5} concentrations (since 1999), compared to the regional gross domestic product, total employment and population. In addition, the O₃ and particulate matter levels continue to trend downward as the economy and population increase, demonstrating that it is possible to maintain a healthy economy while improving public health through air quality improvements (SCAQMP 2017).

In September 2022, the SCAQMD released the Revised Draft 2022 AQMP that builds upon measures already in place from previous AQMPs, including the 2016 AQMP. The Revised Draft 2022 AQMP reported a baseline year 2018 inventory of 351 tons per day (tpd) of NO_x and based on modeling results show that NO_x emissions are estimated to be 187 tpd in the 8-hour O₃ attainment year of 2037, due to continued implementation of already adopted regulatory actions (“baseline emissions”). The Revised Draft 2022 AQMP states that total Air Basin emissions of NO_x must be reduced to 124 tpd by 2037 to attain the 8-hour O₃ standard. However, while existing air regulations and programs will continue to lower NO_x emissions in the region, an additional 67 percent reduction in the year 2031 are necessary to attain the 8-hour O₃ standard.

The Revised Draft 2022 AQMP's overall control strategy is based on promoting widespread deployment of available ZE and low NO_x technologies and developing new zero emission (ZE) and ultra-low NO_x technologies for use in cases where the technology is not currently available. Specifically, the South Coast AQMD proposes a total of 48 control measures for the 2022 AQMP. Of the 48 control measures, 30 control measures targeting stationary sources focus on widespread deployment of ZE and low NO_x technologies through a combination of regulatory approaches and incentives and will require technology assessments to better understand where

and when ZE and low NO_x technologies can be implemented. New funding and programs are needed for research, development, demonstration, and deployment of advanced technologies. The remaining 18 control measures target mobile sources that are largely facility-based mobile source measures, emission reductions from incentive programs, and partnerships with local, state, federal, and international entities.

As with the 2016 AQMP, the Revised Draft 2022 AQMP also forecasts the 2037 emissions inventories “with growth” based on the 2020–2045 RTP/SCS where the region was projected from baseline year 2018 to see a 12 percent growth in population, 17 percent growth in housing units, 11 percent growth in employment, and 5 percent growth in VMT by year 2037. As with the 2016 AQMP, Appendix IV-C of the Revised Draft 2022 AQMP is the Regional Transportation Plan/Sustainable Communities Strategy and Transportation Control Measures that describes the regional land use and transportation strategies and the transportation control measures in RTP/SCS that are included in the Revised Draft 2022 AQMP (SCAQMD 2022).

The Revised Draft 2022 AQMP also reports that even with the projected growth in the region, air quality has improved over the years, primarily due to impacts of air control programs at the local, state, and federal level. As seen in Figure 1-3 of the Revised Draft 2022 AQMP, the percent change in air quality is shown along with demographic data for the 4-county region from the Revised Draft 2022 AQMP where in particular, the trends since 1995 of the 8-hour O₃ levels, the 1-hour O₃ levels, and annual average PM_{2.5} concentrations (since 1999), compared to the regional gross domestic product, total employment and population. Similar to the 2016 AQMP, the O₃ and particulate matter levels continue to decrease as the economy and population increase, further demonstrating that it is possible to maintain a healthy economic growth while bettering public health through air quality improvements (SCAQMD 2022). While the SCAQMD released the Revised Draft 2022 AQMP in September 2022, as noted on page 4-34 of the Revised Draft 2022 AQMP, the Draft SIP strategy and the Revised Draft AQMP rely on different versions of emissions inventory and different base year, from which future emissions were projected from. Due to the discrepancies in the emissions inventory, reductions anticipated from the proposed measures are not identical, but the final version SIP Strategy and AQMP will use a consistent emissions inventory and the discrepancies will be resolved. In addition, the public comment period for the Revised Draft 2022 AQMP and appendices close October 18, 2022. Thus, the Revised Draft 2022 AQMP will need to incorporate updates and adjustments based on received comments. For these reasons, consistency with the 2016 AQMP remains the appropriate version when discussing a project’s consistency with the AQMP.

Criteria Pollutants

The extent and severity of pollutant concentrations in the Air Basin are a function of the area’s natural physical characteristics (weather and topography) and man-made influences (development patterns and lifestyle). Factors, such as wind, sunlight, temperature, humidity, rainfall, and topography, all affect the accumulation and dispersion of pollutants throughout the Air Basin, making it an area of high pollution potential. The Air Basin’s meteorological conditions, in combination with regional topography, are conducive to the formation and retention of O₃, which is a secondary pollutant that forms through photochemical reactions in the atmosphere. Thus, the worst

air pollution conditions throughout the Air Basin typically occur from June through September. These conditions are generally attributed to the seasonally light winds and shallow vertical atmospheric mixing, which reduce the potential for the dispersal of air pollutant emissions, thereby causing elevated air pollutant levels. Pollutant concentrations in the Air Basin vary with location, season, and time of day. Concentrations of O₃, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Air Basin and adjacent desert (SCAQMD 2017b). Table 3.3-1 shows the attainment status of the Air Basin for each criteria pollutant with respect to the state and federal standards. The Air Basin is designated as attainment for the California standards for sulfates and unclassified for hydrogen sulfide and visibility-reducing particles (CARB 2017).¹ The Air Basin is currently in non-attainment for O₃, PM₁₀, and PM_{2.5} under the CAAQS and O₃, and PM_{2.5} under the NAAQS. Since vinyl chloride is a carcinogenic toxic air contaminant, CARB does not classify attainment status for this pollutant. Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria.

The Los Angeles County portion of the Air Basin is designated as nonattainment for the federal lead standard; however, this is due to localized emissions from two lead-acid battery recycling facilities in the City of Vernon and the City of Industry that are no longer operating (SCAQMD 2012).

**TABLE 3.3-1
 SOUTH COAST AIR BASIN ATTAINMENT STATUS (LOS ANGELES COUNTY)**

Pollutant	National Standards (NAAQS)	California Standards (CAAQS)
O ₃ (1-hour standard)	N/A ^a	Non-attainment – Extreme
O ₃ (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
PM ₁₀	Attainment	Non-attainment
PM _{2.5}	Non-attainment – Serious	Non-attainment
Lead (Pb)	Non-attainment (Partial) ^b	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Unclassified
Vinyl Chloride ^c	N/A	N/A

NOTES: N/A = not applicable

^a The NAAQS for 1-hour O₃ was revoked on June 15, 2005, for all areas except Early Action Compact areas.

^b Partial Non-attainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.

^c In 1990, the California Air Resources Board identified vinyl chloride as a toxic air contaminant and determined that it does not have an identifiable threshold. Therefore, the California Air Resources Board does not monitor or make status designations for this pollutant.

SOURCE: USEPA, The Green Book Non-Attainment Areas for Criteria Pollutants, <https://www.epa.gov/green-book>, Green Book current as of January 31, 2020. Accessed October 1, 2020; CARB, Area Designations Maps/State and National, <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>, last reviewed October 24, 2019. Accessed October 1, 2020.

¹ Unclassified is the category designation of an area for a pollutant with insufficient data.

As detailed in the AQMP, the major sources of air pollution in the Air Basin are divided into four major source classifications: point, and area stationary sources, and on-road and off-road mobile sources. Point and area sources are the two major subcategories of stationary sources (SCAQMD 2017b). Point sources are permitted facilities that contain one or more emission sources at an identified location (e.g., power plants, refineries, emergency generator exhaust stacks). Area sources consist of many small emission sources (e.g., water heaters, architectural coatings, consumer products, and fireplaces), which are distributed across the region. Mobile sources consist of two main subcategories: On-road sources (such as cars and trucks) and off-road sources (such as heavy construction equipment and landscaping equipment).

Toxic Air Contaminants

In addition to criteria pollutants, the SCAQMD periodically assesses levels of TACs in the Air Basin. The greatest potential for TAC emissions during construction is related to DPM emissions associated with heavy-duty equipment. During long-term operations, sources of DPM may include heavy duty diesel-fueled delivery trucks and stationary emergency generators.

In August 2021, the SCAQMD released the Final Multiple Air Toxics Exposure Study V (MATES V). The MATES V study includes a fixed site monitoring program with 10 stations, an updated emissions inventory of TACs, and a modeling effort to characterize risk across the Air Basin. The purpose of the fixed site monitoring is to characterize long-term regional air toxics levels in residential and commercial areas. In addition to new measurements and updated modeling results, several key updates were implemented in MATES V. First, MATES V estimates cancer risks by taking into account multiple exposure pathways, which includes inhalation and non-inhalation pathways. This approach is consistent with how cancer risks are estimated in South Coast AQMD's programs such as permitting, Air Toxics Hot Spots (AB2588), and CEQA. Previous MATES studies quantified the cancer risks based on the inhalation pathway only. Second, along with cancer risk estimates, MATES V includes information on the chronic non-cancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic non-cancer risks from MATES II through IV measurements have been re-examined using current OEHHA and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time. This has led to a reduction of the Air Basin average air toxics cancer risk in MATES V of 455 in one million, compared to MATES IV of 997 in one million (SCAQMD 2021a). The key takeaways from the MATES V study: air toxics cancer risk has decreased by about 50 percent since MATES IV based on modeling data; MATES V Air Basin average multi-pathway air toxics cancer risk is 455 in one million, with the highest risk locations being in the Los Angeles International Airport, downtown and the ports areas; diesel particulate matter is the main risk driver for air toxics cancer risk; goods movement and transportation corridors have the highest air toxics cancer risks; and the chronic non-cancer risk was estimated for the first time with a chronic hazard index of approximately 5 to 9 across all 10 fixed stations (SCAQMD 2021b; SCAQMD 2021c).

Local Area Conditions

Local Air Pollution Sources

The sources of air pollutant emissions in the Project Site area include stationary (point and area) sources and mobile sources. Point sources include boilers and combustion equipment that produce electricity or generate heat in surrounding commercial uses. Area sources include residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources include vehicles traveling on local roadways.

Existing Ambient Air Quality in the Surrounding Area

The SCAQMD maintains a network of air quality monitoring stations located throughout the Air Basin to measure ambient pollutant concentrations. The monitoring station most representative of the Project Site is the Central Los Angeles County Monitoring Station, located at 1630 North Main Street, Los Angeles, CA 90012. Criteria pollutants monitored at this station include O₃, NO₂, CO, SO₂, Pb, PM₁₀, and PM_{2.5}. The most recent data available from the SCAQMD for this monitoring station are from years 2018 to 2020 (SCAQMD 2018-20). The pollutant concentration data for these years are summarized in **Table 3.3-2**. As shown in Table 3.3-2, the CAAQS and NAAQS were not exceeded in the Project Site vicinity for most pollutants between 2018 and 2020, except for O₃, PM₁₀, and PM_{2.5}.

**TABLE 3.3-2
 AMBIENT AIR QUALITY IN THE PROJECT VICINITY**

Pollutant/Standard ^a	2018	2019	2020
Ozone, O₃ (1-hour)			
Maximum Concentration (ppm)	0.098	0.085	0.185
Days > CAAQS (0.09 ppm)	2	0	14
Ozone, O₃ (8-hour)			
Maximum Concentration (ppm)	0.073	0.080	0.118
4th High 8-hour Concentration (ppm)	0.071	0.065	0.093
Days > CAAQS (0.070 ppm)	4	2	22
Days > NAAQS (0.070 ppm)	4	2	22
Nitrogen Dioxide, NO₂ (1-hour)			
Maximum Concentration (ppm)	0.071	0.070	0.062
Days > CAAQS (0.18 ppm)	0	0	0
98th Percentile Concentration (ppm)	0.057	0.056	0.055
Days > NAAQS (0.100 ppm)	0	0	0
Nitrogen Dioxide, NO₂ (Annual)			
Annual Arithmetic Mean (0.030 ppm)	0.019	0.018	0.017
Carbon Monoxide, CO (1-hour)			
Maximum Concentration (ppm)	2.0	2.0	1.9
Days > CAAQS (20 ppm)	0	0	0
Days > NAAQS (35 ppm)	0	0	0
Carbon Monoxide, CO (8-hour)			
Maximum Concentration (ppm)	1.7	1.6	1.5
Days > CAAQS (9.0 ppm)	0	0	0
Days > NAAQS (9 ppm)	0	0	0

Pollutant/Standard ^a	2018	2019	2020
Sulfur Dioxide, SO₂ (1-hour)			
Maximum Concentration (ppm)	0.018	0.010	0.004
Days > CAAQS (0.25 ppm)	0	0	0
99th Percentile Concentration (ppm)	0.003	0.002	0.003
Days > NAAQS (0.075 ppm)	0	0	0
Sulfur Dioxide, SO₂ (24-hour)			
Maximum Concentration (ppm)	0.001	0.001	0.001
Days > CAAQS (0.04 ppm)	0	0	0
Respirable Particulate Matter, PM₁₀ (24-hour)			
Maximum Concentration (µg/m ³)	81	62	77
Samples > CAAQS (50 µg/m ³)	31	3	24
Samples > NAAQS (150 µg/m ³)	0	0	0
Respirable Particulate Matter, PM₁₀ (Annual)			
Annual Arithmetic Mean (20 µg/m ³)	34.1	25.5	23.0
Fine Particulate Matter, PM_{2.5} (24-hour)			
Maximum Concentration (µg/m ³)	43.8	43.5	47.3
98th Percentile Concentration (µg/m ³)	30.5	28.3	28.00
Samples > NAAQS (35 µg/m ³)	3	1	2
Fine Particulate Matter, PM_{2.5} (Annual)			
Annual Arithmetic Mean (12 µg/m ³)	12.6	10.9	12.3
Lead, Pb			
Maximum 30-day average (µg/m ³)	0.011	0.012	0.013
Samples > CAAQS (1.5 µg/m ³)	0	0	0
Maximum 3-month rolling average (µg/m ³)	0.010	0.010	0.011
Days > NAAQS (0.15 µg/m ³)	0	0	0

^a ppm = parts per million; µg/m³ = micrograms per cubic meter

SOURCE: SCAQMD, Historical Data by Year, <http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year>; CARB, Air Quality Data Statistics, <http://www.arb.ca.gov/adam/>; USEPA, AirData, http://www.epa.gov/airdata/ad_rep_mon.html. Accessed February 4, 2022.

Existing Health Risk in the Surrounding Area

The SCAQMD has prepared a series of maps that show regional trends in estimated outdoor inhalation cancer risk from toxic emissions, as part of an ongoing effort to provide insight into relative risks. The maps represent the estimated number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years). The background potential cancer risk per million people in the Project Site area using the updated OEHHA methodology is estimated at 580 and 659 in one million (compared to an overall Air Basin-wide risk of 455 in one million for the average of 10 fixed monitoring sites) (SCAQMD 2021d).² Generally, the risk from air toxics is lower near the coastline and increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, rail yards and ports).

² The Project Site is split over two zip codes 90026, with a risk of 659 per million, and 90039, with a risk of 580 per million.

Existing Site Emissions

As described in Chapter 2.0, *Project Description*, of this Draft EIR, the Silver Lake Reservoir Complex (SLRC) is comprised of a 127-acre site that includes reservoirs, dams, buildings and structures, water and stormwater infrastructure, interior roads, and public recreational facilities. Approximately 3 acres of SLRC land is currently operated and maintained by the City of Los Angeles Recreation and Parks Department (RAP) as a publicly accessible park space (refer to Chapter 2.0, *Project Description*, of this Draft EIR for additional details). In addition, RAP operates the existing Silver Lake Recreation Center, located along the southern side of the SLRC. The Silver Lake Recreation Center includes a recreation center, playground, and basketball courts. A dog park operated and maintained by RAP is currently located along the southern side of the SLRC. Currently, there are two public pathways on the west side of Ivanhoe Reservoir and along the top of Silver Lake Dam. Approximately 4 acres of existing paved surfaces around the reservoirs' perimeters are available for shared public use with LADWP. The entire SLRC is enclosed by a perimeter chain-link fence varying in height from 6 to 12 feet. The Neighborhood Nursery School and the Tesla Pocket Park are both located along the northeastern side of the SLRC in an area that would not be impacted by the Project. The proposed Project would re-develop the SLRC with a contemporary design that would create park zones blending vegetated areas with public spaces. The design would enhance the visual and recreational quality of the area to be consistent with goals and objectives of the Community Plan and provide the opportunity for the public to access natural park space. None of the existing public facilities within the SLRC would be removed, rather public spaces and facilities would be expanded, renovated, and redesigned to improve visitor experience and the existing area would be organized into a series of new spaces (zones) surrounding the reservoirs (refer to Chapter 2.0, *Project Description*, of this Draft EIR for additional details). Therefore, since the existing public facilities within the SLRC would not be removed and would either continue to operate as under existing conditions or would be expanded, renovated, and redesigned to improve visitor experience, existing operational air quality emissions are not required to be calculated and the Project's air quality emissions are conservatively considered new.

3.3.2 Regulatory Framework

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding Air Quality at the federal, state, regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Federal Clean Air Act
 - National Ambient Air Quality Standards
- California Clean Air Act
 - California Ambient Air Quality Standards
- California Code of Regulations
- State Programs for Toxic Air Contaminants
- Diesel Risk Reduction Program

- South Coast Air Quality Management District
 - Air Quality Management Plan and Regional Transportation Plan/Sustainable Communities Strategy
 - Air Quality Guidance Documents
 - Rules and Regulations
- City of Los Angeles Air Quality Element
- City of Los Angeles Plan for a Healthy LA

Federal

Federal Clean Air Act

The Federal Clean Air Act (CAA) was enacted in 1970 and has been amended numerous times in subsequent years, with the latest amendments occurring in 1990 (USC 1970). The CAA is the comprehensive federal law that regulates air emissions in order to protect public health and welfare (USEPA 1963). The USEPA is responsible for the implementation and enforcement of the CAA, which establishes NAAQS, specifies future dates for achieving compliance, and requires the USEPA to designate areas as attainment, nonattainment, or maintenance. The CAA also mandates that each state submit and implement a state implementation plan (SIP) for each criteria pollutant for which the state has not achieved the applicable NAAQS. The SIP includes pollution control measures that demonstrate how the standards for those pollutants will be met. The sections of the CAA most applicable to land use development projects include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions) (USEPA 2017).

Title I requirements are implemented for the purpose of attaining NAAQS for criteria air pollutants. **Table 3.3-3** shows the NAAQS currently in effect for each criteria pollutant. The Air Basin fails to meet national standards for O₃ and PM_{2.5} and, therefore, is considered a federal “non-attainment” area for these pollutants.

**TABLE 3.3-3
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Period	Federal Standard ^{a,b}	California Standard ^{a,b}	South Coast Air Basin Attainment Status ^c	
				Federal Standard ^d	California Standard ^d
Ozone (O ₃)	1-hour	—	0.09 ppm (180 µg/m ³)	—	Non-Attainment
	8-hour	0.070 ppm (137 µg/m ³)	0.07 ppm (137 µg/m ³)	Non-Attainment (Extreme)	Non-Attainment
Respirable Particulate Matter (PM ₁₀)	24-hour	150 µg/m ³	50 µg/m ³	Attainment	Non-Attainment
	Annual	—	20 µg/m ³		
Fine Particulate Matter (PM _{2.5})	24-hour	35 µg/m ³	—	Non-Attainment (Serious)	Non-Attainment
	Annual	12 µg/m ³	12 µg/m ³		

Pollutant	Averaging Period	Federal Standard ^{a,b}	California Standard ^{a,b}	South Coast Air Basin Attainment Status ^c	
				Federal Standard ^d	California Standard ^d
Carbon Monoxide (CO)	1-hour	35 ppm (40 mg/m ³)	20 ppm (23 mg/m ³)	Attainment	Attainment
	8-hour	9 ppm (10 mg/m ³)	9.0 ppm (10 mg/m ³)		
Nitrogen Dioxide (NO ₂)	1-hour	0.10 ppm (188 µg/m ³)	0.18 ppm (339 µg/m ³)	Unclassified/ Attainment	Attainment
	Annual	0.053 ppm (100 µg/m ³)	0.030 ppm (57 µg/m ³)		
Sulfur Dioxide (SO ₂)	1-hour	0.075 ppm (196 µg/m ³)	0.25 ppm (655 µg/m ³)	Unclassified/ Attainment	Attainment
	3-hour	0.5 ppm (1,300 µg/m ³)	—		
	24-hour	0.14 ppm (365 µg/m ³)	0.04 ppm (105 µg/m ³)		
	Annual	0.03 ppm (80 µg/m ³)	—		
Lead (Pb)	30-day average	—	1.5 µg/m ³	Partial Non- Attainment ^e	Attainment
	Rolling 3-month average	0.15 µg/m ³	—		
Sulfates (SO ₄ ²⁻)	24-hour	—	25 µg/m ³	—	Attainment
Hydrogen Sulfide (H ₂ S)	1-hour	—	0.03 ppm (42 µg/m ³)	—	Unclassified

NOTES: ppm = parts per million by volume; µg/m³ = micrograms per cubic meter

^a An ambient air quality standard is a concentration level expressed in either ppm or µg/m³ and averaged over a specific time period (e.g., 1 hour). The different averaging times and concentrations are meant to protect against different exposure effects. Some ambient air quality standards are expressed as a concentration that is not to be exceeded. Others are expressed as a concentration that is not to be equaled or exceeded.

^b Ambient Air Quality Standards based on the 2016 AQMP.

^c "Attainment" means that the regulatory agency has determined based on established criteria, that the Air Basin meets the identified standard. "Non-attainment" means that the regulatory agency has determined that the Air Basin does not meet the standard. "Unclassified" means there is insufficient data to designate an area, or designations have yet to be made.

^d California and Federal standard attainment status based on SCAQMD's 2016 AQMP and 2018 updates from CARB. <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>.

^e An attainment re-designation request is pending.

SOURCES: United States Environmental Protection Agency, NAAQS Table, <https://www.epa.gov/criteria-air-pollutants/naaqs-table>. Accessed February 3, 2022.

CARB, Ambient Air Quality Standards May 4, 2016, <https://ww3.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed February 3, 2022.

Title II pertains to mobile sources, which includes on-road vehicles (e.g., cars, buses, motorcycles) and non-road vehicles (e.g., aircraft, trains, construction equipment). Reformulated gasoline and automobile pollution control devices are examples of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_x emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

The NAAQS, and the CAAQS for the California criteria air pollutants (discussed below), have been set at levels considered safe to protect public health, including the health of sensitive populations and to protect public welfare.

State

California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practicable date. CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, CARB conducts research, sets the CAAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. Table 3.3-1 includes the CAAQS currently in effect for each of the criteria pollutants, as well as other pollutants recognized by the state. As shown in Table 3.3-3, the CAAQS include more stringent standards than the NAAQS. The Air Basin fails to meet state standards for O₃, PM₁₀, and PM_{2.5} and, therefore, is considered “non-attainment” for these pollutants.

California Code of Regulations

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended or repealed by state agencies pursuant to the Administrative Procedure Act. The CCR includes regulations that pertain to air quality emissions. Specifically, Section 2485 in Title 13 of the CCR states that the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operations of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emissions standards.

State Programs for Toxic Air Contaminants

The California Air Toxics Program is an established two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances in the air. In the risk identification step, CARB and OEHHA determine if a substance should be formally identified, or “listed,” as a TAC in California. In the risk management step, CARB reviews emission sources of an identified TAC to determine whether regulatory action is needed to reduce risk. Based on results of that review, CARB has promulgated a number of Airborne Toxic Control Measures (ATCMs), both for stationary and mobile sources, including On-Road and Off-Road Vehicle Rules. These ATCMs include measures such as limits on heavy-duty diesel motor vehicle idling and emission standards for off-road diesel construction equipment in order to reduce public exposure to DPM and other TACs. These actions are also supplemented by the Assembly Bill (AB) 2588 Air Toxics “Hot Spots” program and Senate Bill (SB) 1731, which require facilities to report their air toxics emissions, assess health risks, notify nearby residents and workers of significant risks if present, and reduce their risk through implementation of a risk management plan. SCAQMD has further adopted two rules to limit cancer and non-cancer health

risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities.

Diesel Risk Reduction Program

CARB identified particulate emissions from diesel-fueled engines as TACs in August 1998. Following the identification process, CARB was required by law to determine if there is a need for further control, which moved us into the risk management phase of the program. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines* and the *Vehicles and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*. The Diesel Advisory Committee approved these documents on September 28, 2000, paving the way for the next step in the regulatory process: the control measure phase. During the control measure phase, specific statewide regulations designed to further reduce DPM emissions from diesel-fueled engines and vehicles have and continue to be evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions.

Regional

South Coast Air Quality Management District

The SCAQMD is primarily responsible for planning, implementing, and enforcing air quality standards for the South Coast Air Basin. The Air Basin is a subregion within the western portion of the SCAQMD jurisdiction, as the SCAQMD also regulates portions of the Salton Sea Air Basin and Mojave Desert Air Basin within Riverside County.

Air Quality Management Plan and Regional Transportation Plan/Sustainable Communities Strategy

To meet the NAAQS and CAAQS, the SCAQMD has adopted a series of AQMPs, which serve as a regional blueprint to develop and implement an emission reduction strategy that will bring the area into attainment with the standards in a timely manner. The 2016 AQMP includes strategies to ensure that rapidly approaching attainment deadlines for O₃ and PM_{2.5} are met and that public health is protected to the maximum extent feasible. The most significant air quality challenge in the Air Basin is to reduce NO_x emissions³ sufficiently to meet the upcoming O₃ standard deadlines, as NO_x plays a critical role in the creation of O₃. The AQMP's strategy to meet the 8-hour O₃ standard in 2023 should lead to sufficient NO_x emission reductions to attain the 1-hour O₃ standard by 2022. Since NO_x emissions also lead to the formation of PM_{2.5}, the NO_x reductions needed to meet the O₃ standards will likewise lead to improvement of PM_{2.5} levels and attainment of PM_{2.5} standards (SCAQMD 2017b).⁴

³ NO_x emissions are a precursor to the formation of both O₃ and secondary PM_{2.5}.

⁴ Estimates are based on the inventory and modeling results and are relative to the baseline emission levels for each attainment year (see Final 2016 AQMP for detailed discussion).

The SCAQMD’s strategy to meet the NAAQS and CAAQS distributes the responsibility for emission reductions across federal, state, and local levels and industries. The 2016 AQMP is composed of stationary and mobile source emission reductions from traditional regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile source strategies, and reductions from federal sources, which include aircraft, locomotives and ocean-going vessels. These strategies are to be implemented in partnership with the CARB and USEPA.

The AQMP also incorporates the transportation strategy and transportation control measures from SCAG’s 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) Plan (SCAG 2016). SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements. Pursuant to California Health and Safety Code Section 40460, SCAG has the responsibility of preparing and approving the portions of the AQMP relating to the regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is required by law to ensure that transportation activities “conform” to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. The RTP/SCS includes transportation programs, measures, and strategies generally designed to reduce vehicle miles traveled (VMT), which are contained in the AQMP. The SCAQMD combines its portion of the AQMP with those prepared by SCAG (SCAQMD 2017b). The RTP/SCS and Transportation Control Measures, included as Appendix IV-C of the 2016 AQMP, are based on SCAG’s 2016–2040 RTP/SCS.

The 2016 AQMP forecasts the 2031 emissions inventories “with growth” based on SCAG’s 2016–2040 RTP/SCS. The region is projected to see a 12 percent growth in population, 16 percent growth in housing units, 23 percent growth in employment, and 8 percent growth in VMT between 2012 and 2031. Despite regional growth in the past, air quality has improved substantially over the years, primarily due to the effects of air quality control programs at the local, state, and federal levels (SCAQMD 2017b).

On September 3, 2020, SCAG’s Regional Council adopted the 2020–2045 RTP/SCS. The 2020–2045 RTP/SCS was determined to conform to the federally-mandated state implementation plan (SIP), for the attainment and maintenance of NAAQS standards. On October 30, 2020, CARB also accepted SCAG’s determination that the SCS met the applicable future state GHG reduction targets of 19 percent. The 2020–2045 RTP/SCS will be incorporated into the forthcoming 2022 AQMP.

SCAQMD Air Quality Guidance Documents

The SCAQMD published the *CEQA Air Quality Handbook* (approved by the SCAQMD’s Governing Board in 1993) to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts (SCAQMD 1993a). The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses. However, the SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* with the *Air Quality Analysis Guidance Handbook*. While this process is underway, the SCAQMD has provided supplemental guidance on the SCAQMD website (SCAQMD 2005a).

The SCAQMD has also adopted land use planning guidelines in its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TAC emissions (SCAQMD 2005b). SCAQMD's siting distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity to freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The SCAQMD's document introduces land use-related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMD's guidelines are voluntary initiatives recommended for consideration by local planning agencies.

The SCAQMD has published a guidance document called the *Final Localized Significance Threshold Methodology* for CEQA evaluations that is intended to provide guidance when evaluating the localized effects from mass emissions during construction or operation of a project (SCAQMD 2003b). The SCAQMD adopted additional guidance regarding PM_{2.5} emissions in a document called *Final Methodology to Calculate Particulate Matter (PM)_{2.5} and PM_{2.5} Significance Thresholds* (SCAQMD 2006). The latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and *Final Localized Significance Threshold Methodology*.

SCAQMD Rules and Regulations

The SCAQMD has adopted several rules and regulations to regulate sources of air pollution in the Air Basin and to help achieve air quality standards for land use development projects, which include, but are not limited to, the following:

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules which apply to the Project:

- **Rule 401 – Visible Emissions:** This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.
- **Rule 402 – Nuisance:** This rule states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM₁₀ emissions to less than 50 micrograms per cubic meter (µg/m³) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Best available control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for specific sources. The following is a list of rules which may apply to the Project:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NO_x emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.
- **Rule 1186 – PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations:** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM10 emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Regulation XIII – New Source Review (NSR): Regulation XIII sets requirements for preconstruction review required under both federal and state statutes for new and modified sources located in areas that do not meet the Clean Air Act standards ("non-attainment" areas). NSR applies to both individual permits and entire facilities. Any permit that has a net increase in emissions is required to apply Best Available Control Technology (BACT). Facilities with a net increase in emissions are required to offset the emission increase by use of Emission Reduction Credits (ERCs). The regulation provides for the application, eligibility, registration, use and transfer of ERCs. For low emitting facilities, the SCAQMD maintains an internal bank that can be used to provide the required offsets. In addition, certain facilities are subject to provisions that require public notice and modeling analysis to determine the downwind impact prior to permit issuance.

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XIV sets requirements for new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants or other non-criteria pollutants. The following is the only rule under Regulation XIV which may apply to the Project:

- **Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:** This rule requires owners and operators of any demolition or renovation activity and the associated disturbance of asbestos-containing materials, any asbestos storage facility, or any active waste disposal site to implement work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials.

Local

City of Los Angeles General Plan Air Quality Element

Local jurisdictions, such as the City, have the authority and responsibility to reduce air pollution through their land use decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. In general, the City of Los Angeles' General Plan (including the Framework, Air Quality, Mobility 2035, and

Health and Wellness Elements) and the City of Los Angeles' Green New Deal (Sustainability pLAn 2019) contain policies and programs for the protection of the environment and health through improved air quality. These serve to provide additional critical guidance for the betterment of public health for the region and City.

The most directly-related of those plans, the City's General Plan Air Quality Element, was adopted on November 24, 1992, and sets forth the goals, objectives, and policies which guide the City in its implementation of its air quality improvement programs and strategies. A number of these goals, objectives, and policies are relevant to land use development, and relate to traffic mobility, minimizing particulate emissions from construction activities, discouraging single-occupancy vehicle trips, managing traffic congestion during peak hours, and increasing energy efficiency in City facilities and private developments.

The Air Quality Element establishes six goals:

- Good air quality in an environment of continued population growth and healthy economic structure;
- Less reliance on single-occupant vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation and air quality;
- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures such as site orientation and tree planting; and
- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution

The City is also responsible for the implementation of transportation control measures as outlined in the AQMP. Through capital improvement programs, the City can fund infrastructure that contributes to improved air quality by requiring such improvements as bus turnouts as appropriate, installation of energy-efficient streetlights, and synchronization of traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation measures.

Plan for a Healthy Los Angeles

The Plan for a Healthy Los Angeles, adopted by the City Council on March 31, 2015, lays the foundation to create healthier communities for all residents in the City. As an element of the General Plan, it provides high-level policy vision, along with measurable objectives and implementation programs, to elevate health as a priority for the City's future growth and development. With a focus on public health and safety, the Plan for a Healthy Los Angeles provides a roadmap for addressing the most basic and essential quality-of-life issues: safe

neighborhoods, a clean environment (i.e., improved ambient and indoor air quality), the opportunity to thrive, and access to health services, affordable housing, and healthy and sustainably produced food.

3.3.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to air quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Conflict with or obstruct implementation of the applicable air quality plan. (Refer to Impact 3.3-1)
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (Refer to Impact 3.3-2)
- Expose sensitive receptors to substantial pollutant concentrations. (Refer to Impact 3.3-3)
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Refer to Impact 3.3-4)

For this analysis, the Appendix G Thresholds are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide, as appropriate, to assist in answering the Appendix G Threshold questions. The factors to evaluate air quality impacts are listed below.

- Combustion Emissions from Construction Equipment
 - Type, number of pieces and usage for each type of construction equipment;
 - Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment; and
 - Emission factors for each type of equipment.
- Fugitive Dust: Grading, Excavation and Hauling
 - Amount of soil to be disturbed on-site or moved off-site;
 - Emission factors for disturbed soil;
 - Duration of grading, excavation and hauling activities;
 - Type and number of pieces of equipment to be used; and
 - Projected haul route.
- Fugitive Dust: Heavy-Duty Equipment Travel on Unpaved Roads
 - Length and type of road;
 - Type, number of pieces, weight and usage of equipment; and
 - Type of soil.
- Other Mobile Source Emissions
 - Number and average length of construction worker trips to project site, per day; and
 - Duration of construction activities.

While these factors are important inputs in determining the amounts and nature of air pollution emissions generated by a project during construction, construction air quality emissions are evaluated in consideration of the thresholds set forth by the SCAQMD. Pursuant to the CEQA Guidelines (Section 15064.7), a lead agency may consider using, when available, significance thresholds established by the applicable air quality management district or air pollution control district when making determinations of significance. For purposes of this analysis, the City has determined to assess the potential air quality impacts of the Project in accordance with the latest thresholds adopted by the SCAQMD in connection with its CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent SCAQMD guidance, as discussed below, and this assessment satisfies the considerations raised in the 2006 L.A. CEQA Thresholds Guide. While the SCAQMD CEQA Air Quality Handbook contains significance thresholds for lead, Project construction and operation would not include sources of lead emissions and would not exceed the significance thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from commercial land use projects such as the Project. As a result, lead emissions are not further evaluated in this Draft EIR.

Consistency with Applicable Air Quality Plans. CEQA Guidelines Section 15125 requires an analysis of project consistency with applicable governmental plans and policies. In accordance with the SCAQMD's CEQA Air Quality Handbook, the following criteria were used to evaluate the Project's consistency with the SCAQMD's 2016 AQMP and the City's General Plan Air Quality Element:

- Criterion 1: Will the Project result in any of the following:
 - An increase in the frequency or severity of existing air quality violations; or
 - Cause or contribute to new air quality violations; or
 - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Criterion 2: Will the Project exceed the assumptions utilized in preparing the AQMP

The Project's potential impacts with respect to these criteria are discussed to assess the consistency with the SCAQMD's 2016 AQMP and applicable City General Plan Air Quality Element plans and policies.

Construction and Operational Emission Air Quality Standards. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. The Air Basin is currently in non-attainment for O₃, PM₁₀, and PM_{2.5}. SCAQMD methodology recommends that significance thresholds be used to determine the potential cumulative impacts to regional air quality along with a project's consistency with the current AQMP.

The SCAQMD has established numerical significance thresholds for construction and operational activities. The numerical thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health (SCAQMD 1993a). Given that construction impacts are temporary and limited to the construction phase, the SCAQMD has established numerical

significance thresholds specific to construction activity. Based on the thresholds in the SCAQMD CEQA Air Quality Handbook, the Project would potentially result in a significant impact of a federal or state non-attainment pollutant if emissions of O₃ precursors (VOC and NO_x), PM₁₀, or PM_{2.5} would exceed the values shown in **Table 3.3-4** (SCAQMD 2019).

TABLE 3.3-4
SCAQMD REGIONAL EMISSIONS THRESHOLDS (POUNDS PER DAY)

Activity	VOC	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
Construction	75	100	550	150	150	55
Operation	55	55	550	150	150	55

SOURCE: SCAQMD, Air Quality Significance Thresholds, April 2019.

Localized Emission Impacts on Sensitive Receptors. In addition, the SCAQMD has developed a methodology to assess the potential for localized emissions to cause an exceedance of applicable ambient air quality standards or ambient concentration limits. Impacts would be considered significant if the following would occur:

- Maximum daily localized emissions of NO_x and/or CO during construction or operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for NO₂ and/or CO (SCAQMD 2003b).
- Maximum daily localized emissions of PM₁₀ and/or PM_{2.5} during construction are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed 10.4 µg/m³ over 24 hours (SCAQMD Rule 403 control requirement).
- Maximum daily localized emissions of PM₁₀ and/or PM_{2.5} during operation are greater than the applicable localized significance thresholds, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed 2.5 µg/m³ over 24 hours (SCAQMD Rule 1303 allowable change in concentration).
- The following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:
 - The Project would cause or contribute to an exceedance of the CAAQS 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively.
 - Where the CO standard is exceeded at the intersection, a project would result in a significant impact if the incremental increase due to the project is equal to or greater than 1.0 ppm for the California 1-hour CO standard, or 0.45 ppm for the 8-hour CO standard.

The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and, therefore, not cause or contribute to an exceedance of the applicable ambient air quality standards or ambient concentration limits without project-specific dispersion modeling (SCAQMD 2003b). This analysis uses the screening criteria to evaluate impacts from localized emissions where applicable.

Toxic Air Contaminants and Sensitive Receptors. Based on the SCAQMD thresholds, the Project would cause a significant impact by exposing sensitive receptors to toxic air contaminants if any of the following would occur (SCAQMD 1993a):

- The Project emits carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or an acute or chronic hazard index of 1.0.

Objectionable Odors and Other Emissions. With respect to other emissions, such as odors, the Project would be considered significant if it created objectionable odors affecting a substantial number of people. In addition, based on the thresholds in the SCAQMD CEQA Air Quality Handbook, the Project would potentially result in a significant impact of an attainment, maintenance, or unclassified pollutant if emissions of CO or SO₂ would exceed the values shown in Table 3.3-4 (SCAQMD 2019).

Methodology

The evaluation of potential impacts to regional and local air quality that may result from the construction and long-term operations of the Project is discussed below. Additional details are provided in the *Air Quality and Greenhouse Gas Technical Appendix* in Appendix C of this Draft EIR.

SCAQMD Air Quality Guidance Documents

The SCAQMD published the CEQA Air Quality Handbook to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts (SCAQMD 1993a). The CEQA Air Quality Handbook provides standards, methodologies, and procedures for conducting air quality analyses in EIRs and was used extensively in the preparation of this analysis. However, the SCAQMD is currently in the process of replacing the CEQA Air Quality Handbook with the Air Quality Analysis Guidance Handbook. While this process is underway, the SCAQMD recommends that lead agencies avoid using the screening tables in Chapter 6 (Determining the Air Quality Significance of a Project) and the on-road mobile source emission factors in Tables A9-5-J1 through A9-5 of the CEQA Air Quality Handbook as they are outdated.

The SCAQMD instead recommends using other approved models to calculate emissions from land use projects, such as the CalEEMod software, which is a model developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California Air Districts. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions from a variety of land use projects.

The SCAQMD has published a guidance document called the Final Localized Significance Threshold Methodology for CEQA Evaluations that is intended to provide guidance when evaluating the localized effects from mass emissions during construction (SCAQMD 2003b). The SCAQMD adopted additional guidance regarding PM_{2.5} emissions in a document called Final Methodology to Calculate Particulate Matter (PM)_{2.5} and PM_{2.5} Significance Thresholds

(SCAQMD 2006). This latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and Final Localized Significance Threshold Methodology.

Consistency with Air Quality Management Plan

The SCAQMD is required, pursuant to the CAA, to reduce emissions of criteria pollutants for which the Air Basin is in non-attainment of the NAAQS (e.g., O₃ and PM_{2.5}) (SCAQMD 2012).⁵ The SCAQMD's 2016 AQMP contains a comprehensive list of pollution control strategies directed at reducing emissions and achieving the five NAAQS related to these pollutants, including transportation control strategies from SCAG's 2016–2040 RTP/SCS designed to reduce VMT (SCAQMD 2017b). The 2016 AQMP control strategies were developed, in part, based on regional growth projections prepared by SCAG through 2040 (SCAQMD 2017b). For this reason, projects whose growth is consistent with the assumptions used in the 2016–2040 RTP/SCS will be deemed to be consistent with the 2016 AQMP because their growth has already been included in the growth projections utilized in the formulation of the control strategies in the 2016 AQMP. Thus, emissions from projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the 2016 AQMP would not jeopardize attainment of the air pollutant reduction goals identified in the AQMP even if their emissions exceed the SCAQMD thresholds of significance (SCAQMD 1993a). As noted above, the 2016 AQMP has been adopted by the SCAQMD and CARB. Therefore, this analysis considers consistency of the Project (see Chapter 2.0, *Project Description*, of this Draft EIR for additional details) with the 2016 AQMP based on the AQMP's consistency with applicable growth projections and emission control strategies.

Consistency with General Plan – Air Quality Element

As discussed previously, the City's General Plan Air Quality Element includes Citywide goals, objectives, and policies that guide the City in the implementation of its air quality improvement programs and strategies. Goals, objectives, and policies of the Air Quality Element relevant to the Project include minimizing traffic congestion and increasing energy efficiency, as well as reducing air pollutant emissions consistent with the AQMP. The analysis below provides a side-by-side comparison of each of the relevant provisions in the Air Quality Element with the Project to determine whether the Project would be consistent with those provisions.

Existing Project Site Emissions

As described above, since none of the existing public facilities within the SLRC would be removed, rather public spaces and facilities would be expanded, renovated, and redesigned to improve visitor experience and the existing area would be organized into a series of new spaces (zones) surrounding the reservoirs (refer to Chapter 2.0, *Project Description*, of this Draft EIR for additional details), existing operational air quality emissions are not required to be calculated and the Project's air quality emissions are conservatively considered new.

⁵ The Los Angeles County portion of the Air Basin is designated as nonattainment for the federal lead standard; however, this was due to localized emissions from two lead-acid battery recycling facilities in the City of Vernon and the City of Industry that are no longer operating.

Construction Emissions Methodology

Construction air quality impacts were assessed based on the incremental increase in emissions compared to baseline conditions. Under CEQA, the baseline environmental setting for an EIR is generally established at or around the time that the Notice of Preparation (NOP) for the EIR is published.

Project construction activities that would have the potential to create regional air quality impacts include vehicle trips generated by construction workers, vendor trucks, and haul trucks traveling to and from the Project Site and building activities, such as the application of paint and other surface coatings. The Project's daily regional criteria pollutant emissions during construction have been estimated by assuming a conservative scenario for construction activities (i.e., assuming all construction occurs at the earliest feasible date, given that regulatory requirements will improve future emissions associated with fleet, vehicle, and equipment mixes) and applying the mobile source and fugitive dust emissions factors. The emissions have been estimated using the CalEEMod software (Version 2020.4.0), an emissions inventory software program recommended by the SCAQMD, and the CARB on-road vehicle EMFAC2021 model. The input values used in this analysis were adjusted to be Project-specific based on equipment types and the construction schedule based on information provided by the client. As described in Chapter 2.0, *Project Description*, since construction sequence is currently unknown, for purposes of this environmental analysis, it is assumed that construction of certain park zones would need to occur before other park zones to maximize usage of the proposed Project site during construction. For example, the Ivanhoe Overlook and Eucalyptus Grove might need to be constructed before the East and West Narrows to avoid potential damage to any of the new facilities (e.g., new pathways). For the purposes of the environmental analysis, the following park zones are assumed to be constructed simultaneously within two groupings, where the second grouping would be construction sequentially after the first:

1. Ivanhoe Reservoir (Ivanhoe Overlook), The Eucalyptus Grove, Habitat Islands, the Knoll, the Meadow (1st half)
2. The East and West Narrows, the South Valley, Ivanhoe Reservoir (Ivanhoe Spillway and Promenade), and the Meadow (2nd half), and Offsite Improvements.

When information was unknown, CalEEMod defaults were used. Emissions from off-road equipment and off-road vehicles were estimated through CalEEMod since CalEEMod is based on outputs from the CARB off-road emissions factor (OFFROAD), which is the emissions estimation model developed by CARB and used to calculate emissions from construction activities, including off-road vehicles. Worker trip, concrete truck, vendor truck and haul truck trip estimates were provided by the Project's construction representative. Emissions from worker trips, haul truck trips, concrete truck trips and vendor truck trips were estimated using EMFAC2021. Haul truck trip estimates were based on excavation volumes obtained from the City's construction manager and 10 cubic yard capacity haul trucks for demolition and site preparation phase and 14 cubic yard soil capacity haul trucks for the drainage/utilities/trenching and grading/excavation phase; cement truck trip estimates were based on the Project's engineering representative and 9 cubic yard concrete capacity concrete trucks. Emissions from haul trucks, vendor trucks, and concrete trucks were also estimated outside of CalEEMod using

EMFAC2021 emission factors for haul, vendor and concrete trucks because CalEEMod assumes that the number of heavy-duty trucks input into the model occurs across the entire length of the applicable construction phases. However, since the applicable construction phases would not have the same number of haul trucks, vendor trucks, and concrete trucks on-site every day within each particular phase, the emissions calculations performed outside of CalEEMod are able to account for the varying maximum numbers of daily haul truck and concrete truck trips within each of the demolition, site preparation, grading/excavation, and foundations/concrete pour, landscape and pool/canopy/building phases. These values were applied to the construction phasing assumptions used in the criteria pollutant analysis to generate criteria pollutant emissions values for each construction activity. Across all the park zones, the Project is estimated to import approximately 86,765 cubic yards and export approximately 89,003 cubic yards of soil during grading/excavation and export approximately 30,332 cubic yards of soil drainage/utilities/trenching, approximately 21,450 cubic yards of demolition debris (asphalt, earthwork, and general construction debris) and approximately 13,264 cubic yards of site preparation debris (vegetation and minor earthwork). Emissions from these activities were estimated by construction phase within each park zone. The maximum daily emissions were estimated based on maximum construction activity conditions for heavy-duty off-road construction equipment and on-road mobile sources and do not represent the emissions that would occur every day during Project construction. The maximum daily emissions were compared to the SCAQMD daily regional thresholds of significance. A detailed discussion of the Project's construction phasing and equipment list is available in the *Technical Appendix for Air Quality and Greenhouse Gas Emissions* for the Project, which is provided in Appendix C of this Draft EIR.⁶

Project construction activities that would have the potential to create local air quality impacts include fugitive dust from demolition, grading, and building activities, such as the application of paint and other surface coatings. The localized effects from the on-site portion of the Project's construction emissions were evaluated at the nearby sensitive receptor locations that would be potentially impacted by Project construction in accordance with the SCAQMD's *Final Localized Significance Threshold Methodology* (SCAQMD 2003b). The localized significance thresholds only address NO_x, CO, PM₁₀, and PM_{2.5} emissions. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without the need for Project-specific dispersion modeling. The localized analysis for the Project is based on this SCAQMD screening criteria. The Project Site is located within the boundaries of the Silver Lake–Echo Park–Elysian Valley Community Plan Area of the City and as described in Chapter 2.0, *Project Description*, would redesign approximately 116-acres of the 127-acre Silver Lake Reservoir Complex (SLRC) with eight different park zones being developed that range in size between approximately 2.76 and 8.70 acres (refer to Chapter 2.0, *Project Description* and the *Technical Appendix for Air Quality*

⁶ Impacts from asbestos and lead-based paint from Project demolition are expected to be less than significant with compliance with regulations. For additional details please refer to Section 3.9, *Hazards and Hazardous Materials*, of this Draft EIR.

and Greenhouse Gas Emissions for the Project, which is provided in Appendix C of this Draft EIR, for additional details).

The Project would also include off-site improvements along areas surrounding the SLRC, include the addition of parking along the north side of West Silver Lake Drive, and the addition of a bike lane, and the potential addition of a sidewalk and parallel parking for a length of approximately 3,000 feet. Furthermore, off-site improvements include wall openings along the sanitary wall that surrounds the SLRC could be required in order to allow for access points into the proposed Project site. The placement of approximately three strategic wall openings along the western side of the reservoir could be located in areas where neighborhood streets terminate at the reservoir. On the eastern side of the reservoir openings would be created every 100 feet along a 3,000-foot area that between Armstrong Avenue and Duane Street, to allow more entry points into the park. Wall openings would be approximately 5 feet in length at each location (refer to Chapter 2.0, *Project Description*, of this Draft EIR, for additional details).

Therefore, conservatively, the screening criteria used in the analysis were those scaled between the 2 and 5-acre site thresholds to match the size of the individual park zones in the Central Los Angeles County area with sensitive receptors located 25 meters away, which accounts for all adjacent off-site sensitive receptors (SCAQMD 2003b). For any park zone greater than 5-acres and for the groupings of park zones that would be constructed simultaneously as described above where the acreage of the park zone construction groupings were greater than 5-acres, the 5-acre site threshold was conservatively used⁷ in the Central Los Angeles County area with sensitive receptors located 25 meters away, which accounts for all adjacent off-site sensitive receptors.⁸ The maximum net daily emissions from construction of the individual Project park zones and park zones that would be constructed simultaneously in the groupings as described above were compared to these screening criteria.

Project construction is estimated to start in 2025 but may commence at a later date. If this occurs, construction impacts would be lower than those analyzed below due to the use of a more energy-efficient and cleaner burning construction vehicle fleet mix, pursuant to state regulations that require vehicle fleet operators to phase-in less polluting heavy-duty equipment (see subsection, *State Programs for Toxic Air Contaminants and Diesel Risk Reduction Program*, under Section 3.3.2, *Regulatory Framework*, for additional details). As a result, should Project construction commence at a later date than analyzed in this Draft EIR, air quality impacts would be lower than the impacts disclosed herein.

⁷ The use of the 5-acre localized significance thresholds for areas greater than 5 acres results in an environmentally protective analysis because the localized significance thresholds (i.e., the allowable emissions under which a significant impact would not occur) generally increases with increasing size.

⁸ For any park zones greater than 5 acres, using the screening criteria applicable for a 5-acre site is conservative because the localized significance thresholds are project site dependent and the allowable thresholds increase with increasing project size. Therefore, using a 5-acre site threshold instead of the acreage for the larger Project park zones and for the acreage for the groupings of park zones that would be constructed simultaneously that are larger than 5 acres yields a more stringent analysis.

Operational Emissions Methodology

Project operational emissions were estimated using CalEEMod Version 2020.4.0 to forecast the daily regional criteria pollutant emissions from on-site area and stationary sources that would occur during long-term Project operations.

Operation of the Project has the potential to generate criteria pollutant emissions through vehicle and truck trips traveling to and from the Project Site. For mobile sources, the maximum daily VMT was estimated from the vehicle trips provided for the Project uses in the Project's Transportation Impact Assessment (TIA) and default commercial trip type trip lengths from CalEEMod (JBA 2022) (see Appendix K). The SLRC Project team generated vehicle occupancy rates assumptions in order to estimate total vehicle trips associated with each peak park everyday use and special events/life performances, community events and polling station events (see the Project's TIA, included as Appendix K of this Draft EIR, for additional details regarding the vehicle occupancy rate assumptions and trip generation methodology) (JBA 2022) (see Appendix K). Therefore, the Project's mobile source operational emissions represent a maximum day with the highest estimated VMT. The EMFAC2021 model was run in the emissions mode (also referred to as the "Burden" mode) and used to generate Air Basin-specific vehicle fleet emission factors in units of grams or metric tons per mile. These emission factors were then applied to the daily VMT to obtain daily mobile source emissions.

The Project's operational emissions were estimated using the CalEEMod software. CalEEMod was used to forecast the daily regional criteria pollutant emissions from on-site area and stationary sources that would occur during long-term Project operations. Emissions would result from area sources located on-site, such as landscaping equipment and use of consumer products. The Project is not expected to contain any large stationary combustion equipment, such as large boilers or combustion turbines. With compliance with the City of Los Angeles' Green New Deal, all new municipally-owned buildings and major building renovation projects will utilize electricity instead of natural gas. Accordingly, natural gas would not be supplied to support proposed Project operation activities related to building energy (see Section 3.6, *Energy*, of this Draft EIR for additional details).

Further, the Project would optimize natural ventilation and daylighting at the new Education Center and Multi-Purpose Facility which would reduce the amount of electricity needed for lighting and heating/cooling. The Education Center would also include shade trees to minimize the heat-island effect and regulate indoor temperatures without the need for additional electrical capacity. The Project would also improve the energy efficiency of the existing Multi-Purpose Facility and would be updated to meet current building energy and safety codes. The Education Center, updated Recreation Center, and Multi-Purpose Facility would be designed to be all-electric and would eliminate the use of natural gas. The proposed Project would not result in installation of any new natural gas infrastructure. While building electrification would result in higher electricity usage, it would result in more sustainable development by eliminating fossil fuel from on-site natural gas combustion and the associated criteria pollutant emissions use for building energy.

Operational air quality impacts were assessed based on the incremental increase in emissions compared to baseline conditions. Under CEQA, the baseline environmental setting for an EIR is

generally established at or around the time that the Notice of Preparation (NOP) for the EIR is published. As discussed previously, none of the existing public facilities within the SLRC would be removed, but rather public spaces and facilities would be expanded, renovated, and redesigned to improve visitor experience and the existing area would be organized into a series of new spaces (zones) surrounding the reservoirs (refer to Chapter 2.0, *Project Description*, of this Draft EIR for additional details). Therefore, existing operational air quality emissions are not required to be calculated and the Project's air quality emissions are conservatively considered new. The maximum daily emissions from operation of the Project are compared to the SCAQMD daily regional significance thresholds.

The localized effects from the on-site portion of the maximum daily net emissions from Project operation were evaluated at the nearby sensitive receptor locations that would be potentially impacted by operation of the Project according to the SCAQMD's *Final Localized Significance Threshold Methodology* (SCAQMD 2003b). The localized impacts from operation of the Project were assessed similar to the construction emissions, as discussed previously. For further explanation, please see the *Air Quality and Greenhouse Gas Emissions Technical Documentation* in Appendix C of this Draft EIR.

Project operation is conservatively estimated at the earliest feasible year after construction is completed (i.e., 2030) but may commence at a later date. If the onset of Project operations is delayed to a later date than assumed in the modeling analysis, operational impacts would be less at a later date than those analyzed here in 2030 due to the improving vehicle technology that would be more fuel-efficient and lead to a cleaner vehicle fleet mix traveling to and from the Project Site as reflected in EMFAC mobile source emission factors. As a result, Project buildout at a later date than analyzed in emissions modeling would result in air quality emission impacts that would be lower than the impacts disclosed herein.

Localized Emissions

The localized effects from the on-site portion of the maximum daily emissions from Project operation were evaluated at the nearby sensitive receptor locations that would be potentially impacted by operation of the Project according to the SCAQMD's *Final Localized Significance Threshold Methodology* (SCAQMD 2003b). The localized impacts from operation of the Project were assessed similar to the construction emissions, as discussed previously. For further explanation, please see Appendix C of this Draft EIR.

CO Hotspots

The greatest quantities of CO are produced from motor vehicle combustion and are usually concentrated at or near ground level because they do not readily disperse into the atmosphere, particularly under cool, stable (i.e., low or no wind) atmospheric conditions. Localized areas where ambient concentrations exceed state and/or federal standards are termed "CO hotspots." The potential for the Project to cause or contribute to the formation of off-site CO hotspots was evaluated based on prior dispersion modeling of the four busiest intersections in the Air Basin that the SCAQMD conducted for its CO Attainment Demonstration Plan in the AQMP. The analysis compares the intersections with the greatest peak-hour traffic volumes that would be impacted by the Project to the intersections modeled by the SCAQMD. Project-impacted intersections with

peak-hour traffic volumes that would be lower than the intersections modeled by the SCAQMD, in conjunction with lower background CO levels, would result in lower overall CO concentrations as compared to the SCAQMD-modeled values to maintain attainment status in its AQMP.

Toxic Air Contaminant Impacts (Construction / Operation)

The greatest potential for TAC emissions during construction would be related to DPM emissions associated with heavy-duty equipment during excavation and grading activities. Construction activities associated with the Project would be sporadic, transitory, and short-term in nature (approximately 56 months). As further described below, the City is not required to conduct a quantified health risk assessment (HRA) for recreational use projects, such as the Project, as the applicable standards and guidance that are available are intended for evaluation of health risks associated with stationary long-term sources of TAC emissions. Rather than being a stationary source of TAC emissions, the Project's emissions are largely from mobile sources, and, while the Project would generate localized TAC emissions during construction, the associated activities and exposures would be short- rather than long-term.

The OEHHA developed the Air Toxics Hot Spots Program Guidance Manual for the Preparation of Risk Assessments (Guidance Manual), in conjunction with CARB, for use in implementing the Air Toxics "Hot Spots" Program (Health and Safety Code Section 44360 et. seq.). The Air Toxics "Hot Spots" Program requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, to identify facilities having localized impacts, to ascertain health risks, to notify nearby residents of significant risks, and to reduce those significant risks to acceptable levels. The intent in developing the Guidance Manual was to provide HRA procedures for use in the Air Toxics Hot Spots Program or for the permitting of new or modified stationary sources.

Although the HRA guidelines are intended for assessment of long-term stationary sources, in relation to assessment of health risk due to short-term construction, the Guidance Manual states (OEHHA 2015):

"The local air pollution control districts sometimes use the risk assessment guidelines for the Hot Spots program in permitting decisions for short-term projects such as construction or waste site remediation. Frequently, the issue of how to address cancer risks from short-term projects arises. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime."

The Project is not a "Hot Spots" Program project but rather involves the construction and operation of expanded, renovated, and redesigned publicly-accessible recreational uses. The OEHHA Guidance Manual applies to stationary source operations which have no applicability to recreational projects, such as the Project. While OEHHA provides limited guidance on how to conduct HRAs for short-term projects, it makes it clear there is "considerable uncertainty" in evaluating cancer risk over short-term durations. In addition, the Guidance Manual does not identify short-term projects or non-

stationary source projects that warrant the preparation of a HRA or recommend the preparation of HRAs for short-term construction projects or non-stationary source projects, such as the Project.

In addition to OEHHA highlighting the considerable uncertainty in meaningfully evaluating short term exposures to TACs, with respect to construction emissions, the SCAQMD states that it “currently does not have guidance on construction Health Risk Assessments” (SCAQMD 2016a). Furthermore, in comments presented to the SCAQMD Governing Board relating to TAC exposures associated with Rules 1401, 1401.1, 1402 and 212 revisions, with regard to the use of the OEHHA Guidance Manual for projects subject to CEQA, SCAQMD staff reported that (SCAQMD 2015):

The Proposed Amended Rules are separate from the CEQA significance thresholds. SCAQMD staff is currently evaluating how to implement the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will evaluate a variety of options on how to evaluate health risks under the Revised OEHHA Guidelines under CEQA. The SCAQMD staff will conduct public workshops to gather input before bringing recommendations to the Governing Board.

To date, the SCAQMD has not conducted public workshops nor developed policy relating to the applicability of applying the Guidance Manual for projects prepared by other public/lead agencies subject to CEQA, for short-term construction emissions, or for recreational and athletic facility projects, such as the Project. However, despite the considerable uncertainty and lack of accepted guidance for assessing short-term construction emissions from OEHHA and SCAQMD, and although the City does not require that a quantified HRA be prepared for the Project for purposes of CEQA compliance, for informational purposes a refined HRA was performed to assess the potential health risk impacts from the Project’s construction emissions.

The HRA evaluated the potential for increased health risks for off-site sensitive receptors due to Project construction activities. Detailed parameters and calculations for HRA are provided in the *Technical Appendix for Air Quality and Greenhouse Gas Emissions* for the Project, which is provided in Appendix C. The greatest potential for TAC emissions during Project construction would be related to DPM emissions associated with heavy-duty equipment during the construction of the groupings of park zones and off-site improvements that would be constructed simultaneously. Construction activities associated with the Project would be sporadic, transitory, and short term in nature (OEHHA 2015). The construction HRA was performed in accordance with the revised OEHHA Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (OEHHA Guidance). The analysis incorporated the estimated construction emissions and dispersion modeling using the USEPA AMS/EPA Regulatory Model (AERMOD) model with meteorological data from the closest SCAQMD meteorological monitoring station.

For this HRA, AERMOD dispersion model output was converted into specific cancer risks and non-cancer chronic health hazard impacts. Health impacts addressed construction DPM emissions and the effects on nearby sensitive uses. Consistent with OEHHA methodology, health impact calculations take into account higher estimates of cancer potency during early life exposures and to use different assumptions for breathing rates and length of residential exposures (OEHHA

2015). Detailed AERMOD dispersion modeling and HRA calculations are included in the *Technical Appendix for Air Quality and Greenhouse Gas Emissions for the Project*, which is provided in Appendix C.

Health risk calculations were performed using the OEHHA methodologies and exposure parameters, and the corresponding SCAQMD guidance documents (OEHHA 2015). This analysis calculated the cancer risk and chronic hazard indices to estimate Project-specific health risks for construction emissions using annual average pollutant ambient concentrations modeled by the USEPA's AMS/EPA Regulatory Model (AERMOD) model.

During long-term operations, TACs could be emitted as part of periodic maintenance operations, from routine cleaning, from periodic painting, etc., and from periodic visits from delivery trucks and service vehicles. However, these events are expected to be occasional and result in minimal emissions exposure to off-site sensitive receptors. As the Project consists of recreational school- and community-based activities, the Project would not include sources of substantial TAC emissions identified by the SCAQMD or CARB siting recommendations (SCAQMD 2005b; CARB 2005). Thus, a qualitative analysis is appropriate for assessing the Project's operational emissions. The siting of the Project itself in relation to off-site sources of TACs is addressed under land use compatibility for the surrounding area in Section 3.11, *Land Use and Planning*, of this Draft EIR.

3.3.4 Project Design Features

No specific Project Design Features are proposed with regard to air quality.

3.3.5 Impacts and Mitigation Measures

Applicable Air Quality Plan

Impact 3.3-1: Would the proposed Project conflict with or obstruct implementation of the applicable air quality plan?

SCAQMD CEQA Air Quality Handbook Policy Analysis

The following analysis addresses the Project's consistency with applicable SCAQMD and SCAG policies, inclusive of regulatory compliance. In accordance with SCAQMD's CEQA Air Quality Handbook, Chapter 12, the following criteria are required to be addressed to determine the Project's consistency with applicable SCAQMD and SCAG policies:

- Criterion 1: Will the Project result in any of the following:
 - An increase in the frequency or severity of existing air quality violations; or
 - Cause or contribute to new air quality violations; or
 - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
- Criterion 2: Will the Project exceed the assumptions utilized in preparing the AQMP

The Project's potential impacts with respect to these criteria are discussed to assess the consistency with the SCAQMD's 2016 AQMP and applicable City General Plan Air Quality Element plans and policies.

Criterion 1

With respect to the first criterion, as discussed under the analysis for Threshold (c) below, localized concentrations of NO₂ as NO_x, CO, PM10, and PM2.5 have been analyzed for the Project. SO₂ emissions would be negligible during construction and long-term operations and, therefore, would not have the potential to cause or effect a violation of the SO₂ ambient air quality standard. Since VOCs are not a criteria pollutant, there is no ambient standard or localized threshold for VOCs. However, due to the role VOCs play in O₃ formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established.

The Project's NO_x, CO, PM10, and PM2.5 emissions during construction and operations were analyzed: (1) to ascertain potential effects on localized concentrations; and (2) to determine if there is a potential for such emissions to cause or effect a violation of the ambient air quality standards for NO₂, CO, PM10, and PM2.5. As shown in Table 3.3-12 to 3.3-19, the increases in localized emissions of NO_x, CO, PM10, and PM2.5 during construction would not exceed the SCAQMD-recommended localized significance thresholds at sensitive receptors in proximity to the Project Site. As shown in Table 3.3-20, the increases in localized emissions of NO_x, CO, PM10, and PM2.5 emissions during operation of the Project would not exceed the SCAQMD-recommended localized significance thresholds at sensitive receptors in proximity to the Project Site.

The Project would not introduce any substantial stationary sources of emissions; therefore, CO is the appropriate benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations (SCAQMD 1993a). As indicated below in Threshold (c), no intersections would result in a CO hotspot in excess of the ambient air quality standards, and impacts would be less than significant. Accordingly, the Project would not increase the frequency or severity of an existing CO violation or cause or contribute to new CO violations.

Therefore, in response to Criterion 1, the Project could potentially increase the frequency or severity of an existing violation or cause or contribute to new violations for O₃ based on the temporary construction localized exceedance of NO_x, which is an O₃ precursor. Accordingly, impacts regarding the timely attainment of air quality standards or interim emission reductions specified in the AQMP would be significant.

Criterion 2

With respect to the second criterion for determining consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2016–2040 RTP/SCS regarding population, housing, and growth trends. Determining whether or not a project exceeds the assumptions reflected in the AQMP involves the evaluation of consistency with applicable population, housing, and employment growth projections and appropriate incorporation of AQMP control measures. The following discussion provides an analysis with respect to these measures.

Air Quality Management Plan Consistency

Construction and operation of the Project would comply with applicable required fleet rules and control strategies to reduce on-road truck emissions (i.e., 13 CCR, Section 2025 [CARB Truck and Bus regulation]), and other applicable SCAQMD rules specified and incorporated in the 2016 AQMP. As discussed under the *Methodology* subsection in Section 3.3.3, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP even if their emissions exceed the SCAQMD's thresholds of significance. As discussed below, compliance with the applicable required fleet rules and control strategies and requirements would render it consistent with, and meet or exceed, the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Thus, the Project's construction-related and operations-related criteria pollutant emissions would not cause the Air Basin's criteria pollutant emissions to worsen so as to impede the SCAQMD's efforts to achieve attainment with respect to any criteria pollutant for which it is currently not in attainment of the NAAQS and CAAQS (e.g., O₃, PM₁₀, and PM_{2.5}) or to cause the Air Basin to deteriorate from its current attainment status with respect to any other criteria pollutant emissions (SCAQMD 2012).

As further discussed below, the Project is also consistent with the 2016 AQMP as the Project would incorporate into its design appropriate control strategies set forth in the 2016 AQMP for achieving its emission reduction goals and would be consistent with the demographic and economic assumptions upon which the 2016 AQMP is based (see Section 2.5.7, *Sustainability Features*, of this Draft EIR for additional details).

Construction Growth Projections

The Project would generate short-term construction jobs, but these jobs would not necessarily bring new construction workers or their families into the region since construction workers are typically drawn from an existing regional pool of construction workers who travel among construction sites within the region as individual projects are completed, and are not typically brought from other regions to work on developments such as the Project. Moreover, these jobs would be temporary in nature. Therefore, the Project's construction jobs would not conflict with the long-term employment or population projections upon which the 2016 AQMP is based. Impacts would be less than significant.

Operation Growth Projections

As discussed in Section 3.13, *Population and Housing*, of this Draft EIR, the Project's employment growth would fall within the growth projections contained in the 2016–2040 RTP/SCS, which forms the basis of the growth projections in the 2016 AQMP and the 2020–2045 RTP/SCS. Operations and maintenance activities related to the proposed Project would require a total of approximately 5 new full-time staff daily. These new staff would perform routine operation and maintenance activities, horticulture maintenance and water management, and security as outlined below. Security staff would have a daily presence within the proposed Project area to provide oversight of the area's large acreage and to address safety concerns related to the reservoir space and unsafe behavior. Of the five new full-time staff, up to two could be security personnel patrolling the site 24 hours a day, 7 days a week. The proposed Project would

also allow for large, scheduled public events, including outdoor concerts, movie nights, or luncheons, and requiring amplified sound. It is anticipated that approximately 600 visitors would attend such events, with a mixture of approximately 70 percent of attendees coming from the immediate neighborhood by walking or other non-vehicle means, and 30 percent driving in to attend the event. The proposed Project is anticipated to be a local serving recreational Project. However, the proposed Project could have a regional draw during special events. For purposes of this analysis, special event would be assumed to occur weekly during the three months of summer vacation (presumably June, July, and August). These events would require a permit from the City and would be staffed appropriately, but would not result in any permanent employee increases. Conservatively assuming 5 new permanent employees, this increase in employees would represent less than 0.002 percent of the growth in employees projected for the City in the 2016–2040 RTP/SCS, between 2020 and 2040 (SCAG 2016). The Project would, therefore, also fall within the growth projections as contained in the RTP/SCS, and ultimately the growth projections in the AQMP, since the growth would occur in a transit rich area, which would minimize potential growth in transportation-related emissions.

As discussed above under the *Methodology* subsection in Section 3.3.3, projects, uses, and activities that are consistent with the applicable growth projections and control strategies used in the development of the AQMP would not jeopardize attainment of the air quality reductions identified in the AQMP, even if their emissions exceed the SCAQMD’s thresholds of significance (SCAQMD 1993a). The Project would not obstruct implementation of the 2016 AQMP, as discussed below under Thresholds (b), (c), and (d), since its regional construction and operational emissions would be less than significant with implementation of feasible mitigation measures (discussed further below under the *Mitigation Measures* subsection), and its localized construction and operational emissions would be less than significant. As a result, the Project would not conflict with the growth projections and control strategies used in the development in the 2016 AQMP. Impacts would be less than significant.

Revised Draft 2022 AQMP Assessment

As under the analysis for the 2016 AQMP, the Project would generate short-term construction jobs, but these jobs would not necessarily bring new construction workers or their families into the region since construction workers are typically drawn from an existing regional pool of construction workers who travel among construction sites within the region as individual projects are completed, and are not typically brought from other regions to work on developments such as the Project. Moreover, these jobs would be temporary in nature. Therefore, the Project’s construction jobs would not conflict with the long-term employment or population projections upon which the Revised Draft 2022 AQMP is based.

As discussed in Section 3.8, *Greenhouse Gas Emissions*, and 3.11, *Land Use and Planning*, the population, housing, and employment forecasts, which are adopted by SCAG’s Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. While the Project does not propose residential uses or new businesses, new employees would be introduced by the Project. On a typical day in which special events/life performances on the Silver Lake Lawn in the Meadow (i.e., fewer than 600 spectators and participants) would take place. Approximately 5 employees would be net new and

would include operations and maintenance positions. According to the 2020–2045 RTP/SCS, the employment forecast for the City of Los Angeles Subregion in 2022 is approximately 1,907,801 employees (SCAG 2020). In 2030, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have 1,987,139 employees (SCAG 2020). Thus, the Project’s estimated 5 employees would constitute 0.01 percent of the employment growth forecasted in the City between 2022 and 2030. Accordingly, the Project’s generation of employees would not conflict with employment generation projections contained in the 2020–2045 RTP/SCS. Refer to Section 3.8, *Greenhouse Gas Emissions*, and 3.11, *Land Use and Planning*, of this Draft EIR, for additional information regarding consistency with the 2020–2045 RTP/SCS. The Project would, therefore, also fall within the growth projections as contained in the RTP/SCS, and ultimately the growth projections in the Revised Draft 2022 AQMP. Impacts would be less than significant.

Control Strategies

Construction

During its construction phase, the Project would comply with CARB’s requirements to minimize short-term emissions from on-road and off-road diesel equipment and with SCAQMD’s regulations, such as Rule 403 for controlling fugitive dust and Rule 1113 for controlling VOC emissions from architectural coatings. Furthermore, the Project would utilize construction contractors in compliance with state on-road and off-road vehicle rules, including the ATCM that limits heavy-duty diesel motor vehicle idling to five minutes at any location (13 CCR, Section 2485), the Truck and Bus regulation that reduces NO_x, PM₁₀, and PM_{2.5} emissions from existing diesel vehicles operating in California (13 CCR, Section 2025) and the In-Use Off-Road Diesel Fueled Fleets regulation that reduces emissions by the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models (13 CCR, Section 2449). The Project’s construction contractor would be required to comply with these regulatory control measures. Compliance with these regulatory control measures would ensure the Project would not conflict with AQMP control strategies intended to reduce emissions from construction equipment and activities. Impacts would be less than significant.

Operation

The Project’s location, design, and land uses would be consistent with the 2016 AQMP during operations. As discussed above, the 2016 AQMP includes land use and transportation strategies from the SCAG 2016–2040 RTP/SCS that are intended to reduce VMT and resulting regional mobile source emissions. The majority of these strategies are to be implemented by cities, counties, and other regional agencies, such as SCAG and SCAQMD, although some can be furthered by individual development projects.

The Project’s location, design, and land uses would support transportation control strategies related to reducing vehicle trips for users and visitors of the approximately 33 acres of re-developed useable space, including approximately 10 acres for active and passive recreation and approximately 5.5 miles of walking paths and trails to provide public access throughout the Project area, and encourage efficient transportation and reduce VMT associated with the Project (refer to Section 3.16, *Transportation*, for additional details). The Project proposes a project consistent with compact growth within an established residential community accessible to and

well-served by public transit, including Los Angeles County Metropolitan Transit Authority (Metro) Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the that runs on West Silver Lake Drive with multiple stops adjacent to the Complex and 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Project. This analysis provides evidence of the Project's consistency with the 2016 AQMP's goal of reducing mobile source emissions as a source of NO_x and PM_{2.5}. As described above, by locating its public open space and recreational uses within an area that has existing high quality public transit (with access to existing regional bus service) the Project would reduce vehicle trips and VMT and result in the corresponding reduction in air pollutant emissions. In addition, by including features that support and encourage pedestrian activity and other non-vehicular transportation and increased transit use in the Silver Lake community of Los Angeles, the Project would further reduce vehicle trips and VMT and result in the corresponding reduction in air pollutant emissions. Therefore, the Project would not conflict with the 2016 AQMP with respect to transportation control strategies from the 2016–2040 RTP/SCS that are intended to reduce VMT and resulting regional mobile source emissions. Impacts would be less than significant.

Revised Draft 2022 AQMP Assessment

As under the analysis for the 2016 AQMP, the Project's construction contractor would be required to comply with regulatory control measures, such as CARB's requirements to minimize short-term emissions from on-road and off-road diesel equipment and with SCAQMD's regulations, such as Rule 403 for controlling fugitive dust and Rule 1113 for controlling VOC emissions from architectural coatings. Furthermore, the Project would utilize construction contractors in compliance with state on-road and off-road vehicle rules, including the ATCM that limits heavy-duty diesel motor vehicle idling to five minutes at any location (13 CCR, Section 2485), the Truck and Bus regulation that reduces NO_x, PM₁₀, and PM_{2.5} emissions from existing diesel vehicles operating in California (13 CCR, Section 2025) and the In-Use Off-Road Diesel Fueled Fleets regulation that reduces emissions by the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models (13 CCR, Section 2449). Compliance with these regulatory control measures would ensure the Project would not conflict with the Revised Draft 2022 AQMP control strategies intended to reduce emissions from construction equipment and activities where the new control strategies and attainment demonstrations in the Revised 2022 AQMP are expected to supersede any previous commitments not achieved and not re-introduced in the proposed control strategy (SCAQMD 2022).

The Project's location, design, and land uses would be consistent with the Revised Draft 2022 AQMP during operations. As discussed above, the Revised Draft 2022 AQMP includes land use and transportation strategies from the SCAG 2020–2045 RTP/SCS that are intended to reduce VMT and resulting regional mobile source emissions. The majority of these strategies are to be implemented by cities, counties, and other regional agencies, such as SCAG and SCAQMD, although some can be furthered by individual development projects.

As under the analysis for the 2016 AQMP, the Project's location, design, and land uses would support transportation control strategies related to reducing vehicle trips for users and visitors of the approximately 33 acres of re-developed useable space, including approximately 10 acres for

active and passive recreation and approximately 5.5 miles of walking paths and trails to provide public access throughout the Project area, and encourage efficient transportation and reduce VMT associated with the Project (refer to Section 3.16, *Transportation*, for additional details). The Project proposes a project consistent with compact growth within an established residential community accessible to and well-served by public transit, including Los Angeles County Metropolitan Transit Authority (Metro) Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the that runs on West Silver Lake Drive with multiple stops adjacent to the Complex and 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Project. This analysis provides evidence of the Project's consistency with the 2016 AQMP's goal of reducing mobile source emissions as a source of NO_x and PM_{2.5}. As described above, by locating its public open space and recreational uses within an area that has existing high quality public transit (with access to existing regional bus service) the Project would reduce vehicle trips and VMT and result in the corresponding reduction in air pollutant emissions. In addition, by including features that support and encourage pedestrian activity and other non-vehicular transportation and increased transit use in the Silver Lake community of Los Angeles, the Project would further reduce vehicle trips and VMT and result in the corresponding reduction in air pollutant emissions. Therefore, the Project would not conflict with the Revised Draft 2022 AQMP with respect to transportation control strategies from the 2020–2045 RTP/SCS that are intended to reduce VMT and resulting regional mobile source emissions. Impacts would be less than significant. As a result, the Project would not conflict with the growth projections and control strategies used in the development in the Revised Draft 2022 AQMP. Impacts would be less than significant.⁹

General Plan Air Quality Element

The Project would promote the General Plan Air Quality Element goals, objectives, and policies as listed under the *City of Los Angeles Air Quality Element* subsection in Section 3.3.2. In particular, the Project location and characteristics, as discussed above, would achieve several goals, policies, and objectives of the Air Quality Element by locating its development within an established residential community and supporting a land use pattern that promotes sustainability and minimization of VMT. The Project would continue to support pedestrian activity in the Silver Lake community of Los Angeles by continuing to locate park and recreational uses and added new school and community athletic uses in an already established neighborhood. As discussed in Chapter 2.0, *Project Description*, to allow for public access to park amenities as well as accommodate larger group education programs, an accessible vehicle and bus parking area would be located at the corner of Silver Lake Boulevard and Armstrong Avenue. To create safe points of entry into the proposed Project area, new pedestrian-activated flashing beacon crossings would be added along Silver Lake Boulevard and West Silver Lake Drive. Furthermore, pedestrian pathways implemented as pedestrian only would be established as described as primary paths, secondary paths, the promenade, within the Meadow, within the Narrows, and

⁹ As noted under the *Regional Context* subsection in Section 3.3.1, due to the discrepancies in the emissions inventory, reductions anticipated from the proposed measures are not identical, but the final version SIP Strategy and AQMP will use a consistent emissions inventory and the discrepancies will be resolved. In addition, the public comment period for the Revised Draft 2022 AQMP and appendices close October 18, 2022. Thus, the Revised Draft 2022 AQMP will need to incorporate updates and adjustments based on received comments. For these reasons, consistency with the 2016 AQMP remains the appropriate version when discussing a project's consistency with the AQMP.

within the Eucalyptus Grove. As discussed in Chapter 2.0, *Project Description*, the primary paths would be a minimum of 10 feet wide and would connect major destinations and link edges (at street intersections) to the promenade and the secondary paths, which are the smallest pathways, at 6 feet in width, would provide casual circulation within the gardens, terraces, and habitat areas. The promenade would be a 2.5-mile continuous walking/running loop connecting all the park zones to one another and the reservoirs. The promenade is envisioned as both place and connector. On average, it would be 25 feet wide with seating and 5-foot-wide ornamental planting bands along its edges. These would double as rain gardens during winter months. At a minimum, the promenade would maintain a 15-foot clear pathway for LADWP maintenance and operations. Within the Meadow, the promenade would run along Silver Lake Boulevard before turning west to follow the base of the Knoll. The clear path would remain consistent at 15 feet wide with 5-foot bioswale buffers on either side. A line of trees planted within the bioswales would line both sides of the promenade. Within the Narrows, at the narrowest locations within the Project area, the promenade emphasizes inward views of the water and makes space for small overlooks and terraced seating. On the southwest end, a grade change between Silver Lake Boulevard and the reservoir would allow for a small seat wall to be integrated and act as a buffer between the promenade and the road. Where it widens, a small exercise circuit would be incorporated. The clear path would be 15 feet wide at its narrowest and 20 feet wide at its widest in this section. Within the Eucalyptus Grove, the promenade would be designed to have minimal impact on the restored habitat. At the south end of the Eucalyptus Grove, the promenade leaves the road and follows the embankment edge to an overlook. Here it would be 25-feet wide with a seating band which provides a buffer between the promenade and habitat area. As it returns to the road from the overlook, crossing through the Eucalyptus Grove, the path would narrow to 15-foot wide with habitat fences on either side to provide maximum protected habitat. At the north end of the Eucalyptus Grove, a 7-foot bioswale planting strip and trees would buffer pedestrians from the street (refer to Chapter 2.0, *Project Description*, of this Draft EIR for additional details).

The Project's pedestrian features would be integrated into the adjacent pedestrian network to maintain connections with multimodal facilities. Providing pedestrian and bicycle access that minimizes barriers and links the Project Site with existing or planned external streets encourages people to walk instead of drive and reduces VMT (CAPCOA 2010). Based on the above, the Project would support a land use pattern that encourages reduced vehicle trips and transportation air pollutant emissions.

Furthermore, the Project Site is served by multiple public transit options (with access to existing local and regional bus lines that connect to regional rail service). While the Project Site is not located within a Transit Priority Area (TPA) or Transit Oriented Communities (TOC) area, the Project Site is well-served by public transit, including Los Angeles County Metropolitan Transit Authority (Metro) Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the that runs on West Silver Lake Drive with multiple stops adjacent to the Complex and 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Project. Refer to Section 3.16, *Transportation*, for additional details regarding public transit services. As such, the Project would provide opportunities for the use of alternative modes of transportation, including convenient access to public transit and opportunities for walking and biking, thereby facilitating a reduction in VMT.

Based on the above analysis, the Project would not conflict with applicable air quality policies of the General Plan's Air Quality Element, and impacts would be less than significant.

Mitigation Measures:

As discussed above, in response to Criterion 1, the Project could potentially increase the frequency or severity of an existing violation or cause or contribute to new violations for O₃ based on the temporary construction localized exceedance of NO_x, which is an O₃ precursor. Accordingly, impacts under Criterion 1 would be significant. The following mitigation measure would reduce Project construction emissions. As discussed in more detail below in Impact 3.3-2 and Impact 3.3-3, implementation of Mitigation Measure AIR-1 would reduce emission impacts to less than significant, thereby also reducing impacts under Criterion 1 of Impact 3.2-1 to less than significant.

AIR-1: Haul Trucks and Construction Equipment. The City shall implement the following requirements for construction equipment operating at each Project site. These requirements shall be included in applicable bid documents and contractor(s) must demonstrate the ability to supply such equipment. Construction equipment shall include the following:

- The Project shall utilize off-road diesel-powered construction equipment that meets or exceeds the California Air Resources Board (CARB) and United States Environmental Protection Agency (USEPA) Tier 4 Final off-road emissions standards or equivalent for equipment rated at 50 horsepower (hp) or greater during Project construction where available within the Los Angeles region. Such equipment shall be outfitted with Best Available Control Technology (BACT) which means a CARB certified Level 3 Diesel Particulate Filter or equivalent. A copy of each unit's certified tier specification, BACT documentation, and CARB or Southern California Air Quality Management District (SCAQMD) operating permit at the time of mobilization of each applicable unit of equipment shall be provided.
- Contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. All construction equipment must be properly tuned and maintained in accordance with the manufacturer's specifications. The contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications. Tampering with construction equipment to increase horsepower or to defeat emission control devices shall be prohibited.
- To import and export of on-site materials shall be scheduled to minimize empty return trips.
- Use alternatively fueled (e.g., compressed natural gas, liquefied natural gas, propane), gasoline fueled, or electrified construction equipment in place of diesel-fueled equipment to the extent locally available.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

Criteria Pollutant

Impact 3.3-2: Would the proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Construction

Construction of the Project has the potential to generate temporary regional criteria pollutant emissions through the use of heavy-duty construction equipment, such as excavators and forklifts, through vehicle trips generated by workers and haul trucks traveling to and from the Project Site, and through building activities, such as the application of paint and other surface coatings. In addition, fugitive dust emissions would result from demolition and various soil-handling activities. Mobile source emissions, primarily NO_x, would result from the use of construction equipment, such as dozers and loaders. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of construction activity, and prevailing weather conditions.¹⁰

Construction emissions were quantified for construction of each park zone and for the off-site improvements and its associated land uses. Each of the park zones and off-site improvements include implementation of different construction phases including demolition, site grubbing, excavation, drainage/utilities/trenching, foundations, building construction, asphalt paving, landscaping, waterside construction and architectural coating. Maximum daily construction emissions were calculated by combining overlapping phases and any potentially simultaneous/overlapping park zone construction in the groupings as described above. The maximum daily emissions were estimated based on maximum construction activity conditions for heavy-duty off-road construction equipment and on-road mobile sources and do not represent the emissions that would occur every day during Project construction, which would be lower on construction days under typical or below average construction activity conditions. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

The results of the criteria pollutant calculations are presented in **Table 3.3-5** and **3.3-6**. As shown in Table 3.3-5 and 3.3-6, construction-related daily emissions of NO_x would exceed the SCAQMD thresholds of significance. Emissions of other criteria pollutants would be below SCAQMD thresholds. The NO_x emissions result primarily from heavy-duty trucks required for on-road soil hauling and from concrete trucks delivering concrete to the Project Site from concrete suppliers. Therefore, the Project's temporary impact related to regional NO_x construction emissions would be potentially significant.

Implementation of Mitigation Measure AIR-1 would reduce short-term and temporary NO_x emissions, including from construction equipment, as shown in **Table 3.3-7** and **Table 3.3-8**. With implementation of Mitigation Measure AIR-1, short-term construction NO_x emissions would be reduced to below the regional emission significance threshold for NO_x. Therefore, short-term and temporary impacts related to regional NO_x construction emissions would be less than significant with mitigation.

¹⁰ Impacts from asbestos and lead-based paint from Project demolition are expected to be less than significant with compliance with regulations. For additional details please refer to Section 3.9, *Hazards and Hazardous Materials*, of this Draft EIR.

**TABLE 3.3-5
MAXIMUM REGIONAL PROJECT CONSTRUCTION EMISSIONS BY PARK ZONE FOR FIRST GROUPING
(POUNDS PER DAY)^a**

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
	lb/day					
Eucalyptus Grove and Ivanhoe Overlook						
Demolition	1	18	17	<1	3	1
Site Preparation/Grubbing	1	14	14	<1	3	2
Mass Grading/Excavation	2	22	23	<1	4	2
Drainage/Utilities/Trenching	1	10	9	<1	1	<1
Foundations/Concrete Pads	1	6	8	<1	<1	<1
Building/Structure Construction	1	16	19	<1	1	1
Asphalt Paving	1	7	12	<1	<1	<1
Architectural Coating	<1	2	3	<1	<1	<1
Landscaping or Other Finishing	1	5	7	<1	1	<1
Waterside Construction (Piles)	1	6	7	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Architectural Coating + Landscaping or Other Finishing + Water Construction (Piles)	5	50	62	<1	3	2
Knoll and Meadow (1st Half)						
Demolition	1	14	15	<1	1	1
Site Preparation/Grubbing	1	18	16	<1	4	2
Mass Grading/Excavation	2	26	25	<1	4	2
Drainage/Utilities/Trenching	1	7	6	<1	<1	<1
Foundations/Concrete Pads	1	5	8	<1	<1	<1
Building/Structure Construction	2	17	21	<1	1	1
Asphalt Paving	1	7	12	<1	<1	<1
Architectural Coating	1	2	3	<1	<1	<1
Landscaping or Other Finishing	1	5	7	<1	1	<1
Waterside Construction (Piles)	1	6	7	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Architectural Coating + Landscaping or Other Finishing + Water Construction (Piles)	6	51	64	<1	3	2
Habitat Islands						
Waterside Construction (Landscaping)	2	17	21	<1	1	1
Project First Grouping – Eucalyptus Grove and Ivanhoe Overlook + Knoll and Meadow (1st Half) + Habitat Island Daily Maximum Emissions	13	117	148	<1	9	5
SCAQMD Regional Significance Threshold	75	100	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

**TABLE 3.3-6
 MAXIMUM REGIONAL PROJECT CONSTRUCTION EMISSIONS BY PARK ZONE FOR SECOND GROUPING
 (POUNDS PER DAY)^a**

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
	lb/day					
East and West Narrows						
Demolition	1	17	16	<1	3	1
Site Preparation/Grubbing	2	15	19	<1	3	2
Drainage/Utilities/Trenching	2	18	21	<1	1	1
Foundations/Concrete Pads	1	5	7	<1	<1	<1
Building/Structure Construction	1	13	17	<1	1	1
Asphalt Paving	1	7	12	<1	<1	<1
Landscaping or Other Finishing	1	7	7	<1	1	<1
Waterside Construction (Piles)	1	6	6	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Landscaping or Other Finishing + Water Construction (Piles)	6	57	70	<1	3	2
Ivanhoe Spillway						
Demolition	1	14	14	<1	1	1
Drainage/Utilities/Trenching	1	5	7	<1	<1	<1
Asphalt Paving	1	7	12	<1	<1	<1
Overlapping Components						
Drainage + Asphalt Paving	1	13	19	<1	1	1
South Valley						
Demolition	1	15	18	<1	3	1
Site Preparation/Grubbing	1	9	7	<1	1	<1
Mass Grading/Excavation	1	16	14	<1	4	2
Drainage/Utilities/Trenching	1	7	7	<1	1	<1
Foundations/Concrete Pads	<1	3	6	<1	<1	<1
Building/Structure Construction	1	14	19	<1	1	1
Asphalt Paving	1	7	11	<1	<1	<1
Architectural Coating	1	2	3	<1	<1	<1
Landscaping or Other Finishing	1	5	6	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Architectural Coating + Landscaping or Other Finishing	5	38	53	<1	3	2
Meadow (2nd Half)						
Demolition	1	14	14	<1	1	1
Site Preparation/Grubbing	1	15	14	<1	4	2
Mass Grading/Excavation	2	25	24	<1	4	2
Drainage/Utilities/Trenching	1	9	8	<1	1	<1
Foundations/Concrete Pads	1	5	8	<1	<1	<1
Building/Structure Construction	1	14	17	<1	1	1
Asphalt Paving	1	7	12	<1	<1	<1

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
	lb/day					
Landscaping or Other Finishing	1	6	8	<1	1	<1
Waterside Construction (Piles)	1	6	7	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Landscaping or Other Finishing + Water Construction (Piles)	5	49	60	<1	3	2
Off-site Improvements						
Restriping West Silver Lake Drive	2	4	7	<1	<1	<1
Restriping Silver Lake Boulevard	14	4	7	<1	<1	<1
Sidewalk Construction Silver Lake Boulevard						
Demolition	2	15	24	<1	2	1
Placing Base	<1	3	3	<1	1	<1
Form/Place Rebar and Pour	<1	4	5	<1	<1	<1
Project Second Grouping – East and West Narrows + Ivanhoe Spillway + South Valley + Meadow (2nd Half) + Off-site Improvements Daily Maximum Emissions	35	181	239	1	14	8
SCAQMD Regional Significance Threshold	75	100	550	150	150	55
Exceeds Threshold?	No	Yes	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

**TABLE 3.3-7
MAXIMUM MITIGATED REGIONAL PROJECT CONSTRUCTION EMISSIONS BY PARK ZONE FOR FIRST GROUPING
(POUNDS PER DAY)^a**

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
	lb/day					
Eucalyptus Grove and Ivanhoe Overlook						
Demolition	<1	6	18	<1	3	1
Site Preparation/Grubbing	<1	3	15	<1	3	1
Mass Grading/Excavation	1	3	30	<1	3	1
Drainage/Utilities/Trenching	<1	2	10	<1	<1	<1
Foundations/Concrete Pads	<1	3	9	<1	<1	<1
Building/Structure Construction	1	6	21	<1	<1	<1
Asphalt Paving	<1	2	14	<1	<1	<1
Architectural Coating	<1	<1	3	<1	<1	<1
Landscaping or Other Finishing	<1	1	8	<1	<1	<1
Waterside Construction (Piles)	<1	1	10	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Architectural Coating + Landscaping or Other Finishing + Water Construction (Piles)	2	11	72	<1	1	1
Knoll and Meadow (1st Half)						
Demolition	<1	2	16	<1	1	1
Site Preparation/Grubbing	<1	7	17	<1	4	2

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
	lb/day					
Mass Grading/Excavation	1	7	32	<1	4	2
Drainage/Utilities/Trenching	<1	2	8	<1	<1	<1
Foundations/Concrete Pads	<1	2	9	<1	<1	<1
Building/Structure Construction	1	7	23	<1	1	<1
Asphalt Paving	<1	2	14	<1	<1	<1
Architectural Coating	1	<1	3	<1	<1	<1
Landscaping or Other Finishing	<1	1	8	<1	<1	<1
Waterside Construction (Piles)	<1	1	10	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Architectural Coating + Landscaping or Other Finishing + Water Construction (Piles)	3	14	74	<1	2	1
Habitat Islands						
Waterside Construction (Landscaping)	1	5	26	<1	<1	<1
Project First Grouping – Eucalyptus Grove and Ivanhoe Overlook + Knoll and Meadow (1st Half) + Habitat Island Daily Maximum Emissions	5	30	172	<1	7	3
SCAQMD Regional Significance Threshold	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

**TABLE 3.3-8
 MAXIMUM MITIGATED REGIONAL PROJECT CONSTRUCTION EMISSIONS BY PARK ZONE FOR SECOND GROUPING (POUNDS PER DAY)^a**

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
	lb/day					
East and West Narrows						
Demolition	<1	5	18	<1	2	<1
Site Preparation/Grubbing	<1	2	21	<1	3	1
Drainage/Utilities/Trenching	<1	3	25	<1	<1	<1
Foundations/Concrete Pads	<1	2	8	<1	<1	<1
Building/Structure Construction	1	4	18	<1	<1	<1
Asphalt Paving	<1	2	14	<1	<1	<1
Landscaping or Other Finishing	<1	2	8	<1	<1	<1
Waterside Construction (Piles)	<1	1	9	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Landscaping or Other Finishing + Water Construction (Piles)	2	13	82	<1	1	<1
Ivanhoe Spillway						
Demolition	<1	2	16	<1	<1	<1
Drainage/Utilities/Trenching	<1	1	7	<1	<1	<1
Asphalt Paving	<1	2	14	<1	<1	<1

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
	lb/day					
Overlapping Components						
Drainage + Asphalt Paving	<1	2	21	<1	<1	<1
South Valley						
Demolition	<1	6	19	<1	3	<1
Site Preparation/Grubbing	<1	4	8	<1	1	<1
Mass Grading/Excavation	<1	4	17	<1	3	1
Drainage/Utilities/Trenching	<1	2	7	<1	<1	<1
Foundations/Concrete Pads	<1	1	7	<1	<1	<1
Building/Structure Construction	1	4	21	<1	<1	<1
Asphalt Paving	<1	2	13	<1	<1	<1
Architectural Coating	1	<1	3	<1	<1	<1
Landscaping or Other Finishing	<1	1	7	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Architectural Coating + Landscaping or Other Finishing	2	9	58	<1	1	<1
Meadow (2nd Half)						
Demolition	<1	2	16	<1	1	<1
Site Preparation/Grubbing	<1	4	15	<1	3	1
Mass Grading/Excavation	1	6	32	<1	3	2
Drainage/Utilities/Trenching	<1	1	10	<1	<1	<1
Foundations/Concrete Pads	<1	2	9	<1	<1	<1
Building/Structure Construction	1	4	19	<1	<1	<1
Asphalt Paving	<1	2	14	<1	<1	<1
Landscaping or Other Finishing	<1	2	9	<1	<1	<1
Waterside Construction (Piles)	<1	1	10	<1	<1	<1
Overlapping Components						
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Landscaping or Other Finishing + Water Construction (Piles)	2	12	70	<1	1	<1
Off-site Improvements						
Restriping West Silver Lake Drive	2	1	7	<1	<1	<1
Restriping Silver Lake Boulevard	14	1	7	<1	<1	<1
Sidewalk Construction Silver Lake Boulevard						
Demolition	<1	4	27	<1	1	<1
Placing Base	<1	3	3	<1	<1	<1
Form/Place Rebar and Pour	<1	2	6	<1	<1	<1
Project Second Grouping – East and West Narrows + Ivanhoe Spillway + South Valley + Meadow (2nd Half) Daily Maximum Emissions						
	22	41	272	1	11	5
SCAQMD Regional Significance Threshold	75	100	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

Mitigation Measures:

Implement Mitigation Measure AIR-1.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

Operation

Mobile, stationary, and area source operational regional criteria pollutant emissions were calculated for the Project's full buildout year. Operational emission estimates include compliance with SCAQMD Rule 1113 (Architectural Coatings), which limits the VOC content of architectural coatings. Detailed emissions calculations are provided in Appendix C of this Draft EIR. Landscape equipment emissions are based on off-road emission factors from CARB. Emissions from the use of consumer products and the reapplication of architectural coatings are based on data provided in CalEEMod.

In addition, as presented above, the Project park zones would be built in two groupings with the first grouping being completed in 2027 and full Project buildout in 2030. The results of the regional criteria pollutant operational emission calculations for VOC, NO_x, CO, SO₂, PM10, and PM2.5 of the overlap of Project operational emissions from the completed first grouping and overlapping construction of the second grouping are presented in **Table 3.3-9**. The results of the regional criteria pollutant operational emission calculations for VOC, NO_x, CO, SO₂, PM10, and PM2.5 at full Buildout of the Project are presented in **Table 3.3-10**. As shown, based on the conservative analysis of completed Park Zones in the first grouping and concurrent construction of the second grouping, regional emissions of NO_x and PM2.5 would potentially exceed the SCAQMD significance thresholds. Therefore, as the Project's maximum regional emissions from operations would exceed the regional thresholds of significance for NO_x and PM2.5, regional operational emissions impacts would be potentially significant and mitigation measures are required.

With implementation of Mitigation Measure AIR-1, the regional NO_x and PM2.5 emissions would be reduced to a level below the SCAQMD regional thresholds of 55 pounds per day, as shown in **Table 3.3-11**. With implementation of Mitigation Measure AIR-1, regional NO_x and PM2.5 emissions from operations would be reduced to below the regional threshold for NO_x and PM2.5, and impacts related to regional NO_x and PM2.5 operational emissions would be mitigated to a less-than-significant level.

**TABLE 3.3-9
ESTIMATED MAXIMUM REGIONAL OPERATIONAL EMISSIONS OF PROJECT FIRST GROUPING OF PARK ZONES
AND CONCURRENT CONSTRUCTION OF SECOND GROUPING OF PARK ZONES (POUNDS PER DAY)^a**

Source	VOC	NO_x	CO	SO₂	PM10	PM2.5
Project						
Area (Coating, Consumer Products, Landscaping)	<1	<1	<1	0	<1	<1
Mobile	3	5	29	<1	4	1
Construction – Project Second Grouping – East and West Narrows + Ivanhoe Spillway + South Valley + Meadow (2nd Half) + Off-site Improvements Daily Maximum Emissions	35	181	239	1	14	8
Total Project	39	186	269	1	18	9
SCAQMD Thresholds of Significance	55	55	550	150	150	55
Exceeds Thresholds?	No	Yes	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

**TABLE 3.3-10
ESTIMATED MAXIMUM REGIONAL OPERATIONAL EMISSIONS OF PROJECT FULL BUILDOUT (POUNDS PER DAY)^a**

Source	VOC	NO_x	CO	SO₂	PM10	PM2.5
Project						
Area (Coating, Consumer Products, Landscaping)	<1	<1	<1	0	<1	<1
Mobile	3	4	28	<1	4	1
Total Project	4	4	28	<1	4	1
SCAQMD Thresholds of Significance	55	55	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

**TABLE 3.3-11
 ESTIMATED MAXIMUM MITIGATED REGIONAL OPERATIONAL EMISSIONS OF PROJECT FIRST GROUPING OF
 PARK ZONES AND CONCURRENT CONSTRUCTION OF SECOND GROUPING OF PARK ZONES (POUNDS PER DAY)^a**

Source	VOC	NO _x	CO	SO ₂	PM10	PM2.5
Project						
Area (Coating, Consumer Products, Landscaping)	<1	<1	<1	0	<1	<1
Energy	<1	<1	<1	<1	<1	<1
Mobile	3	5	29	<1	4	1
Construction – Project Second Grouping – East and West Narrows + Ivanhoe Spillway + South Valley + Meadow (2nd Half) + Off-site Improvements Daily Maximum Emissions	22	41	272	1	11	5
Total Project	26	46	301	1	15	6
SCAQMD Thresholds of Significance	55	55	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

Mitigation Measures:

Implement Mitigation Measure AIR-1.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

Sensitive Receptors

Impact 3.3-3: Would the proposed Project expose sensitive receptors to substantial pollutant concentrations?

Localized Construction

As explained above, the localized construction air quality analysis was conducted using the methodology prescribed in the SCAQMD *Final Localized Significance Threshold Methodology* (SCAQMD 2003b). The localized significance thresholds (LSTs) only address NO_x, CO, PM10, and PM2.5 emissions. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without the need for Project-specific dispersion modeling. The localized analysis for the Project is based on this SCAQMD screening criteria. Unlike regional emissions, localized emissions are specific to a smaller source receptor area (SRA) and proximity to sensitive receptors. **Tables 3.3-12 through 3.3-22** show the localized emissions for the worst-case localized emissions scenario for individual park zones, off-site improvements, and by the park zone groupings described above. As shown, based on the conservative analysis of Project construction emissions, localized emissions for the park zone groupings described above would exceed the SCAQMD significance thresholds. Therefore, the Project’s temporary impact related to localized NO_x construction emissions would be potentially significant

**TABLE 3.3-12
MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR
EUCALYPTUS GROVE OR IVANHOE OVERLOOK^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
Eucalyptus Grove and Ivanhoe Overlook				
Demolition	13.0	13.3	2.6	0.8
Site Preparation/Grubbing	12.0	11.9	3.1	1.8
Mass Grading/Excavation	21.4	21.4	3.6	2.1
Drainage/Utilities/Trenching	8.6	7.5	0.4	0.4
Foundations/Concrete Pads	4.4	6.9	0.2	0.2
Building/Structure Construction	12.5	16.0	0.5	0.5
Asphalt Paving	7.5	11.6	0.3	0.3
Architectural Coating	1.5	2.4	0.1	0.1
Landscaping or Other Finishing	5.3	5.1	0.2	0.2
Waterside Construction (Piles)	6.4	6.0	0.3	0.2
Overlapping Components				
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Architectural Coating + Landscaping or Other Finishing + Water Construction (Piles)	46.2	55.5	2.0	1.9
SCAQMD Localized Significance Threshold^b	121.3	1,252.6	10.0	5.8
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 2.76-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-13
 MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR KNOLL AND MEADOW (1ST HALF)^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
Knoll and Meadow (1st Half)				
Demolition	13.0	13.3	1.0	0.6
Site Preparation/Grubbing	12.0	11.9	3.1	1.8
Mass Grading/Excavation	21.4	21.4	3.6	2.1
Drainage/Utilities/Trenching	5.6	5.0	0.2	0.2
Foundations/Concrete Pads	4.4	6.9	0.2	0.2
Building/Structure Construction	13.4	17.1	0.6	0.5
Asphalt Paving	7.5	11.6	0.3	0.3
Architectural Coating	1.5	2.4	0.1	0.1
Landscaping or Other Finishing	5.3	5.1	0.2	0.2
Waterside Construction (Piles)	6.4	6.0	0.3	0.2
Overlapping Components				
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Architectural Coating + Landscaping or Other Finishing + Water Construction (Piles)	44.1	54.1	1.9	1.7
SCAQMD Localized Significance Threshold^b	149.5	1,684.9	14.3	7.4
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 4.35-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-14
 MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR HABITAT ISLANDS^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
Habitat Islands				
Waterside Construction (Landscaping)	15.5	19.4	0.6	0.6
SCAQMD Localized Significance Threshold^b	134.3	1,451.5	12.0	6.5
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 3.49-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-15
MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR EAST AND WEST NARROWS^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
East and West Narrows				
Demolition	13.0	13.3	2.3	0.8
Site Preparation/Grubbing	14.4	18.4	3.2	1.9
Drainage/Utilities/Trenching	17.9	20.0	0.7	0.7
Foundations/Concrete Pads	4.4	6.9	0.2	0.2
Building/Structure Construction	11.7	14.9	0.5	0.4
Asphalt Paving	7.5	11.6	0.3	0.3
Landscaping or Other Finishing	5.3	5.1	0.2	0.2
Waterside Construction (Piles)	6.2	5.7	0.2	0.2
Overlapping Components				
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Landscaping or Other Finishing + Water Construction (Piles)	53.0	64.2	2.2	2.1
SCAQMD Localized Significance Threshold^b	161.0	1,861.0	16.0	8.0
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 5.00-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-16
MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR IVANHOE SPILLWAY^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
Ivanhoe Spillway				
Demolition	13.0	13.3	0.8	0.5
Drainage/Utilities/Trenching	5.1	5.9	0.3	0.3
Asphalt Paving	7.5	11.6	0.3	0.5
Overlapping Components				
Drainage + Asphalt Paving	12.6	17.6	0.6	0.6
SCAQMD Localized Significance Threshold^b	124.2	1296.0	10.4	5.9
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 2.92-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-17
 MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR SOUTH VALLEY^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
South Valley				
Demolition	10.1	14.2	2.3	0.7
Site Preparation/Grubbing	5.0	4.0	0.4	0.2
Mass Grading/Excavation	14.0	12.3	3.3	1.9
Drainage/Utilities/Trenching	5.1	5.9	0.3	0.3
Foundations/Concrete Pads	2.6	5.5	0.1	0.1
Building/Structure Construction	13.4	17.1	0.6	0.5
Asphalt Paving	6.8	10.5	0.3	0.3
Architectural Coating	1.5	2.4	0.1	0.1
Landscaping or Other Finishing	5.3	5.1	0.2	0.2
Overlapping Components				
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Landscaping or Other Finishing	34.6	46.6	1.6	1.5
SCAQMD Localized Significance Threshold^b	146.5	1,638.5	13.8	7.2
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 4.18-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-18
 MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR MEADOW (2ND HALF)^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
Meadow (2nd Half)				
Demolition	13.0	13.3	0.9	0.6
Site Preparation/Grubbing	12.0	11.9	3.1	1.8
Mass Grading/Excavation	21.4	21.4	3.6	2.1
Drainage/Utilities/Trenching	8.6	7.5	0.4	0.4
Foundations/Concrete Pads	4.4	6.9	0.2	0.2
Building/Structure Construction	12.5	16.0	0.5	0.5
Asphalt Paving	7.5	11.6	0.3	0.3
Landscaping or Other Finishing	5.3	5.1	0.2	0.2
Waterside Construction (Piles)	6.4	6.0	0.3	0.2
Overlapping Components				
Drainage + Foundations + Building/Structure Construction + Asphalt Paving + Landscaping or Other Finishing	44.7	53.1	1.9	1.8
SCAQMD Localized Significance Threshold^b	149.5	1,684.9	14.3	7.4
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 4.35-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-19
MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR OFF-SITE IMPROVEMENTS –
WEST SILVERLAKE DRIVE^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
Off-site Improvements				
Restriping West Silver Lake Drive	4.2	6.5	0.2	0.2
SCAQMD Localized Significance Threshold^b	51.3	434.5	3.0	1.7
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 0.33-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-20
MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR OFF-SITE IMPROVEMENTS –
SILVER LAKE BOULEVARD^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
Off-site Improvements				
Restriping Silver Lake Boulevard	4.2	6.5	0.2	0.2
Sidewalk Construction Silver Lake Boulevard				
Demolition	13.7	22.5	1.5	0.7
Placing Base	0.8	0.6	<0.1	<0.1
Form/Place Rebar and Pour	2.4	3.7	0.1	0.1
Overlapping Components				
Restriping Silver Lake Boulevard + Demolition	17.9	29.0	1.7	0.9
SCAQMD Localized Significance Threshold^b	139.6	1,532.5	12.8	6.8
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 3.79-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-21
 MAXIMUM LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR OVERLAP OF PARK ZONE GROUPINGS^{a,b}**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
Project First Grouping – Eucalyptus Grove and Ivanhoe Overlook + Knoll and Meadow (1st Half) + Habitat Island Daily Maximum Emissions	105.8	129.0	7.8	4.8
Project Second Grouping – East and West Narrows + Ivanhoe Spillway + South Valley + Meadow (2nd Half) + Off-site Improvements Daily Maximum Emissions	167.5	216.9	12.8	7.7
SCAQMD Localized Significance Threshold^b	161.0	1,861.0	16.0	8.0
Exceeds Threshold?	Yes	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 5.00-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

**TABLE 3.3-22
 MAXIMUM MITIGATED LOCALIZED PROJECT CONSTRUCTION EMISSIONS FOR
 OVERLAP OF PARK ZONE GROUPINGS^a**

Source	NO _x	CO	PM10	PM2.5
	lb/day			
Project First Grouping – Eucalyptus Grove and Ivanhoe Overlook + Knoll and Meadow (1st Half) + Habitat Island Daily Maximum Emissions	19.1	153.2	5.8	2.9
Project Second Grouping – East and West Narrows + Ivanhoe Spillway + South Valley + Meadow (2nd Half) + Off-site Improvements Daily Maximum Emissions	27.8	249.4	9.6	4.5
SCAQMD Localized Significance Threshold^b	161.0	1,861.0	16.0	8.0
Exceeds Threshold?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central LA County) for a 5.00-acre site with sensitive receptors with the nearest sensitive receptor within 25 meters from the Project Site.

As expressed in the *amicus curiae* brief submitted for the *Sierra Club v. County of Fresno* case (*Friant Ranch Case*) (SCAQMD 2014; SJVAPCD 2014), the CEQA criteria pollutants significance thresholds from the air district were set at emission levels tied to the region’s attainment status, they are emission levels at which stationary pollution sources permitted by the air district must offset their emissions and CEQA project must use feasible mitigations, and they are not intended to be indicative of any localized human health impact that a project may have. This is further supported by the City’s guidance document, *Air Quality and Health Effects (Sierra Club v. County of Fresno)*, that addresses the potential for identifiable health impacts to result from air pollutants analyzed in City environmental documents prepared pursuant to CEQA in response to the California Supreme Court decision on December 24, 2018, the *Sierra Club v.*

County of Fresno case (Friant Ranch Case) (City of Los Angeles 2019). The City's guidance document focuses on significant impacts identified in City EIRs and the feasibility of directly relating any identified significant adverse air quality impact to likely health consequences. The City's guidance document provides information to the public regarding the health consequences associated with exposure to air pollutants and explains why direct correlation of a project's pollutant emissions and anticipated health effects is currently infeasible, as no expert agency has approved a quantitative method to reliably and meaningfully translate mass emission estimates of criteria air pollutants to specific health effects for the scale of projects typically analyzed in City EIRs. Therefore, the project's exceedance of the mass regional and localized emissions threshold (i.e., pounds per day NO_x thresholds) from project-related activities does not necessarily indicate that the project will cause or contribute to the exposure of sensitive receptors to ground-level concentrations in excess of health-protective levels.

Furthermore, available models today are designed to determine regional, population-wide health impacts, and cannot accurately quantify O₃-related health impacts caused by NO_x or VOCs emissions from project level. Therefore, it is infeasible to connect the Project level NO_x emissions to O₃-related health impact at this time.

The primary health concern with exposure to NO_x emissions is the secondary formation of O₃. Based on discussions with air quality management district staff (SCAQMD 2016b), and as the *amicus curiae* briefs submitted for the Friant Ranch Case suggested, because of the complexity of O₃ formation and given the state of environmental science modeling in use at this time, it is infeasible to determine whether, or the extent to which, a single project's precursor (i.e., NO_x and VOCs) emissions would potentially result in the formation of secondary ground-level O₃ and the geographic and temporal distribution of such secondary formed emissions. Meteorology, the presence of sunlight, seasonal impacts, and other complex chemical factors all combine to determine the ultimate concentration and location of O₃. Furthermore, available models today are designed to determine regional, population-wide health impacts, and cannot accurately quantify O₃-related health impacts caused by NO_x or VOCs emissions from local level (project level). Notwithstanding these scientific constraints, the disconnect between Project level NO_x emissions and O₃-related health impact cannot be bridged at this time. See also the City's supplement discussion on Air Quality and Health Effects, providing further detail and concluding the same regarding why direct correlation of a project's pollutant emissions and anticipated health effects is currently infeasible, as no expert agency has approved a quantitative method to reliably and meaningfully translate mass emission estimates of criteria air pollutants to specific health effects for the scale of projects typically analyzed in City EIRs, at https://planning.lacity.org/odocument/e1a00fbf-6134-4fa9-b6fd-54eee631effb/City_of_LA_-_Air_Quality_and_Health_Effects_and_Attachments.pdf

Implementation of Mitigation Measure AIR-1 would reduce short-term and temporary NO_x emissions, including from construction equipment, as shown in **Table 3.3-23**. With implementation of Mitigation Measure AIR-1, short-term construction NO_x emissions would be reduced to below the localized emission significance threshold for NO_x. Therefore, short-term and temporary impacts related to localized NO_x construction emissions would be less than significant with mitigation.

Localized Operation

The localized operational air quality analysis was conducted using the methodology prescribed in the SCAQMD Localized Significance Threshold Methodology (SCAQMD 2003b). The screening criteria provided in the Localized Significance Threshold Methodology were used to determine the localized operational emissions numerical indicators of significance for the Project. The maximum daily localized emissions and the localized significance thresholds are presented in Table 3.3-23. The Project’s maximum localized operational emissions would be below the localized significance thresholds, and localized operational emissions impacts to existing sensitive receptors would be less than significant.

**TABLE 3.3-23
 ESTIMATED MAXIMUM LOCALIZED OPERATIONAL EMISSIONS FOR THE PROJECT BUILDOUT IN 2030
 (POUNDS PER DAY)^a**

Source	NO _x	CO	PM10	PM2.5
Area (Coating, Consumer Products, Landscaping)	<1	<1	<0.1	<0.1
Total Localized (On-Site) Emissions	<1	<1	<0.1	<0.1
SCAQMD Screening Thresholds of Significance^b	161	1,861	3.0	2.0
Exceeds Thresholds?	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b The SCAQMD LSTs are based on Source Receptor Area 1 (Central Los Angeles County) for a 5.00-acre site with sensitive receptors conservatively assumed to be located adjacent to the Project Site for operational emissions for LST purposes.

Carbon Monoxide Hotspots

The potential for the Project to cause or contribute to CO hotspots was evaluated by comparing Project intersections (both intersection geometry and traffic volumes) with prior studies conducted by the SCAQMD in support of their AQMPs and considering existing background CO concentrations. As discussed below, this comparison demonstrates that the Project would not cause or contribute considerably to the formation of CO hotspots, that CO concentrations at Project-impacted intersections would remain well below the threshold one-hour and eight-hour ambient air quality standards (CAAQS) of 20 or 9.0 parts per million (ppm), respectively within one-quarter mile of a sensitive receptor, and that no further CO analysis is warranted or required.

As shown previously in Table 3.3-2, CO levels in the Project area are substantially below the federal and the state standards. Maximum CO levels in recent years (2018-2020) were 2.0 ppm (one-hour average) and 1.7 ppm (eight-hour average) as compared to the criteria of 20 ppm (CAAQS one-hour average) or 35 ppm (NAAQS one-hour average) and 9.0 ppm (eight-hour average). No exceedances of the CO standards have been recorded at monitoring stations in the Air Basin since 2003, and the Air Basin is currently designated as a CO attainment area for both the CAAQS and the NAAQS (SCAQMD 2017b).

The SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin. These included the intersections of Wilshire Boulevard and Veteran Avenue,

Sunset Boulevard and Highland Avenue, La Cienega Boulevard and Century Boulevard, and Long Beach Boulevard and Imperial Highway. In the 2003 AQMP CO attainment demonstration, the SCAQMD noted that the intersection of Wilshire Boulevard and Veteran Avenue was the most congested intersection in Los Angeles County, with an average daily traffic volume of about 100,000 vehicles per day (SCAQMD 2003a). Relevant information from the 2003 AQMP CO attainment demonstration relied upon in this assessment is provided in Appendix C of this Draft EIR. This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in Table 4-10 of Appendix V of the 2003 AQMP showed that the peak modeled CO concentration due to vehicle emissions (i.e., excluding background concentrations) at these four intersections was 4.6 ppm (one-hour average) and 3.2 ppm (eight-hour average) at Wilshire Boulevard and Veteran Avenue.¹¹

Based on the Project's TIA (JBA 2022) (see Appendix K), under Future (2030) With Project Traffic conditions, the intersection of Glendale Blvd north of Silver Lake Blvd would have a maximum traffic volume of approximately 27,930 average daily trips (ADT) (FHA 2017).¹² As a result, CO concentrations from the Project's maximum traffic volume at the intersection identified above plus the measured background level in the Project Site area are expected to be approximately 3.3 ppm (one-hour average) and 2.6 ppm (eight-hour average), which would not exceed the numerical thresholds of significance. Total traffic volumes at the maximally impacted intersection would likely have to increase by approximately five times higher to cause or contribute to a CO hotspot impact given that vehicles operating today have reduced CO emissions as compared to vehicles operating in year 2003 when the SCAQMD conducted the AQMP attainment demonstration modeling (SCAQMD 2003e). This comparison demonstrates that the Project would not contribute to the formation of CO hotspots and that no further CO analysis is required. Therefore, the Project would result in less-than-significant impacts with respect to CO hotspots.

Toxic Air Contaminant Emissions

Construction

According to the Office of Environmental Health Hazard Assessment (OEHHA) and the SCAQMD's Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis (August 2003), health effects from TACs are described in terms of individual cancer risk based on a lifetime (i.e., 70-year) resident exposure duration. Given the temporary and short-term construction schedule (56 months), the Project would not result in a long-term (i.e., lifetime or 70-year) exposure as a result of construction activities. The Project's health risk calculations were performed using a spreadsheet tool consistent with the OEHHA guidance, which incorporates the algorithms, equations, and variables described above as well as in the OEHHA guidance, and incorporates the results of the AERMOD dispersion model.

¹¹ The eight-hour average is based on a 0.7 persistence factor, as recommended by the SCAQMD.

¹² The traffic volume of approximately 27,930 ADT was estimated based on the peak hour intersection volumes under future with Project conditions and the general assumption that peak hour trips represent approximately 10 percent of daily trip volumes (the Federal Highway Administration considers 10 percent to be a standard assumption).

As shown in **Table 3.3-24**, unmitigated results of the HRA cancer risk exceed the SCAQMD significance threshold of 10 per million; therefore, this impact is potentially significant, and mitigation would be required. Hazard index values for all receptor types were below the SCAQMD significance threshold of 1.0, therefore, chronic impacts would be less than significant. As shown in **Table 3.3-25**, with implementation of Mitigation Measure AIR-1, the maximum cancer risk and hazard index for sensitive receptors would be below the SCAQMD significance thresholds. Therefore, the impact related to health risks would be less than significant with mitigation.

**TABLE 3.3-24
 MAXIMUM UNMITIGATED HEALTH RISK IMPACTS FOR OFF-SITE SENSITIVE RECEPTORS**

Sensitive Receptor	Maximum Cancer Risk (# in one million)	Hazard Index
Residential Land Use	46.3	0.3
Maximum Individual Cancer Risk Threshold	10	1.0
Exceeds Threshold?	Yes	No

SOURCE: Appendix C

**TABLE 3.3-25
 MAXIMUM MITIGATED HEALTH RISK IMPACTS FOR OFF-SITE SENSITIVE RECEPTORS**

Sensitive Receptor	Maximum Cancer Risk (# in one million)	Hazard Index
Residential Land Use	7.2	<0.1
Maximum Individual Cancer Risk Threshold	10	1.0
Exceeds Threshold?	No	No

SOURCE: Appendix C

Operation

The SCAQMD recommends that operational health risk assessments be conducted for substantial sources of operational DPM (e.g., truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions (SCAQMD 2003c). The Project would not include any truck stop or warehouse distribution uses, and, as such, operations would generate only minor amounts of diesel emissions from mobile sources, such as delivery trucks and occasional maintenance. Furthermore, Project trucks would be required to comply with the applicable provisions of 13 CCR, Section 2025 (Truck and Bus regulation) to minimize and reduce PM10, PM2.5, and NO_x emissions from existing diesel trucks. Therefore, Project operation would not be considered a substantial source of DPM.

With respect to the use of consumer products and architectural coatings, the public recreational uses associated with the Project would be expected to generate minimal emissions from these sources. The Project’s land uses would not include installation of industrial-sized paint booths or

require extensive use of commercial or household cleaning products. As a result, toxic or carcinogenic air pollutants are not expected to occur in any substantial amounts in conjunction with operation of the proposed land uses within the Project Site. Based on the uses expected on the Project Site, operation of the Project would not expose sensitive receptors to substantial TAC concentrations, and operational impacts would be less than significant.

Conclusion

Based on the above, construction of the Project would not expose sensitive receptors to a substantial pollutant concentration and impacts would be less than significant with implementation of Mitigation Measure AIR-1. Operation of the Project would not expose sensitive receptors to substantial pollutant concentrations, and impacts during Project operation would be less than significant.

Mitigation Measures:

Implement Mitigation Measure AIR-1.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

Other Emissions

Impact 3.3-4: Would the proposed Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction

Potential activities that may emit other emissions, such as those leading to odors, during construction activities include the use of architectural coatings and solvents, as well as the combustion of diesel fuel in on- and off-road equipment. SCAQMD Rule 1113 would limit the amount of VOCs in architectural coatings and solvents. In addition, the Project would comply with the applicable provisions of the CARB Air Toxics Control Measure regarding idling limitations for diesel trucks. Through mandatory compliance with SCAQMD rules, no construction activities or materials are expected to result in other emissions, such as those leading to objectionable odors, affecting a substantial number of people. Furthermore, as shown in Table 3.3-5 and 3.3-6, construction emissions would not exceed the SCAQMD regional significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO₂). Therefore, construction activities under the Project would result in less-than-significant impacts with respect to other emissions, including those leading to odors.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project does not include any uses identified by the SCAQMD as being associated with substantial odors. As a result, the Project is not expected to discharge contaminants into the air in quantities that would cause a nuisance, injury, or annoyance to the public or property pursuant to SCAQMD Rule 402. Furthermore, as shown in Table 3.3-9 and 3.3-10, operational emissions would not exceed the SCAQMD regional significance thresholds for attainment, maintenance, or unclassifiable criteria air pollutants (i.e., CO and SO₂). Therefore, operation of the Project or the Project would result in less-than-significant impacts with respect to other emissions, including those leading to odors.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Cumulative Impact

Impact 3.3-5: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to air quality?

Table 3-2 identifies thirteen related projects that are planned or are under construction within the Project area. Related Projects No. 4, No. 12, and No. 13 are located within 1,000 feet of the Project Site. Related Project No. 4, the 2280 North Glendale Boulevard related project, would consist of 6 condominium units across 3 lots and is located approximately 800 feet to the east of the Project Site. Since both the specific timing and the sequencing of the construction of the thirteen related projects are unknown, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be speculative.

The SCAQMD recommends using two methodologies to assess the cumulative impact of air quality emissions: (1) a project's consistency with the current AQMP be used to determine its potential cumulative impacts. or (2) that project-specific air quality impacts be used to determine the project's potential cumulative impacts to regional air quality (SCAQMD 2003d).

Consistency with Air Quality Management Plan

The SCAQMD recommends assessing a project's cumulative impacts based on whether the project is consistent with the current AQMP. CEQA Guidelines Section 15064(h)(3) provides guidance in determining the significance of cumulative impacts. Specifically, CEQA Guidelines Section 15064(h)(3) states in part that:

“A lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the

cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency...

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the Project's cumulative air quality impacts are determined not to be significant based on its consistency with the SCAQMD's adopted 2016 AQMP, as discussed above. As is also discussed above, the Project's increase in population, housing, and employment would be consistent with the 2016–2040 RTP/SCS growth projections, upon which the 2016 AQMP is based. Related projects would also be required to assess consistency with 2016 AQMP transportation control strategies, as well as with population, housing, and employment growth projections in the 2016–2040 RTP/SCS and provide mitigation measures if significant impacts are identified. As discussed in Threshold (a), the Project would not increase the frequency or severity of an existing violation or cause or contribute to new violations for O₃. Therefore, the Project would be consistent with and would not conflict with or obstruct implementation of the 2016 AQMP. Accordingly, Project impacts are not cumulatively considerable and cumulative impacts are less than significant.

Project-Specific Impacts

As stated in the 2006 L.A. CEQA Thresholds Guide, the “City of Los Angeles has not adopted specific Citywide significance thresholds for air quality impacts. However, because of the SCAQMD's regulatory role in the Air Basin, the 2006 L.A. CEQA Thresholds Guide references the screening criteria, significance thresholds and analysis methodologies in the CEQA Air Quality Handbook to assist in evaluating projects proposed within the City” (City of Los Angeles 2006). The SCAQMD CEQA Air Quality Handbook states that the “Handbook is intended to provide local governments, project proponents, and consultants who prepare environmental documents with guidance for analyzing and mitigating air quality impacts of projects” (SCAQMD 1993a). The SCAQMD CEQA Air Quality Handbook also states that “[f]rom an air quality perspective, the impact of a project is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. As such, projects should be evaluated in terms of air pollution thresholds established by the District” (SCAQMD 1993a). The SCAQMD has provided guidance on addressing the cumulative impacts for air quality, as discussed below (SCAQMD 2003d):

“As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR... Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.”

The SCAQMD recommends evaluating cumulative impacts for individual projects based on whether the project exceeds the SCAQMD's recommended daily thresholds for project-specific

impacts for those pollutants for which the Air Basin is in non-attainment. Thus, the cumulative analysis of air quality impacts follows SCAQMD's guidance such that construction or operational Project emissions would be considered cumulatively considerable if Project-specific emissions exceed an applicable SCAQMD recommended significance threshold.

The City has determined to rely on thresholds established by the SCAQMD (refer to CEQA Guidelines Section 15064.7) to assess the Project's cumulative impacts. Regional emissions from a project have the potential to affect the Air Basin as a whole, and, unlike other environmental issues areas, such as aesthetics or noise, it is not possible to establish a geographical radius from a specific project site where potential cumulative impacts from regional emissions would be limited. Meteorological factors, such as wind, can disperse pollutants, often times tens of miles downwind from a project site. Therefore, consistent with accepted and established SCAQMD cumulative impact evaluation methodologies, the potential for the Project to result in cumulative impacts from regional emissions is assessed based on the SCAQMD thresholds.

For construction, as shown in Table 3.3-5, 3.3-6, 3.3-9, 3.3-10, and 3.3-12 through 3.3-22, the Project would not result in an exceedance of regional and localized significance thresholds with implementation of mitigation measures. Therefore, cumulative impacts related to regional and localized construction emissions would be less than significant with mitigation.

For operations, as shown in Table 3.3-7, 3.3-8, 3.3-9, 3.3-10, and 3.3-23, the Project would not result in an exceedance of regional or localized significance thresholds with implementation of mitigation measures. Therefore, cumulative impacts related to regional operational emissions would be less than significant.

Mitigation Measures:

Implementation of Mitigation Measure AIR-1 would reduce short-term and temporary NO_x emissions, including from construction equipment. With implementation of Mitigation Measure AIR-1, short-term construction NO_x emissions would be reduced to below the regional emission significance threshold for NO_x. Therefore, cumulative impacts related to regional and localized construction emissions would be less than significant with mitigation.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

3.3.6 Summary of Impacts

Table 3.3-26 summarizes the impact significance determinations and lists mitigation measures related to air quality.

**TABLE 3.3-26
SUMMARY OF PROPOSED PROJECT IMPACTS TO AIR QUALITY**

Impact	Mitigation Measure	Significance
3.3-1: Applicable Air Quality Plan	Mitigation Measure AIR-1	LTSM
3.3-2: Criteria Pollutant	Mitigation Measure AIR-1	LTSM
3.3-3: Sensitive Receptors	None Required	LTSM
3.3-4: Other Emissions	None Required	LTS
3.3-5: Cumulative	Mitigation Measure AIR-1	LTSM

NOTES: NI = No Impact, no mitigation proposed; LTS = Less than Significant, no mitigation proposed; LTSM = Less than Significant Impact with Mitigation Incorporated; SU = Significant and Unavoidable

3.3.7 References

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3.4 Biological Resources

This section addresses the impacts to biological resources associated with implementation of the proposed project. This section is based on a review of existing resources and focused field surveys that analyzes an approximately 274.65-acre biological study area (BSA), including the proposed approximately 116-acre Project footprint plus a 500-foot perimeter buffer, as summarized within the Biological Technical Report prepared for the proposed Project and included as **Appendix D** to this Draft EIR.

This section includes: a description of the existing biological resources conditions at the proposed project site; a summary of applicable regulations related to biological resources; and an evaluation of the potential impacts of the proposed project related to biological resources at the proposed project site and in the surrounding area, including cumulative impacts. Project Design Features include: **PDF-BIO-1: Ornamental Native Plants, PDF-BIO-2: Nesting Birds, PDF-BIO-3: Wildlife Friendly Fencing, PDF-BIO-4: Tree Protection Fencing, PDF-BIO-5: Grading/Trenching in TPZ, PDF-BIO-6: Avoiding Root Damage, PDF-BIO-7: Soil Grade, PDF-BIO-8: Irrigation, PDF-BIO-9: Landscaping Around Native Trees, PDF-BIO-10: Tree Pest Inspection, PDF-BIO-11: Development of Pest Management Plan, PDF-BIO-12: Prevention of Pathogen Spread, PDF-BIO-13: City Tree Ordinance, and PDF-BIO-14: RAP Tree Policy.** Impacts to biological resources are less than significant with incorporation of Mitigation Measures **BIO-1: Pre-Construction Training, BIO-2: Preconstruction Surveys and Mitigation for Crotch’s Bumble Bee and Monarch Butterfly, and BIO-3: Special-Status Bats, BIO-4: Tree Salvage and Replanting Plan, and BIO-5: Native Oak Trees.**

Existing Data Analysis

A review of aerial maps and biological resource databases was conducted to identify biological resources potentially occurring within the BSA and broader vicinity of the proposed Project site. Aerial imagery (Google Earth 2022) as well as electronic Hollywood USGS 7.5-minute topographic quadrangle maps were reviewed to confirm the current locations of developed and undeveloped land, and unique landforms. Aerial photographs were also reviewed to identify potential natural drainage features and water bodies that may be under the jurisdiction of the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB) and/or California Department of Fish and Wildlife (CDFW).

A list of sensitive plant and wildlife species and their habitats known to occur within the BSA was compiled primarily from the CDFW, California Natural Diversity Database (CNDDDB) (2022), and California Native Plant Society (CNPS) (2022) Inventory of Rare and Endangered Plants. The CNDDDB and CNPS records were queried for the following USGS 7.5-minute topographic quadrangle maps: Beverly Hills, Burbank, Hollywood, Inglewood, Los Angeles, Pasadena, South Gate, Van Nuys, and Venice. In addition, the United States Department of Agriculture Natural Resources Conservation Service (NRCS) soils mapping (USDA 2022), U.S. Fish and Wildlife Service (USFWS) critical habitat maps (USFWS 2022a), the Information for Planning and Consultation (IPaC) (USFWS 20212B), and the National Wetlands Inventory (NWI) (USFWS 2022c) were reviewed.

The *Silver Lake Reservoir Complex Master Plan Biological Resources Report* (GPA 2019; GPA 2019 report) served as a primary reference for this analysis. Also referenced is the *Silver Lake and Ivanhoe Reservoirs Aeration and Circulation System Project, Biological Resources Memorandum* (AECOM 2020); the area of analysis for both projects overlaps with the Project site. Since the reports were prepared previously, existing databases were queried to support the Biological Technical Report and field surveys were conducted to accompany the analysis as described below.

Biological Field Surveys

The 2019 GPA report summarizes field surveys conducted from 2004 to 2018 as well as a 2019 biological reconnaissance survey. This information was referenced prior to conducting additional field surveys in 2021.

ESA biologist Amanda Brophy conducted a reconnaissance field survey on October 19, 2021 to inventory and categorize biological resources within the BSA. An additional field survey was conducted by ESA biologists Ryan Gilmore and Amanda Brophy on April 12, 2022 that included a jurisdictional delineation and tree survey. Protected tree surveys were conducted by certified arborists Ryan Gilmore and Douglas Gordon-Blackwood on April 2, 5, 6, 8, 15, and 22, 2022. The survey efforts involved pedestrian access over the entire site. All species of plant and animals observed, including sign (e.g., presence of scat) as well as any audible detections, were noted during the site visit. Wildlife observations and other features were mapped utilizing Collector for ArcGIS and representative photographs were taken.

Vegetation mapping was conducted and notes were taken of vegetation communities observed. Vegetation communities noted were generally classified using *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009) as necessary to reflect the existing site conditions.

Plant communities and habitats within the BSA were characterized to determine the extent of habitats that could support sensitive species and listed plants. The potential for special-status species and other sensitive biological resources to occur was based on habitat suitability, such as soil type, vegetation, slope, aspect, hydrology, and the presence of any disturbances within or adjacent to the area. Representative photographs of habitats that occur within the BSA are included in Appendix D, Subappendix A. No focused surveys for special-status species were conducted during these field surveys. A formal jurisdictional delineation to locate potential natural drainage features and water bodies that may be under the jurisdiction of USACE, RWQCB and/or CDFW was performed. Additionally, noise analysis data used in the biological assessment is presented in Section 3.12, *Noise and Vibration*.

Aquatic resources within the BSA were delineated concurrently with the biological resources reconnaissance field survey. Surveys were conducted by walking throughout the BSA to selected areas where potential jurisdictional features were identified during the literature and aerial review. Additional data, such as landforms, vegetation, hydrology, and soils, were noted where these characteristics were pertinent to identification of features. Potential jurisdictional features were identified and delineated following current federal and state methodology and guidelines, including waters of the state.

Protected tree surveys were conducted by walking the entire Project site and recording all native trees and shrubs covered by the City of Los Angeles Tree and Shrub Ordinance (City Tree Ordinance) with a trunk diameter of 4 inches or greater. Also, trees regulated by the City Bureau of Street Services (BSS) and the Department of Recreation and Parks (RAP) were also recorded. Trees and shrubs not protected or regulated by the aforementioned policies or ordinances were not recorded. Photographs of each protected/regulated tree and shrub were recorded. The trunk location for each tree/shrub was recorded with Collector for ArcGIS using an Arrow 100 Submeter GNSS Receiver and a smart phone. The following data was collected for each tree: trunk diameter, canopy spread, height, health, and structure.

3.4.1 Environmental Setting

Regional Setting

The project site is located in the City of Los Angeles, California, in the Silver Lake neighborhood. Regional geographic features surrounding the area include Silver Lake, Echo Park Lake, Griffith Park to the northwest and Dodger Stadium to the southeast. The proposed Project site is located in a densely urban area of Los Angeles (Appendix D, Figure 2) with hilly terrain west of Elysian Heights and northwest of downtown. The Los Angeles River is the principal drainage for the region and is located 0.5 miles to the northeast of the proposed Project site; it should be noted the Project's water bodies do not drain into the Los Angeles River.

The climate in the region is Mediterranean and lies in the atmospheric high-pressure zone of the eastern Pacific, resulting in a mild climate with cool sea breezes and light average wind speeds. The climatological pattern is disrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. The region experiences more days of sunlight than any other major urban area in the nation except the City of Phoenix in Arizona (SCAQMD 2012). Average temperatures during the winter range from 49 to 67 degrees Fahrenheit. Average temperatures during the hottest summer months range from 63 to 83 degrees Fahrenheit. Average precipitation is 14.9 inches per year (Weatherbase 2022).

Local Setting

The BSA is currently developed and contains ornamental vegetation primarily consisting of non-native trees and maintained turf. The proposed Project site includes the existing Ivanhoe and Silver Lake Reservoirs, a dog park, and recreation center area to the south, Silver Lake Meadow Park to the east, a vegetated hillside which is inaccessible to the public to the north, and a pedestrian path that circumnavigates the SLRC.

The area is surrounded on all sides by steep terrain developed with residential properties, creating a valley in which the SLRC sits. The SLRC site elevation is approximately 460 feet above mean sea level (amsl). Silver Lake Boulevard is located to the east of the SLRC with residential streets leading up into the developed hillsides. Ornamental landscape vegetation including shrubs and trees is common throughout the BSA.

Soils

The BSA is underlain by native soils, fill material, and bedrock outcroppings. The following two soil types are mapped within the BSA (USDA 2021). The elevation within the BSA ranges from approximately 400 feet to approximately 510 feet.

Urban land-Ballona-Typic Xerorthents, fine substratum complex, 0 to 5 percent slopes

This soil map unit contains soils resulting from discontinuous human-transported material over young alluvium derived from sedimentary rock. Urban land-Ballona-Typic Xerorthents soils have slopes of 0 to 5 percent. These soils are well-drained with moderately low to moderately high permeability and moderate to high (about 7.7 to 10.1 inches) water capacity.

Urban land-Dapplegray-Soper complex, 20 to 55 percent slopes

This soil map unit contains soils resulting from human-transported material consisting mostly of colluvium and/or residuum weathered from sedimentary rock. Urban land-Dapplegray-Soper complex soils have slopes of 20 to 55 percent. These soils are well-drained with moderately low to moderately high permeability and high (9.5 inches) water capacity.

Natural Communities and Land Uses

Vegetation communities as described in the 2019 GPA report (GPA 2019) were reviewed and mapped in the field during the reconnaissance survey. The vegetation communities characterized within the BSA are discussed in detail below (Appendix D, Figure 4). Representative photographs were taken during the field surveys and are included in Appendix D, Subappendix A. **Table 3.4-1** indicates the acreages of the plant communities and land cover types observed within the BSA.

**TABLE 3.4-1
 NATURAL COMMUNITIES AND LAND COVER TYPES WITHIN THE BIOLOGICAL STUDY AREA**

Natural Community/Land Cover Type	Project Site (acres)	500-foot Buffer (acres)	Total (acres)
Aquatic/Riparian			
Open Water	76.75	0.19	76.93
Terrestrial			
<i>Eucalyptus globulus</i> Semi-Natural Woodland Stands	2.48	0.20	2.68
<i>Eucalyptus</i> Species Mixed Semi-Natural Woodland Stands	7.00	1.12	8.12
<i>Pinus</i> Species Semi-Natural Woodland Stands	0.23	0.09	0.32
Ornamental	0.40	-	0.40
Native Ornamental	0.79	-	0.85
Developed/Disturbed Land Cover Types			
Developed	25.76	154.43	180.20
Ruderal	2.87	2.32	5.2
TOTAL	116.29	158.36	274.65

***Eucalyptus globulus* Semi-Natural Woodland Stands**

Eucalyptus globulus Semi-Natural Woodland Stands include blue gum (*Eucalyptus globulus*) as the dominant eucalyptus tree in the canopy. This community can have intermittent to continuous cover. The understory is sparse to intermittent. Eucalyptus species are typically planted for windbreaks and groves and are considered naturalized on uplands and along stream corridors. At least nine eucalyptus species are found in the BSA: red river gum (*Eucalyptus camaldulensis*), lemon scented gum (*Eucalyptus citriodora*), sugar gum (*Eucalyptus cladocalyx*), blue gum, silver dollar gum (*Eucalyptus polyanthemos*), money tree (*Eucalyptus pulverulenta*), red iron bark (*Eucalyptus sideroxylon*), forest red gum (*Eucalyptus tereticornis*), and manna gum (*Eucalyptus viminalis*). It should be noted that blue gum, red river gum, and sugar gum are on the California Invasive Plant Council Invasive Plant Council (Cal-IPC 2022). Within the SLRC this community is located on the east and west sides of the Ivanhoe and Silver Lake Reservoirs along the pathway inside the perimeter fence. This vegetation community comprises 2.48-acres within the Project site and 0.20-acres within the 500-foot buffer of the BSA.

***Eucalyptus* Species Mixed Semi-Natural Woodland Stands**

Eucalyptus Species Mixed Semi-Natural Woodland Stands include several *Eucalyptus* species (those listed above) as the dominant trees in the canopy. Blue gum was not the dominant eucalyptus tree in canopy cover. This community is described in the same manner as above. Within the SLRC this community is located on the Knoll. Other non-native species associated within this community include Chilean pepper (*Schinus polygamus*), deodar cedar (*Cedrus deodar*), Aleppo pine (*Pinus halepensis*), silk oak (*Grevillea robusta*), olive (*Olea europaea*), and annual non-native grasses. It should be noted that the aforementioned eucalyptus species, silk oak, and olive are on the California Invasive Plant Council Invasive Plant Council (Cal-IPC 2022). Native species observed included toyon, Southern California black walnut, hollyleaf cherry (*Prunus illicifoli* ssp. *illicifolia*), Mexican elderberry, and coast live oak (*Quercus agrifolia*). This vegetation community comprises 7.00-acres within the Project site and 1.12-acres within the 500-foot buffer of the BSA.

Southern California black walnut is a CRPR 4.2 species that is present within the BSA, found interspersed within the *Eucalyptus* Species Mixed Semi-Natural Woodland Stands on the Knoll. However, it should be noted that per the City's CEQA Thresholds, few CRPR List 4 plants meet the definition of the Native Plant Protection Act or Sections 2062 and 2067 of the California Department of Fish and Game Code and are not eligible for listing (City of LA 2006). The BSA does not support black walnut woodland and its occurrence onsite is not within typical habitat. Thus, we would not consider southern California black walnut a special-status species for the project site.

However, southern California black walnut is a species that is regulated under local tree policies and ordinances. A total of 18 individuals were observed within the BSA (Appendix D, Figure 5). Classifications in accordance with the three applicable tree ordinances (City Tree Ordinance, RAP, or BSS street trees) determined are summarized in **Table 3.4-2**. Of the 18 observed, eight trees are considered protected under the City Tree Ordinance, and an additional six are considered protected under the RAP Tree Policy. Four trees do not meet the classifications of the three applicable tree policies.

**TABLE 3.4-2
 CLASSIFICATIONS OF SOUTHERN CALIFORNIA BLACK WALNUT WITHIN THE BIOLOGICAL STUDY AREA**

Classification	Tree Identification Numbers	Number of Trees
City Tree Ordinance	731, 732, 733, 738, 739, 740, 741, 745	8
RAP	174, 754, 755, 756, 758, 759	6
BSS	NA	0
No Classification	NA	4*
TOTAL	--	18

* Trees below regulation size.

Pinus Species Semi-Natural Woodland Stands

Pinus Species Semi-Natural Woodland Stands include Canary Island pine (*Pinus canariensis*), Aleppo pine, and stone pine (*Pinus pinea*) as the dominant trees in the canopy. This community can have intermittent to continuous cover. The understory is sparse to intermittent. Similar to the eucalyptus species these have been planted for windbreaks and groves and are considered naturalized. Within the SLRC this community is located on the west side of the Ivanhoe Reservoir along the pathway inside the perimeter fence. This vegetation community comprises 0.23-acres within the Project site and 0.90-acres within the 500-foot buffer of the BSA.

Developed

Developed areas are associated with paved areas, buildings, bridges, and other structures. Within the SLRC, developed areas consist of the Recreation Center, Los Angeles Department of Water and Power facilities, dam infrastructure, the Neighborhood Nursery School, and the paved slopes of the reservoirs. Additionally, within these areas are scattered ornamental plantings. Within the 500-foot buffer surrounding the SLRC is residential development with associated ornamental plantings. Ornamental plantings within the developed areas can provide nesting bird and foraging habitat. This vegetation community comprises 25.76-acres within the Project site and 154.43-acres within the 500-foot buffer of the BSA.

Ornamental

Ornamental communities are dominated by non-native horticultural plants, including introduced trees, shrubs, and flowers. Within the SLRC, this community is found along the perimeter of Silver Lake Meadow Park, along the perimeter of the walking path to the south and surrounding the Recreation Center at the south end of the SLRC. Ornamental plantings landscapes can provide nesting bird and foraging habitat. This vegetation community comprises 0.40-acres within the Project site.

Native Ornamental

Native ornamental communities are dominated by native horticultural plants, including introduced trees, shrubs, and flowers. Within the SLRC, this community is found along the perimeter of Silver Lake Meadow Park and along the pathway at the intersection of Silver Lake Boulevard and Armstrong Avenue. These native plant installations have been referred to as the

Community Restoration Area. Native plantings included a variety of species including California sagebrush (*Artemisia californica*), Saint Catherine's lace (*Eriogonum giganteum*), white sage (*Salvia apiana*), and hummingbird sage (*Salvia spathacea*). Additionally, three sensitive species Nevin's barberry (*Berberis nevinii*), showy island snapdragon (*Gambelia speciosa*), and Coulter's matilija poppy (*Romneya coulteri*). Overall, this vegetation community is not contiguous and is broken up with areas of bare ground and non-native vegetation. This vegetation community comprises 0.79-acres within the Project site.

Ruderal

Ruderal communities are typical in early successional stages following extreme human disturbance, or recurrent natural disturbance. This vegetation community is dominated by annual and perennial, introduced/non-native, pioneering, herbaceous plants that readily colonize disturbed ground. Within the SLRC, this community is found sporadically within the SLRC with the largest occurrence observed at the dam face and interspersed within the semi-natural woodland stands. In the study area, this vegetation type is dominated by a sparse cover of some weedy species, such as short-podded mustard (*Hirschfeldia incana*), wild radish (*Raphanus sativus*), Russian thistle (*Salsola tragus*), and a multitude of non-native grasses. Non-native grasses observed included wild oat (*Avena fatua*), downy chess (*Bromus tectorum*) and blue foxtail (*Hordeum murinum*). Generally, these areas are considered to be of very low value to most wildlife. This vegetation community comprises 2.87-acres within the Project site and 2.32-acres within the 500-foot buffer of the BSA.

Open Water

Open water areas consist of land covered by water and contain less than 10 percent vegetation cover, and may support emergent or submerged vegetation. Within the SLRC these areas include the basins of Ivanhoe and Silver Lake Reservoirs. This land cover comprises 76.75-acres within the Project site and 0.19-acres within the 500-foot buffer of the BSA.

General Plant Inventory

The plant communities discussed above are composed of a number of plant species. Observations regarding the plant species present were made during the field reconnaissance survey, and a list of all plant species observed is provided in Appendix D, Subappendix B.

General Wildlife Species

Wildlife observed or detected during the habitat assessment include species that are adapted to urban environments. A list of all wildlife species observed is provided in Appendix D, Subappendix B. Bird species observed during the assessment included: Cooper's hawk (*Accipiter cooperii*), killdeer (*Charadrius vociferus*), American coot (*Fulica americana*), house finch (*Haemorhous mexicanus*), turkey vulture (*Cathartes aura*), western gull (*Larus occidentalis*), scaly-breasted munia (*Lonchura punctulata*), hooded merganser (*Lophodytes cucullatus*), song sparrow (*Melospiza melodia*), California towhee (*Melospiza crissalis*), northern mockingbird (*Mimus polyglottos*), ruddy duck (*Oxyura jamaicensis*), bushtit (*Psaltiriparus minimus*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), cinnamon teal (*Spatula cyanoptera*), mourning dove (*Zenaida macroura*), and white-crowned sparrow (*Zonotrichia leucophrys*).

Mammal species observed included coyote (*Canis latrans*) and desert cottontail (*Sylvilagus audubonii*). No reptile species were detected during the assessment.

Sensitive Biological Resources

Special-status plants are defined as those plants that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by federal, state, or other agencies as under threat from human-associated developments. Some of these species receive specific protection that is defined by federal or state endangered species legislation. Others have been designated as special-status on the basis of adopted policies and expertise of state resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. Special-status plants are defined as follows:

- Plants that are listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the FESA or the CESA
- Plants that meet the definitions of rare or endangered under State CEQA Guidelines Section 15380
- Plants covered under an adopted Natural Community Conservation Plan (NCCP)/Habitat Conservation Plan (HCP)
- Plants considered by the CNPS to be rare, threatened, or endangered (California Rare Plant Rank [CRPR] 1A, 1B, 2A and 2B plants¹) in California
- Plants listed as rare under the California Native Plant Protection Act (FGC 1900 et seq.)

The potential for special-status plant species to occur within the BSA was assessed by looking at on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences and geographic ranges. A review of the CNDDDB (CDFW 2022) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2022) revealed that 20 special-status plant species have been recorded within the USGS 9-quadrangle search area that had the potential to occur within the BSA. However, based on the criteria listed below, it has been determined that these species do not have the potential to occur naturally within the BSA because they lack necessary habitat requirements. All 20 species are listed in Appendix D, Subappendix C and have been omitted from further discussion in this report. The criteria for potential to occur include:

- **Present:** Species was observed or detected during Project-specific biological surveys.
- **High Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present on the Project site. These species are generally common and/or widespread in the Project area and vicinity.
- **Moderate Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present within the Project site. These species are generally less common and/or widespread than species considered to have “high” potential to occur.

¹ CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere; 1B: Plants rare, threatened, or endangered in California and elsewhere; 2A: Plants presumed extirpated in California but common elsewhere; 2B: Plants rare, threatened, or endangered in California but more common elsewhere.

- **Low Potential:** Species identified in the literature search or known to occur in the region, but the habitat on site is of low or marginal quality and/or the Project site occurs outside the species known geographic or elevational range. Distance to nearest known occurrence and the age of last reported local occurrence are also considered.
- **Not Expected:** Species identified in the literature search or known to occur in the region, but the habitat on site is not suitable for the species.

The 2019 GPA report states that habitat was present for two special-status species: Robinson's pepper grass (*Lepidium virginicum* var. *robinsonii*) and San Bernardino aster (*Symphotrichum defoliatum*). However, the literature review and field reconnaissance visit determined suitable habitat for these species does not exist within the BSA.

No special-status species as defined above were observed within the proposed project site. However, there are three special-status species that have been planted intentionally in the Community Restoration Area within the Silver Lake Meadows (see Appendix D, Figure 5). Those three species are Nevin's barberry, showy island snapdragon, and Coulter's matilija poppy (Appendix D, Figure 5) and are discussed further below.

Nevin's Barberry

Nevin's Barberry is a CRPR 1B.1 species that is federally and state endangered and has been planted in the Community Restoration Area within the Project site. The planted occurrence consists of a single specimen (Appendix D, Figure 5). This species is a commonly used native plant in native gardens. There are three CNDDDB records for this species within five miles of the BSA however all are for planted specimens and are not naturally occurring. In a horticultural setting this species is quite easily grown though dependent on irrigation.

Showy Island Snapdragon

Showy island snapdragon is a CRPR 1.B.2 species that has been planted in the Community Restoration Area within the Project site (Appendix D, Figure 5). This species is a commonly used native plant in native gardens. There are no CNDDDB records for this species within five miles of the BSA. In a horticultural setting this species is quite easily grown though highly dependent on irrigation.

Coulter's Matilija Poppy

Coulter's matilija poppy is a CRPR 4.2 species that has been widely planted in the Community Restoration Area and Silver Lake Meadow Park within the Project site (Appendix D, Figure 5). This species is a commonly used native plant in native gardens. There are no CNDDDB records for this species within five miles of the BSA. In a horticultural setting this species is quite easily grown though highly dependent on irrigation.

Special-Status Wildlife

Special-status wildlife consists of those animals that because of their recognized rarity or vulnerability to habitat loss or population decline are considered by federal, state, or other agencies to be under threat from human-associated development. Some of these species receive

specific protection that is defined by federal or state endangered species legislation and others have been designated as special-status on the basis of adopted local policies (i.e., city and county) or the educated opinion of respected resource interest groups (e.g., Western Bat Working Group). Special-status wildlife is defined as follows:

- Wildlife listed or proposed for listing as threatened or endangered, or are candidates for possible future listing as threatened or endangered, under the FESA or the CESA.
- Wildlife that meet the definitions of rare or endangered under California Environmental Quality Act (CEQA) Guidelines Section 15380.
- Wildlife covered under an adopted NCCP/HCP.
- Wildlife designated by CDFW as species of special concern, included on the Watch List or are considered Special Animals.
- Wildlife “fully protected” in California (FGC Sections 3511, 4700, and 5050).
- Bat species considered priority by the Western Bat Working Group (WBWG).

The potential for special-status wildlife species to occur within the BSA was assessed according to on-site vegetation and habitat quality, topography, elevation, soils, surrounding land uses, habitat preferences and geographic ranges. A review of the CNDDDB (CDFW 2022) revealed that 21 special-status wildlife species have been recorded within five miles of the search area. The 2019 GPA report analyzed 20 special-status wildlife species. Based on the criteria listed below, it is determined that only five species have a potential to occur within the BSA (**Table 3.4-3**). The other species lack the necessary habitat requirements or the species range does not overlap with the BSA. The 16 species that are not expected to occur within the BSA are further detailed in Appendix D, Subappendix D and are omitted from further discussion here.

**TABLE 3.4-3
 SPECIAL-STATUS WILDLIFE SPECIES**

Common Name Scientific Name	Sensitivity Status	Preferred Habitat/Known Elevational Range	Presence/Potential to Occur within the BSA
Invertebrates			
monarch butterfly – California overwintering population <i>Danaus plexippus pop. 1</i>		Wintering sites in California are associated with wind-protected groves of large trees (primarily eucalyptus or pine [<i>Pinus spp.</i>]) with nectar and water sources nearby that are generally near the coast.	Low. Large wind-protected trees occur within the BSA at various locations. Limited nectar plant food species available within BSA. BSA outside documented overwintering locations which are generally associated within areas in closer proximity to the coast. There are no CNDDDB records within five miles of the BSA (CNDDDB 2022).
Crotch bumble bee <i>Bombus crotchii</i>	--/SSC	Open grassland and scrub habitats that support potential nectar sources such as plants within the Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae families.	Low. Limited suitable habitat present within the BSA. Six CNDDDB records with the most recent dated 2020 located at Occidental College. (CNDDDB 2022). Very limited sage plant species a primary food source for the species were observed within the proposed Project site during the site visit.

Common Name Scientific Name	Sensitivity Status	Preferred Habitat/Known Elevational Range	Presence/Potential to Occur within the BSA
Mammals			
western mastiff bat <i>Eumops perotis californicus</i>	-- /SSC/WBWG HIGH	Known to occur in habitat consisting of extensive open areas within dry desert washes, flood plains, chaparral, cismontane oak woodland, coastal scrub, open ponderosa pine forest, and grasslands. Roosts primarily in crevices in rock outcrops, buildings, tunnels, and trees.	Low. Large trees adjacent the basins provide potential roosting and foraging habitat for the species. The most recent detection was in 1991 the (CNDDDB 2022).
hoary bat <i>Lasiurus cinereus</i>	--/ WBWG MEDIUM	Habitats suitable for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. Generally, roosts in dense foliage of medium to large trees and requires water.	Low. Large trees adjacent the basins provide potential roosting and foraging habitat for the species. There are four CNDDDB records within five miles of the BSA (CNDDDB 2022).
Western yellow bat <i>Lasiurus xanthinus</i>	-- /SSC/WBWG HIGH	Found in valley foothill riparian, desert riparian, desert wash and palm oasis habitats. Roosts in trees, particularly palms, forages over water and among trees.	Low. Large trees, particularly palm trees adjacent the SLRC provide potential roosting habitat. The basins provide potential foraging habitat for the species. There are four CNDDDB records within five miles of the BSA (CNDDDB 2022).

Key:

SSC = Species of Special Concern (CDFW)

WBWG (Western Bat Working Group) MEDIUM = Medium designation indicates a level of concern that should warrant closer evaluation, more research, and conservation actions

WBWG HIGH = High designation represents those species considered the highest priority for funding, planning, and conservation actions

SOURCE: CNDDDB 2021

Of the 21 special-status wildlife species recorded within five miles, a total of five special-status wildlife species, Crotch’s bumble bee (*Bombus crotchii*), western mastiff bat (*Eumops perotis californicus*), monarch butterfly (*Danaus plexippus*) hoary bat (*Lasiurus cinereus*), and western yellow bat (*Lasiurus xanthinus*), were identified as having a low potential to occur within the BSA, based on the criteria described below:

- **Present:** The species was observed within the study area during the site assessment or has been documented within or immediately adjacent to the BSA during recent surveys (with 2 years).
- **High Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present on the BSA. These species are generally common and/or widespread in the BSA and vicinity.
- **Moderate Potential:** Species identified in the literature search and/or known to occur in the region and suitable habitat is present within the BSA. These species are generally less common and/or widespread than species considered to have “high” potential to occur.
- **Low Potential:** Species identified in the literature search or known to occur in the region, but the habitat on site is of low or marginal quality and/or the proposed Project site occurs outside the species known geographic or elevational range. Distance to nearest known occurrence and the age of last reported local occurrence are also considered.

One additional special-status wildlife species, mountain lion (*Puma concolor*), although not identified in CNDDDB, CDFW or USFWS queries, has been identified as potentially occurring nearby based on data from National Park Service (NPS) (NPS 2022). The Southern California/Central Coast evolutionarily significant unit (ESU) has proposed the mountain lion as a threatened or endangered candidate species under CESA, as defined in Section 2068 of the FGC. This candidacy is under review by the CDFW. Mountain lion is well-documented within the Santa Monica Mountains, based on tracking studies conducted by the NPS. Mountain lion's primary prey is mule deer, and mountain lion seasonal movements often follow deer migration. Mule deer comprise up to 80% of a mountain lion's diet but other prey species may include coyotes, raccoons, rabbits, livestock or pets in urban areas. Mountain lions often make their dens for rearing young in natural cavities such as caves and sometimes in thickets. Mountain lions prefer vegetated ridgetops and stream courses as travel corridors and hunting routes. Mountain lions select habitats with dense understory vegetation, such as riparian woodlands and chaparral, and adequate stalking cover to allow for successful hunting. None of these habitats exist on the Project site. A single mountain lion has been documented numerous times since 2012 as living in Griffith Park which is located approximately 1.4 miles to the northwest of the Project site. Specifically, the mountain lion known as P-022 has made excursions within the urbanized residential areas surrounding Griffith Park. However, the species is not expected to occur within the Project site in spite of being documented within the Silver Lake area by the NPS (NPS 2022) due to the lack of the necessary habitat requirements for the species. In addition, the proposed Project is situated within a busy and established residential community. The site lacks suitable vegetation, stream courses or natural cavities to provide suitable foraging, den sites, or as a movement corridor. Due to the Project site's densely urbanized location, lack of suitable habitat and lack of viable wildlife corridor, it is not expected that the mountain lion would utilize the project site. However, occasional visitations do occur and some mountain lion sightings have been made in the vicinity in recent years². No evidence of mountain lions, mule deer, or active or former mountain lion natal dens were observed during the general biological survey.

Crotch's Bumble Bee

Crotch's bumble bee is a state candidate endangered species. The species prefers grassland and sage shrubland habitats and relies on milkweeds (*Asclepias* sp.) and sages (*Salvia* sp.) for food. There are limited food source plants available within the Community Restoration Area. There are six CNDDDB records with the most recent occurring in 2020 located at Occidental College approximately three miles east of the BSA. (CNDDDB 2022).

Western Mastiff Bat

Western mastiff bat is a State species of special concern and a WBWG species ranked as High. WBWG ranked High species are those considered the highest priority for funding, planning, and conservation actions. Commonly associated vegetation includes large trees and palm tree species used for roosting. Suitable woodland habitat and palm trees are present within multiple portions

² <https://www.latimes.com/california/story/2022-03-26/mountain-lion-believed-to-be-p-22-is-seen-roaming-in-silver-lake-neighborhood>

of the BSA. There are four CNDDDB records located within five miles of the BSA with the most recent being from over 30 years ago in 1991 (CNDDDB 2022).

Hoary Bat

Hoary bat is a Western Bat Working Group (WBWG) species ranked as Medium. WBWG ranked Medium species are those that indicate a level of concern that should warrant closer evaluation and research. The species prefers medium to large-sized trees with dense foliage to roost in and nearby bodies of water to forage. Suitable woodland habitat is present within multiple portions of the BSA. There are four CNDDDB records for the species within five miles of the BSA. The most recent CNDDDB record is from 30 years ago in 1992 located 0.5 miles to the northwest of the BSA along Monon Street (CNDDDB 2022).

Western Yellow Bat

Western yellow bat is a State species of special concern and a WBWG species ranked as High. WBWG ranked High species are those considered the highest priority for funding, planning, and conservation actions. Commonly associated vegetation includes large trees and palm tree species near bodies of water for foraging. Suitable woodland habitat and palm trees are present within multiple portions of the BSA. There is a single CNDDDB record dated over 35 years ago (1984) located within five miles of the BSA (CNDDDB 2022).

Monarch Butterfly

Monarch butterfly is a State Rank S2S3 species. Commonly associated vegetation includes large wind-protected stands of non-native eucalyptus (*Eucalyptus* sp.) trees located near the California coastline. The species uses these stands of trees as over-wintering roost sites on their migration. They additionally will use other tree species including pine (*Pinus* sp.) and cypress (*Cupressus* sp.) trees. Within the BSA, suitable habitat exists within all of the semi-natural woodlands located at multiple locations within the SLRC. There are no CNDDDB records within five miles of the BSA (CNDDDB 2022).

Sensitive Natural Communities

Sensitive natural communities are those that are considered by the CDFW to be imperiled due to their decline in the region and/or their ability to support special-status plant and/or wildlife species. These communities include those that, if eliminated or substantially degraded, would sustain a significant adverse impact as defined under CEQA Section 15002(g). Sensitive natural communities are important ecologically because their degradation and destruction could threaten populations of dependent plant and wildlife species and significantly reduce the regional distribution and viability of the community. Loss of sensitive natural communities also can remove or reduce important ecosystem functions, such as water filtration by wetlands or bank stabilization by riparian woodlands.

The 9-quadrangle CNDDDB search yielded eight sensitive natural communities: California Walnut Woodland, Riversidian Alluvial Fan Sage Scrub, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Coastal Salt Marsh, Southern Dune Scrub, Sycamore Alder Riparian Woodland, and Walnut Forest. Consistent with the 2019 GPA

report and the site visit that was conducted for the proposed Project, none of these natural communities occur within the BSA.

Critical Habitat

Under FESA the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) are required to designate Critical Habitat for endangered and threatened species. Critical Habitat is defined as areas of land, water, and air space containing the physical and biological features essential for the survival and recovery of endangered and threatened species. Designated Critical Habitat includes sites for breeding and rearing, movement or migration, feeding, roosting, cover, and shelter. Designated Critical Habitats require special management and protection of existing resources, including water quality and quantity, host animals and plants, food availability, pollinators, sunlight, and specific soil types. Critical Habitat delineates all suitable habitat, occupied or not, essential to the survival and recovery of the species. No USFWS-Designated or NMFS Critical Habitat is located within 10 miles of the BSA.

Wildlife Movement

Effective wildlife movement is essential for dispersal, genetic exchange, migration, foraging, and breeding. Migration of wildlife either seasonally or in response to resource availability is vital for survival in virtually all ecosystems. Migration corridors are linkages between large open space areas. Top tier predators, mezzo predators, and prey species alike utilize migration corridors for travel and refuge between open space areas, as well as for wintering and breeding grounds. Some migration corridors are created naturally by topography and have been used by wildlife for hundreds or thousands of years, and some have been constructed by humans to mitigate for the loss of existing natural corridors, such as bridge crossings, underpasses, and culverts. Natural features commonly utilized for local wildlife movement and migration include creeks, rivers, canyons, and valleys, because these low-lying riparian areas are generally flat and include an over story of vegetation that provides shelter from predators. Functional wildlife movement corridors are especially important in highly fragmented habitat, such as urbanized areas. Wildlife movement corridors are generally used by terrestrial animals, although they may also be important for aquatic species and avian dispersal.

The BSA is located within the urbanized area of the Los Angeles Basin that is fully developed with only fragmented vegetated areas. The BSA primarily hosts urbanized wildlife though it does provide habitat for a variety of native birds, some migratory. However, the BSA does not serve as a contiguous regional corridor between two larger stands of habitat.

The BSA supports migratory birds that fly through the Los Angeles Basin. The Migratory Bird Treaty Act (MBTA) protects migratory birds including nests and foraging habitat. Many avian species that do not have any state of federal special status are still protected under the MBTA and the California Fish and Game Code.

Aquatic Resources

A formal jurisdictional waters delineation was conducted concurrently with the biological field assessment. All aquatic features within the aquatic resources study area (Project site and 100-foot buffer) were analyzed in the field to determine whether each may be considered wetland or non-

wetland (“other”) waters of the U.S., waters of the State, and/or FGC Section 1600 resources. Aquatic resources delineated within the survey area include the Ivanhoe Reservoir and Silver Lake Reservoir, which are described below, summarized in **Table 3.4-4**, and depicted as Open Water in Appendix D, Figure 3.

**TABLE 3.4-4
 AQUATIC RESOURCES WITHIN THE SURVEY AREA**

Aquatic Feature	Cowardin Type	Dominant Vegetation/ Land Cover Type	OHWM (feet)	Linear Feet	Acres
Ivanhoe Reservoir	Lacustrine Permanently Flooded	Open Water	415-620	560	7.58
Silver Lake Reservoir	Lacustrine Permanently Flooded	Open Water	605-1,350	3,335	69.35
Total Acreage:					76.93

Ivanhoe Reservoir and Silver Lake Reservoir are both constructed, well-fed reservoirs with natural bottoms and concrete side slopes. NWI categorizes these reservoirs as permanently flooded lakes (USFWS 2022c). The reservoirs are connected by a spillway located on the south end of Ivanhoe Reservoir and north end of Silver Lake Reservoir. There is an overflow located on the west side of Silver Lake Reservoir that releases water to the City’s stormwater system if the reservoirs reach 454 feet in elevation.

Based on the results of the aquatic resources delineation and the jurisdictional analysis, it was determined that both reservoir’s 76.93-acres of open water are considered “other” (non-wetland) waters of the State and FGC 1600 resources. No waters of the U.S. were identified during the aquatic resources delineation.

Protected Trees

The BSA was surveyed for trees protected and/or managed under the City Tree Ordinance, RAP Tree Policy, and BSS; the tree survey area is depicted in Appendix D, Figure 6. This analysis related to tree and shrub impacts is summarized from Biological Technical Report included as Appendix D, Subappendix E, the *Silver Lake Reservoir Complex Master Plan Project, Protected Tree Report* and Appendix D, Subappendix F, the *Silver Lake Reservoir Complex Master Plan Project, Park and Street Tree Inventory Results Report*.

A total of 47 trees protected under the City Tree Ordinance consisting of four species were recorded within the Project site (see **Table 3.4-5**, Appendix D Figures 7a through 7c, and Appendix D, Subappendix E). Although confirmation is not possible, it is unknown if these trees are naturally occurring or planted. Irrigation was observed in the vicinity of many of the trees in a state of disrepair.

**TABLE 3.4-5
 CITY ORDINANCE TREES WITHIN BIOLOGICAL STUDY AREA**

Tree Species (Common Name)	Number of Trees Observed
coast live oak	23
Mexican elderberry	6
Southern California black walnut	8
toyon	10
Total Trees	47

A total of 254 RAP and 107 BSS street trees consisting of 50 species were inventoried within the Project site (see **Table 3.4-6**, Appendix D, Figures 8a through 8g, and Appendix D, Subappendix F). Native trees comprise a portion of the species recorded as a RAP and BSS trees. However, most of if not all of these native trees have been planted, maintained, and are not naturally occurring.

**TABLE 3.4-6
 RAP AND BSS TREES WITHIN THE BIOLOGICAL STUDY AREA**

Protected Tree Species (Common Name)	Number of RAP Trees Observed	Number of BSS Trees Observed	Total Number of Trees Per Species
African sumac	4	0	4
Aleppo pine	12	0	12
American sweetgum	8	0	8
Armenian plum	1	0	1
Australian willow	0	43	43
black acacia	2	0	2
black locust	10	0	10
blue gum	14	2	16
Brazilian pepper tree	1	0	1
camphor	0	15	15
Canary Island Date palm	4	0	4
Canary Island pine	12	2	14
carob	5	2	7
carrotwood	3	0	3
Chilean pepper tree	22	0	22
Chinese elm	1	0	1
Chinese flame tree	0	18	18
Chinese pistache	0	2	2
chitalpa	1	0	1
coast live oak	3	2	5
coastal redwood	0	1	1
deodar	32	8	40
Eastern redbud	8	0	8

Protected Tree Species (Common Name)	Number of RAP Trees Observed	Number of BSS Trees Observed	Total Number of Trees Per Species
fern pine	2	0	2
foothill pine	2	0	2
golden wattle	3	0	3
holly leaf cherry	2	0	2
holly oak	1	0	1
honey locust	4	0	4
Indian laurel	5	0	5
ironwood	3	0	3
jacaranda	9	9	18
koda tree	9	0	9
lemonade berry	1	0	1
London plane	10	0	10
Mexican elderberry	3	0	3
Mexican fan palm	3	0	3
olive	2	0	2
pink trumpet tree	3	0	3
pittosporum	1	0	1
red ironbark	6	0	6
red river gum	3	0	3
silk oak	1	0	1
Southern California black walnut	6	0	6
southern live oak	1	0	1
stone pine	8	3	11
toyon	1	0	1
Western redbud	4	0	4
Western sycamore	17	0	17
wild lilac	1	0	1
Total Number of Trees Per Classification	254	107	361

3.4.2 Regulatory Framework

Federal

Federal Endangered Species Act

The federal Endangered Species Act (FESA) and subsequent amendments provide for the conservation and protection of wildlife and plant species that are listed or proposed for listing as endangered or threatened species and the ecosystems upon which they depend. FESA also provides statutory framework for the conservation and recovery of threatened and endangered species as well as for the conservation of Designated Critical Habitat that the United States Fish and Wildlife Service (USFWS) determines is required for the survival and recovery of these listed species.

FESA requires federal agencies to ensure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. Regulations governing federal interagency cooperation under Section 7 are found in CCR Title 50, Part 402. The opinion issued at the conclusion of a Section 7 consultation includes a statement authorizing “take” (to harass, harm, pursue, hunt, wound, kill, etc.) that may occur incidental to an otherwise legal activity. The consultation process leads to issuance of a Biological Opinion from USFWS. In most cases, a Biological Opinion addresses a Project’s potential to result in “take” of listed species (as defined below) and includes mandatory conditions that would allow for limited incidental take to occur subject to prescribed conditions.

Section 10 provides a means whereby a non-federal action with the potential to result in take of a listed species can be allowed under an incidental take permit which may be issued once an HCP is approved. Application procedures are found at 50 CFR 13 and 17 for species under the jurisdiction of USFWS and 50 CFR 217, 220, and 222 for species under the jurisdiction of NMFS.

The Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) is the domestic law that affirms, or implements, a commitment by the U.S. to four international conventions (with Canada, Mexico, Japan, and Russia) for the protection of a shared migratory bird resource. The MBTA makes it unlawful at any time, by any means, or in any manner to pursue, hunt, take, capture, or kill migratory birds. “Migratory bird” means any bird protected by any of the treaties and currently includes 1,027 bird species in the United States (50 CFR 10.13), regardless of whether the particular species actually migrates. The law also applies to the removal of nests occupied by migratory birds during the breeding season. The MBTA makes it unlawful to take, pursue, molest, or disturb these species, their nests, or their eggs anywhere in the United States.

Federal Clean Water Act (33 USC 1251 through 1376)

The United States Army Corps of Engineers (USACE) regulates “discharge of dredged or fill material” into “waters” of the United States, which includes tidal waters, interstate waters, and “all other waters, interstate lakes, rivers, streams (including ephemeral drainages), mud flats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce or which are tributaries to waters subject to the ebb and flow of the tide” (33 C.F.R. 328.3[a]), pursuant to provisions of Section 404 of the Clean Water Act (CWA). The CWA also excludes certain features from this regulation, including “wastewater recycling facility constructed on dry land” (see 33 CFR Section 230.3 [o][2][vii]). Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11[m] which also meet the criteria of this definition) are not considered waters of the United States.

Fish and Wildlife Conservation Act

The Fish and Wildlife Conservation Act declares that fish and wildlife are of ecological, educational, esthetic, cultural, recreational, economic, and scientific value to the United States. The purposes of this Act are to encourage all federal departments and agencies to utilize their statutory and administrative authority, to the maximum extent practicable and consistent with each agency's statutory responsibilities, to conserve and to promote conservation of non-game fish and wildlife and their habitats. Another purpose is to provide financial and technical assistance to the states for the development, revision, and implementation of conservation plans and programs for nongame fish and wildlife.

State

California Endangered Species Act

The California Endangered Species Act (CESA) establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. The CESA mandates that state agencies should not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy.

Section 2080 of the California FGC states that “No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the Commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.” Pursuant to Section 2081, CDFW may authorize individuals or public agencies to import, export, take, or possess state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through Incidental Take permits or Memoranda of Understanding if the take is incidental to an otherwise lawful activity, impacts of the authorized take are minimized and fully mitigated, the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and the project operator ensures adequate funding to implement the measures required by CDFW, which makes this determination based on available scientific information and considers the ability of the species to survive and reproduce.

California Fish and Game Code Section 1600 et seq.

CDFW is responsible for protecting and conserving fish and wildlife resources, and the habitats upon which they depend. Under Section 1600 of the California FGC, CDFW administers the Lake and Streambed Alteration (LSA) Program and regulates all substantial diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake (which typically include reservoirs), which supports fish or wildlife.

Applicants proposing changes to such regulated water resources must submit a Lake or Streambed Alteration Notification to CDFW for such projects. CDFW will then determine if the proposed activity may substantially adversely affect an existing fish or wildlife resource and will issue a final agreement for the applicant's signature that includes reasonable measures necessary to protect the resource. Preliminary notification to CDFW, and project review by CDFW may

occur during or after the California Environmental Quality Act (CEQA) environmental review process but prior to project implementation.

California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800

Under these sections of the California FGC, a project operator is not allowed to conduct activities that would result in the taking, possessing, or destroying of any birds of prey; the taking or possessing of any migratory nongame bird as designated in the MBTA; the taking, possessing, or needlessly destroying of the nest or eggs of any raptors or nongame birds protected by the MBTA; or the taking of any nongame bird pursuant to California FGC Section 3800.

Section 3800 of the California FGC affords protection to all nongame birds, which are all birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds. Section 3513 of the California FGC upholds the MBTA by prohibiting any take or possession of birds that are designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations promulgated pursuant to the MBTA.

California Environmental Quality Act Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, California Environmental Quality Act (CEQA) Guidelines Section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled after the definition in FESA and the section of the California FGC dealing with rare or endangered plants or animals. This section is included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities. Although natural communities do not at present have legal protection of any kind, CEQA calls for an assessment of whether any such resources would be affected and requires findings of significance if there would be substantial losses. Natural communities listed by CNDDDB as sensitive are considered by CDFW to be significant resources and fall under the State CEQA Guidelines for addressing impacts. Local planning documents such as General Plans often identify these resources as well.

California Water Quality Control Act (Porter-Cologne California Water Code Section 13260)

The State Water Resources Control Board and the RWQCB (together “Boards”) are the principal state agencies with primary responsibility for the coordination and control of water quality. The Boards regulate activities pursuant to Section 401(a)(1) of the federal CWA as well as the Porter-Cologne Water Quality Control Act (Porter-Cologne) (Water Code Section 13260). Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification

shall originate from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable water at the point where the discharge originates or will originate. Any such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA.

In Porter-Cologne, the Legislature declared that the “State must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the State from degradation...” (California Water Code Section 13000). Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the State. It is important to note that enforcement of the State’s water quality requirements is not solely the purview of the Boards and their staff. Other agencies (e.g., CDFW) have the ability to enforce certain water quality provisions in state law.

The State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (procedures), adopted by the State Water Resources Control Board on April 2, 2019, became effective May 28, 2020. The Procedures include a definition for wetland waters of the state that include (1) all wetland waters of the U.S.; and (2) aquatic resources that meet both the soils and hydrology criteria for wetland waters of the U.S. but lack vegetation.

Native Plant Protection Act (California FGC Sections 1900 through 1913)

The California’s Native Plant Protection Act requires all state agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of CDFW at least 10 days in advance of any change in land use. This allows CDFW to salvage listed plant species that would otherwise be destroyed. The project operator is required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that apply to rare or endangered plants.

Regional

Significant Ecological Areas

Los Angeles County adopted the Significant Ecological Areas (SEAs) Ordinance, effective on January 16, 2020. These are areas that are officially designated as containing irreplaceable biological resources under the SEA Program. The objective of the SEA Program is to conserve genetic and physical diversity within the County by designating resource areas that are capable of sustaining themselves into the future. SEAs are protected by Chapter 22.102 of the County’s code of ordinances. The ordinance requires that a biological constraints analysis (BCA) report be prepared by a qualified biologist listed in the SEA Technical Advisory Committee (SEATAC) Certified Biologist List maintained by the Department of Regional Planning (Department) that assesses the biological resources on a project site and in the surrounding area. A comprehensive list of what shall be included in the BCA is found in the BCA Checklist maintained by the Department. The BCA requires at a minimum the inclusion of a map of a project site, a list of all SEA resources, project impacts, and required mitigation. However, there are no SEAs located within the BSA.

Local

City of Los Angeles

Los Angeles Protected Tree and Shrub Ordinance (City Tree Ordinance) (City of Los Angeles Municipal Code [LAMC] Chapter IV, Article 6) regulates the relocation or removal of all Southern California native oak trees (*Quercus* sp.; excluding scrub oak), Southern California black walnut trees (*Juglans californica*), western sycamore (*Platanus racemosa*) trees, California bay trees (*Laurus nobilis*), Mexican elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*) of at least 4 inches in diameter at breast height. These tree and shrub species are considered “protected” by the City of Los Angeles. Native trees and shrubs that have been planted as part of a tree planting program are exempt from this ordinance and are not considered protected. The ordinance prohibits, without permit, the removal of any regulated protected tree, including “acts which inflict damage upon root systems or other parts of the tree ...” and requires that all regulated protected trees that are removed be replaced on at least a 4:1 basis with trees and shrubs that are of a protected variety. The City requires that a report be prepared by a qualified tree expert discussing the subject tree(s), their preservation, effects of proposed construction, and mitigation measures pursuant to the removal or replacement thereof.

The RAP Tree Preservation Policy (Policy) is a regulatory tool to provide protection of specified trees, protect their value, and avoid significant negative impacts to the ecosystem (City of Los Angeles 2022). The Policy regulates protection of trees in four categories:

- Native Trees as defined by City Tree Ordinance as noted above.
- Heritage Trees are individual trees of any size or species that are specifically designated as heritage because of their historical, commemorative, or horticultural significance.
- Special Habitat Value Trees are native trees located on RAP managed lands.
- Common Park Trees are generally mature exotic trees that have value beyond the shade they provide to park users and are a scenic resource.

When a large number of trees are proposed for removal the notification protocol present in the RAP Tree Policy must be followed. The protocol assures that information is communicated to the public, City council offices, the Park Advisory Board, and to the department Divisions affected by the removal project. The protocol provides an opportunity for the public to become involved with forestry issues and for department coordination. Additionally, tree replacement is guided by the RAP Tree Policy and by the objectives and functions as defined by the Department. RAP trees are planted according to the RAP Reforestation Program. Sometimes when crowding or other physical constraints make it impossible to plant the same tree in the same place where it was removed, an alternate location is found. Undesirable tree species are not replaced.

The BSS, Urban Forestry Division (UFD), Department of Public Works manages street trees. A City Tree Removal Permit (Permit Application) is required to remove any street tree planted in the public right-of-way prior the start of construction. The UFD requires a 2:1 street tree replacement ratio.

Sections 6 and 12 of the City of Los Angeles Conservation Element (Conservation Element) of the General Plan require that if protected species, habitats, wildlife dispersal, and migration corridors are identified as having the potential to be impacted by a proposed development project, the developer is required by CEQA to provide protection of the species (City of Los Angeles 2001).

Open Space Goal 6 of the Silver Lake - Echo Park - Elysian Valley Community Plan has two main objectives (City of Los Angeles 2004):

Objective 5-1 Preserve existing and develop new open space resources.

Objective 5-2 Provide/ensure access to new recreational resources and open space developed throughout the Plan area, including trails and facilities along the Los Angeles River, and new parks.

3.4.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to biological resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. (Refer to Impact 3.4-1)
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. (Refer to Impact 3.4-2)
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (Refer to Impact 3.4-3)
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (Refer to Impact 3.4-4)
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Refer to Impact 3.4-5)
- Conflict with provisions of an adopted HCP, Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan. (Refer to Impact 3.4-6)

The City of Los Angeles 2006 CEQA Thresholds Guide holds that the determination of significance shall be made on a case-by-case basis after considering the following factors:

- The loss of individuals, or the reduction of existing habitat, of a state or federal listed endangered, threatened, rare, protected, or candidate species, or a Species of Special Concern or federally listed critical habitat; (Refer to Impact 3.4-1)
- The loss of individuals or the reduction of existing habitat of a locally designated species or a reduction in a locally designated natural habitat or plant community; (Refer to Impact 3.4-2)

- Interference with wildlife movement/migration corridors that may diminish the chances for long-term survival of a sensitive species; (Refer to Impact 3.4-4)
- The alteration of an existing wetland habitat; (Refer to Impact 3.4-3)
- Interference with habitat such that normal species behaviors are disturbed (e.g., from the introduction of noise, light) to a degree that may diminish the chances for long-term survival of a sensitive species. (Refer to Impact 3.4-1)

Therefore, each impact analysis is evaluated under both Appendix G and the 2006 City of Los Angeles CEQA Thresholds Guidelines, with the thresholds for the City of Los Angeles applied to the relevant Appendix G Thresholds.

Methodology

The analysis of potential Project impacts to biological resources and corresponding recommendations for avoidance, minimization, and mitigation are discussed in this section. It should be noted that because the overall Project footprint is conceptual at this time (preliminary design), impacts may need to be confirmed upon completion of a more finalized Project design.

Approach to the Analysis

Generally, impacts may be defined as direct or indirect, and permanent or temporary. Definitions of these impact types are provided below.

- **Direct Impacts:** Any alteration, disturbance, or destruction of biological resources that would result from project-related activities is considered a direct impact. Examples include loss of individual species and/or their associated plant communities, diversion of surface water flows, and encroachment into wetlands. Under the FESA, direct impacts are defined as the immediate impacts of a project on a species or its habitat, including construction noise disturbance, sedimentation, or habitat loss.
- **Indirect Impacts:** As a result of project-related activities, biological resources may also be affected in an indirect manner. Under the FESA, indirect impacts are defined as those impacts that are caused by, or would result from, a proposed project but occur later in time and are reasonably certain to occur (50 CFR, Section 402-02). An example of indirect impacts may include irrigation runoff from a developed area into surrounding natural vegetation. Indirect impacts could also include increased wildfire frequency as a result of power line failures.
- **Temporary Impacts:** Any impacts to biological resources that are considered reversible can be viewed as temporary. Examples include the generation of fugitive dust during construction activities and temporary access or staging areas that will be returned to pre-project conditions.
- **Permanent Impacts:** All impacts that result in the irreversible removal of biological resources are considered permanent. Examples include constructing a building or permanent road on an area with native vegetation, such that the native vegetation is permanent removed and replaced with a developed structure.

3.4.4 Project Design Features

The following Project Design Features (PDF) would be implemented for the proposed Project.

PDF-BIO-1: Ornamental Native Plants. If the proposed Project impacts native planted species within the Community Restoration Area, including Nevin's barberry, showy island snapdragon, and Coulter's matilija poppy, these species will be replanted onsite at a 1:1 ratio.

PDF-BIO-2: Nesting Birds. If construction and vegetation removal is proposed between February 1 and August 31, a qualified biologist shall conduct a pre-construction survey for breeding and nesting birds and raptors 30 days prior to the start of construction, and then weekly, within 300-feet of the construction limits (or to the outer limits of the park area bounded by West Silver Lake Drive, Van Pelt Place, and Silver Lake Boulevard) to determine and map the location and extent of breeding birds that could be affected by the Project. Nesting bird surveys shall be conducted at appropriate nesting times and concentrate on potential roosting or perch sites. Weekly surveys will take place with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work." If Project activities are delayed or suspended for more than 7 days after the last survey, surveys shall be repeated before work can resume.

If an active nest is located, clearing and construction within appropriate buffers as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. Due to the urbanized nature of the Project site, 300-feet for raptors and 150-feet for passerine birds could suffice for nesting bird buffers however it will be at the discretion of the qualified biologist. The buffer zone from the nest shall be established in the field with flagging and stakes. The qualified biologist shall retain the ability to increase buffers if needed to protect the nesting birds. Temporary fencing and signage shall be maintained for the duration of the Project. Construction personnel shall be instructed on the sensitivity of the area and be advised not to work, trespass, or engage in activities that would disturb nesting birds near or inside the buffer. On-site construction monitoring may also be required to ensure that no direct or indirect impacts occur to the active nest. Project activities may encroach into the buffer only at the discretion of the qualified biologist.

PDF-BIO-3: Wildlife Fencing Signage. Interpretive signage will be installed near all wildlife friendly fencing to educate the public on wildlife and habitat sensitivity, and to encourage the public to not enter the restricted areas.

PDF-BIO-4: Tree Protection Fencing. Establish tree protection fencing around the tree protection zone (TPZ). This area will be marked and avoided during all construction activities near the protected trees. This area will be kept clear of any construction material, debris, equipment, portable toilets, and foot or equipment traffic. Fencing will be installed prior to construction at the edge of the TPZ and remain in place until the entire project is complete. The fence will be chain link and a minimum of five feet in height.

PDF-BIO-5: Grading/Trenching in TPZ. Grading/trenching will be restricted to areas outside the TPZ of the trees. All grubbing and clearing within the TPZ of a tree will be done manually. All soil removal will be done with hand tools, using an air spade or

comparable equipment that will excavate soil without damaging the roots. Jack hammers will not be used to remove the soil. When a root is encountered, soil removal will be done without chipping, marring, or damaging the root bark in any way (damaging the root bark will open up the bark barrier so that disease can enter the tree, allowing rot to develop or fungus to take over, and can result in root death).

PDF-BIO-6: Avoiding Root Damage. If tree roots must be cut, cuts will be less than one inch. If any roots over one inch in diameter are damaged, they will be clean-cut with a sharp and sterilized hand tool. Any roots permanently exposed from grading or scraping of topsoil will be cleanly cut just below the new soil grade.

PDF-BIO-7: Soil Grade. Soil levels will be returned to the original grade, at which trees' roots were first established. Existing fill soil above that original grade will be removed to the extent possible; no additional fill soil will be placed over the original grade. If soil is filled back to the original grade, compaction will be done manually only (no equipment will be used). Compaction will be done in layers of three to six inches depending on soil structure. No gaps or pockets will remain in the soil.

PDF-BIO-8: Irrigation. During construction, trees will only be watered under the guidance of the project arborist. Where it is needed, temporary irrigation (drip, leaking tube, or other) will be installed at intervals throughout the fenced protection zone to allow periodic deep watering during construction. The entire TPZ of the trees will be watered to a soil depth of four feet. This may require slow irrigation for 8-24 hours or more, or may require repeat waterings of shorter duration to promote saturation. The soil will be allowed to dry out completely before watering is repeated. The period between waterings may be a month or more. The project arborist will monitor the protected trees and provide recommendations on the effectiveness and duration of temporary irrigation.

PDF-BIO-9: Landscaping Around Native Trees. Landscaping near protected trees will be drought-tolerant only unless trees are already accustomed to current landscape irrigation (to be confirmed by arborist). Irrigation overspray or runoff, as a result of lawn or ornamental irrigation, will be avoided in the TPZ of any protected tree with the noted exception above. All landscaping will be kept away from the trunk of any protected tree by a minimum of two feet.

PDF-BIO-10: Tree Pest Inspection. Prior to tree removal, the City will have a certified arborist evaluate the trees to ensure they are free of pests.

PDF-BIO-11: Development of Pest Management Plan. If the certified arborist determines trees are impacted by infectious pests or diseases, the City will work with the certified arborist to prepare an Infectious Tree Disease Management Plan or develop a detailed, robust, enforceable, and feasible list of preventative measures. A plan/list will provide measures relevant for each tree pest or disease observed. To avoid the spread of infectious tree pests and diseases, infected trees should not be transported from the Project site without first being treated using best available management practices described in the Infectious Tree Disease Management Plan or the list of preventative measures.

PDF-BIO-12: Prevention of Pathogen Spread. All tree material, especially infected tree material, will be left on site, chipping the material for use as ground cover or mulch. Cleaning and disinfecting pruning and power tools before use will be completed to

prevent introducing pathogens from known infested areas, and after use to prevent spread of pathogens to new areas.

PDF-BIO-13: City Tree Ordinance. Any tree or shrub covered under the City Tree Ordinance which may be impacted by proposed Project construction, either through removal or encroachment within the TPZ, shall be replaced with nursery stock at a minimum 4:1 mitigation ratio of like species and 15-gallon in size. The City will work with a certified arborist and/or tree specialist to acquire appropriately sized, locally sourced trees from a local native plant nursery that implements Phytophthora/Clean Nursery Stock protocols. This may reduce the probability of introducing replacement trees contaminated with pests, diseases, and pathogens that could spread and infect native trees or habitats. A certified arborist and/or tree specialist should inspect and potentially quarantine nursery stock before bringing them into the Project site. Replacement tree plantings shall be located in areas protected by the habitat fencing to ensure their protection from the public.

PDF-BIO-14: RAP Tree Policy. Any tree or shrub covered under the RAP Tree Policy which may be impacted by the proposed Project construction, either through removal or encroachment within the TPZ, shall be replaced with nursery stock. The City at a minimum will be required to replace impacted trees at a 1:1 ratio for trunk diameter. The impacted trees' aggregate diameter, measured at DSH (multi-trunk trees are to be measured immediately below the lowest trunk) shall be replaced at an equal or greater rate of caliper of new trees. Each one-inch DSH of existing tree shall be replaced with a minimum one-inch caliper new tree.

3.4.5 Impacts and Mitigation Measures

Candidate, Sensitive, or Special-status Species

Impact 3.4-1: Would the proposed Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Construction

Special-Status Plants

Found within the proposed Project site are three special-status plant species that have been ornamentally planted in the Community Restoration Area including Nevin's barberry, showy island snapdragon, and Coulter's matilija poppy. These species are common horticulturally used native plants in Southern California gardens. Mitigation is not typically required for impacts to these species as they are not naturally occurring. However, as outlined by PDF-BIO-1, these species will be planted in-kind at a 1:1 ratio within the Project site as appropriate with no loss of habitat value.

As no USFWS-Designated Critical Habitat for plants occurs within the Project site, no impacts to USFWS-Designated Critical Habitat for rare plants would occur. No other special-status plant species have the potential to naturally occur within Project site. Impacts to other special-status plants and critical habitat would be considered less than significant.

Special-Status Wildlife

A total of five special-status wildlife species, Crotch's bumble bee, monarch butterfly, hoary bat, western mastiff bat, and western yellow bat, were identified as having a low potential to occur within the BSA. Habitat for these species occurs primarily within the semi-natural woodlands located in the Knoll and Meadow areas. No other special-status wildlife species were determined to have a potential to occur within the BSA.

Direct impacts to the five special-status species may occur from direct mortality (loss of individuals) due to construction activity or the removal of habitat. While the Project site would be located outside of documented overwintering site for monarch butterfly, habitat for the species does occur at the Knoll and Eucalyptus Grove park zones. Therefore, potential impacts to monarch butterfly could result from the removal of large eucalyptus and pine tree species. To minimize impacts to suitable habitat resulting from the removal of trees, the proposed Project would include the preparation of a Tree Succession Plan as outlined in Chapter 2, *Project Description*, to phase the removal of trees in a scheduled manner to allow for new tree and shrub plantings to mature and provide interim habitat value as the new vegetation is planted over time. The Tree Succession Plan would incorporate native plants into the understory thus providing food sources and habitat for native wildlife including native sages (*Salvia* sp.) and milkweeds (*Asclepias* sp.) which are necessary nectar sources for special-status species like Crotch's bumble bee and monarch butterfly respectively. This successional tree removal practice would ensure that nesting and foraging habitat would not be eliminated during implementation of the Tree Succession Plan.

To minimize impacts to biological resources including special-status invertebrates **Mitigation Measure BIO-1** would be implemented to require a preconstruction training for all contractors to note sensitive biological resources on-site. To minimize impacts to special-status invertebrates, **Mitigation Measure BIO-2** would require pre-construction surveys be conducted for Crotch's bumble bee and monarch butterfly. If these species are found on site during the surveys the mitigation measure would also require construction area delineation, construction vehicle speed reductions, and avoidance of host vegetation, to avoid impacts. With implementation of these mitigation measures, impacts to these special-status invertebrates would be reduced to a less than significant level.

Special-status bats including hoary bat, western mastiff bat, and western yellow bat may occur within large trees and skirted palm trees within the Project site. Bat colonies utilizing the site are adapted to living in an urbanized setting with the existing lighting on-site, including the adjacent residential areas and traffic along roads. However, removal of large trees or skirted palm trees, if required, may result in direct bat mortality or disturbance of maternity roosts, and would be considered a significant impact. Mature trees would be removed subject to the Tree Succession Plan which would be implemented over a 15-year period, allowing time for new tree plantings to become established. Additionally, trees can be selectively identified for removal thus avoiding trees with active roosts. As the new tree plantings mature new roosting habitat would be established over time.

Mitigation Measure BIO-3 would require a preconstruction survey of large trees and skirted palm trees by a qualified biologist, and the implementation of bat protection measures to avoid impacts to the species. With implementation of Mitigation Measure BIO-3, impacts to bats would be reduced to a less than significant level.

No USFWS-Designated Critical Habitat occurs within the BSA. No impacts would occur to USFWS-Designated Critical Habitat.

Nesting Birds

The proposed Project and off-site improvements would be constructed within semi-natural woodlands, ornamental landscapes, developed areas, and the open-water reservoirs. These areas can provide suitable nesting habitat for birds, including great blue herons, great horned owls, red-tailed hawks, and red-shouldered hawks. Potential impacts to nesting birds may occur during the general avian nesting season from February 15 to August 31 for songbirds and January 15 to August 31 for raptors during construction. Impacts may include direct mortality to individuals, nests, or eggs, and loss of nesting habitat (i.e., tree removal). Indirect impacts to active nests may occur due to construction noise and vibration.

The proposed Project would not include nighttime construction. In addition, it can be assumed that nesting bird species utilizing the site, are already adapted to living in an urbanized setting with the existing lighting on-site in the South Valley and the LADWP facility, the LADWP current operational activities, as well as from the adjacent residential areas and traffic light and noise along roads.

The creation of native habitat including coastal scrub and wetlands would result in a net gain of avian-supporting vegetation. The proposed diverse native habitat including habitat islands, would particularly serve as a supportive habitat for many species of wading birds which often nest in woody vegetation that is either submerged or surrounded by water. The habitat islands would be varied in size and set-back from the shoreline approximately 50 feet or more, to offer a variety of protected foraging and nesting spaces for waterfowl and other aquatic species (see Appendix D, Figure 3). Additionally, the created upland and coastal scrub areas within the Knoll and Meadow park zones would provide foraging and nesting habitat for avian species. Overall, the net gain of the proposed native habitats to be created would outweigh the impacts associated with removal of non-native species and temporary construction activities. Nevertheless, during construction, nesting birds could be impacted if construction occurs during the nesting bird season. PDF-BIO-2 would require pre-construction nesting bird surveys and the implementation of avoidance measures during construction if nests are found to be active within 300 feet of construction activities or to roads surrounding the SLRC, West Silver Lake Drive, Van Pelt Place, and Silver Lake Boulevard, and Tesla Avenue. The proposed Project would comply with PDF-BIO-2. Impacts to nesting birds during construction would be considered less than significant.

Operation

Currently, public use of the proposed Project site occurs primarily within the South Valley, the Meadow, and a walking path surrounding the SLRC. The rest of the proposed Project area is off-

limits to the public and is part of the current LADWP facility. The proposed Project could increase visitorship to the proposed Project area by approximate 390 people daily, with a total of up to 12 special events occurring weekly during three months during the summer, attracting approximately 600 people per event. Although the proposed Project may attract a higher level of visitorship, the recreational area would be expanded and visitors would be spread out over larger areas within the SLRC. Operational noise levels and associated human activities are expected to generally be similar to existing conditions and would not diminish wildlife use including nesting birds or roosting bat species, as the species utilizing the site are adapted to living in an urbanized setting, surrounded by a residential neighborhood. Allowable event hours would be from noon to 10:00 p.m. Events occurring during the nighttime would result in increased noise, light and general disruption, but these events would be temporary, infrequent, and would not result in degraded habitat values. Special events would occur at the Meadow, which is an area currently in frequent use by the public. It is anticipated that wildlife utilizing the park would avoid the event areas, which would occur within the more developed portions of the SLRC (e.g., within the Meadow area). Additionally, the noise analysis (see Section 3.12, *Noise and Vibration*) found that anticipated amplified sound generated during special events at the Meadow would not exceed recorded ambient noise levels within the rookery sites (rookery locations depicted on Appendix D, Figure 5) located around the proposed Project area. Ambient noise levels recorded at the southernmost rookery site located northwest and across the reservoir from the Meadow are 63 dBA averaged for 24 hours and 54 dBA during the hours (10:00 p.m. to 7:00 a.m.). The analysis found that amplified sound associated with special events at the Meadow would result in noise level impacts of approximately 45 to 50 dBA at the southernmost rookery site, with decreasing noise impacts to the rookery sites further to the north. Additionally, noise level impacts due to special events would not exceed ambient noise levels at the southern perimeter of the Knoll with decreasing noise levels to the north. Thus, operational noise impacts, including from special events (even with amplified sound) would be less than significant.

The proposed Project would include the addition of lighting throughout the proposed Project area as shown on Figure 2-8. New lighting would be added throughout the proposed Project area for safety and to allow the public to use the public park spaces after dark. High-level lighting would only be used at the park facilities in the South Valley, where such lighting already exists. New pathways and walking areas would have medium-level lighting to allow for nighttime recreational use and new low-level or accent lighting would be added to the Meadow, including the Education Center. The proposed Project would be designed to limit lighting within areas with the most habitat value for wildlife species, therefore, no lighting would be proposed for secondary paths within habitat areas or in areas such as the Knoll, Ivanhoe Outlook, and the Eucalyptus Grove. All lighting would be shielded and pointed away from the surrounding neighborhood and habitat areas. The Knoll would be closed to public access at night. Therefore, indirect impacts from lighting, noise, and human activity during proposed Project operation would not impact or diminish long-term survival of wildlife species, including nesting birds or roosting bat species, and impacts would be considered less than significant.

A proposed Education Center would be constructed within the Meadow along the base of the Knoll overlooking the Silver Lake Reservoir. The proposed Education Center would include small indoor and outdoor teaching and assembly spaces, including two interior classrooms.

Accent lighting would be added to the proposed Education Center (Figure 2-8). It is expected that the education center would be used during the daytime. The proposed Education Center would be connected directly to the Silver Lake Reservoir via an accessible pathway leading down to a floating dock. No public access to water activities would be allowed, except through guided kayak tours conducted by an ecologist for educational purposes. The impact of the proposed Education Center would be greatly outweighed by the creation of native upland and wetland habitat and would be considered less than significant. New native habitat would enhance habitat values for numerous wildlife species within the Knoll landscaped areas. Additionally, the kayak tour guided by trained ecologists would be temporary, infrequent and would not result in degraded habitat values and would be considered less than significant.

The proposed Project would install low-level habitat fencing to delineate public walkways from the created habitat (Figure 2-4). The fencing would be designed to allow wildlife to jump over or crawl through. Interpretive signage would be posted on the fencing to educate the public on the sensitivity of wildlife (see PDF-BIO-3). Overall, the wildlife-friendly fencing would minimize impacts to habitat from human interference. Nonetheless, some habitat areas would be shared with recreational visitors and would be affected by human presence and recreational usage. Parts of the SLRC currently serve as a recreational park within a densely developed urban area. However, as a fundamental project objective, the Project would be designed to enhance and expand wildlife habitat by introducing wetland and aquatic ecologies and improving upland habitat as well as provide opportunities for the public to connect with nature and provide facilities for onsite environmental education and stewardship while limiting human/wildlife interactions through design and operations to protect habitat.

The perimeter chain-link fence which currently surrounds the SLRC, would be removed in phases as different park zones are constructed. Removal of the chain-link perimeter fence would eliminate barriers to wildlife and provide access for larger wildlife to access the water and wetlands areas. Areas with the most habitat value for wildlife such as the Knoll, would be closed at night and off limits to the public. No impacts to wildlife are anticipated from the installation of the proposed habitat fencing or the removal of the perimeter fence. Overall, operational impacts of the proposed Project to wildlife are considered less than significant.

Mitigation Measures:

BIO-1: Pre-Construction Training. Prior to construction, a worker environmental awareness program (WEAP) training will be provided by a qualified biologist/ISA certified arborist to describe biological resources (including protected trees) that could be impacted and summarize the construction BMPs and project design features to be implemented. The WEAP will include all contractors (including grading, tree removal/pruning, and builders). The meeting shall include a focus on instructing the contractors on tree protection practices including information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that shall accomplish these tasks. All equipment operators and spotters, assistants, or those directing operators from the ground shall provide written acknowledgement of receiving training.

BIO-2: Preconstruction Surveys and Mitigation for Crotch's Bumble Bee and Monarch Butterfly. Prior to the start of construction activities, the City shall conduct

pre-construction surveys for special-status invertebrates, Crotch's bumble bee and monarch butterfly, within 100 feet of construction activities near host plant communities (including nectar plants for Crotch's bumble bee and mature eucalyptus and pines trees for monarch butterfly). The pre-construction surveys shall be conducted 7 days prior to the start of construction activities. If any of these species are determined to be present within 100 feet of construction areas, construction best management practices (BMPs) will be implemented to avoid potential impacts to these species. BMPs shall include limiting construction vehicle speeds to 15 miles per hour when operating within 100 feet of the habitat areas, fencing habitat areas using temporary silt fencing, and cleaning up all trash and debris daily. Construction personnel will be instructed to not directly harm any special-status species on-site by halting activities until the species can move to off-site areas or contact a qualified biologist to move the species out of harm's way.

BIO-3: Special-Status Bats. Prior to construction activities, bat surveys shall be conducted by a qualified bat biologist 7 days prior to the start of construction activities to determine if the special-status hoary bat, western mastiff bat, or western yellow bat could be impacted by proposed Project implementation. If special-status bat species are determined to be present within the proposed Project impact areas and if removal of roosting habitat (mature trees or palm trees) is required, a qualified biologist (a biologist with the ability to identify bat guano and assess habitat suitability) shall inspect the base of trees and palm skirts for guano prior to removal of skirted palm trees (i.e. palm trees with several layers of accumulated dead fronds).

If bats are detected, tree removal shall avoid the bat maternity season (April 1 through August 31). If tree removal cannot avoid the maternity season, bat protection protocols shall be identified and implemented by a qualified bat biologist and approved by CDFW. The protocols may require installation of bat exclusionary devices, followed by up to four weeks of nightly monitoring by a qualified biologist to confirm bats are being excluded without harm until it is determined bats are no longer present. Construction of substitute bat habitat (i.e., bat boxes, artificial tree structures) should take place one-month prior the start of bat exclusion activities. Substitute bat habitat should be in the vicinity of bat-occupied mature trees or palm trees that a qualified biologist has been confirmed that bats are using. Bat boxes manufactured by vendors such as Bat Conservation and Management should be used. The one-month window prior to the start of bat exclusion activities will allow bats sufficient time to acclimate to a new potential roost location. The bat boxes shall be installed in an area that is close to suitable foraging habitat as determined by a qualified bat biologist. Bat boxes should be located on poles 10 to 20 feet off the ground. Additionally, the bat boxes will be oriented to the south or southwest, and the area chosen for the bat boxes must receive sufficient sunlight (at least 6 hours daily) to allow the bat boxes to reach an optimum internal temperature (approximately 80-100°F).

At a minimum monitoring by qualified bat biologist should be required each month during construction and quarterly thereafter until it can be established that the bat box is being utilized. A determination needs to be made of what bat species are using the box. If the boxes are unsuccessful adaptive management measures should be developed in coordination with the CDFW.

Significance Determination:

Less than Significant with Mitigation Incorporated

Sensitive Natural Communities

Impact 3.4-2: Would the proposed Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or USFWS?

Construction

As noted above, the nine-quad CNDDDB search yielded records for eight sensitive natural communities: California Walnut Woodland, Riversidian Alluvial Fan Sage Scrub, Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, Southern Coastal Salt Marsh, Southern Dune Scrub, Sycamore Alder Riparian Woodland, and Walnut Forest. Based on the site visit, none of these natural communities were observed to occur within the BSA.

Additionally, the coast live oak and Southern California black walnut trees were observed to not meet the definition of sensitive natural communities listed above. Specifically, two tree species listed above need to be dominant or co-dominant in the tree canopy and attaining 30 to 50 percent relative cover. Neither of these species acquire that level of dominance or co-dominance as all woodlands present within the project site are dominated by non-native species. The western sycamores located near the Silver Lake Recreation Center do not meet the definition of a sensitive natural community. The western sycamores onsite are planted and share the location with a variety of non-native tree species. Overall, these three native tree species are dispersed throughout the project site and do not constitute native woodlands.

There are no sensitive natural communities located on or immediately adjacent to the proposed Project areas. No reduction in a locally designated natural habitat or plant community would occur. No impact would occur.

Operation

There are no sensitive natural communities located on or immediately adjacent to the proposed Project. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Wetlands

Impact 3.4-3: Would the proposed Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Construction

Based on the results of the field survey habitat assessment and a review of aerial photography (historic and current) and topographic maps, there are no natural drainage features or potentially jurisdictional resources located on or immediately adjacent to the BSA. Additionally, due to

unsuitable soils and lack of surface hydrology, no wetlands including federally-protected wetlands occur or have the potential to occur within the proposed Project site. Construction would not result in any impacts (including alteration) to State or federally protected waters or wetlands, or to any jurisdictional features that would require mitigation and permitting from USACE, CDFW, or RWQCB. No impact would occur.

Operation

There are no natural drainage features or potentially jurisdictional resources located on or immediately adjacent to the proposed Project therefore no impact would occur from operational use. The proposed Project would include the addition of wetland habitat along the perimeter of the reservoir and through the addition of habitat islands. New wetland habitat would enhance habitat values for numerous wildlife species including migratory avian species. During periods of drought or other emergency, water levels may decline to levels that temporarily degrade wetland habitat values on the reservoirs' edges. The proposed Project would include the preparation of a Wetlands Management Plan to ensure that habitat values are sustained in the long-term. The Plan would identify drought contingencies, including post-drought recovery actions to restore habitat values when water levels recover. The Project would increase wetland habitats compared to existing conditions and would not result in adverse impacts.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Wildlife Corridors

Impact 3.4-4: Would the proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Construction / Operation

The proposed Project and off-site improvements would be located within an urbanized area of the City of Los Angeles and is surrounded by residential development. The proposed Project site is located approximately 0.4 mile southwest of the Los Angeles River, a principal drainage that could be used as a wildlife corridor. The proposed Project site would be located approximately 1.4 miles southeast of the Santa Monica Mountains, which is the closest open space area. The proposed Project site is not a designated wildlife movement corridor, would be isolated within a residential neighborhood, and would not function as a wildlife movement corridor within the region.

Ivanhoe and Silver Lake Reservoirs do serve as foraging habitat for migratory avian species including waterfowl and shoreline species. Construction activities to the reservoir would temporarily disrupt avian foraging opportunities. However, these interruptions would be temporary during construction activities associated with the reservoir improvement. In addition, there are two reservoirs located within less than 4 miles of the proposed Project site, Echo Park located less than 1.5 miles to the south and Hollywood Reservoir, located less than 4 miles to the

northwest. In addition, once construction is completed, the Project will include creation of 7-acres of wetland habitat including habitat islands. The habitat islands and shoreline wetland habitat will create habitat underneath them within their below-the-water root zone which is a highly ecologically productive area that attracts fish (which will be introduced as a local prey source) and other aquatic species. These wetlands will provide a net gain in habitat values within the SLRC by increasing habitat diversity, providing predator protection, and providing increased foraging opportunities. Regionally, the created wetlands and the SLRC as a whole will serve as a great attractant and resource for migratory avian species (GPA 2020). The Project would result in less than significant impacts.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Local Policies and Ordinances

Impact 3.4-5: Would the proposed Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Construction / Operation

The proposed Project has the potential to result in direct impacts to native shrubs and trees regulated by the City Tree Ordinance, RAP Policy, and the BSS tree permit application. Direct impacts include tree removal and encroachment resulting in the decline and/or death of protected trees. Indirect impacts may result from dust, sedimentation, runoff, soil compaction, and failure to establish tree protection zones. Overall, impact totals presented are based on conceptual disturbance limits and site plans as of the date of this Draft EIR. As such, the actual number of trees subject to direct and indirect impacts may change as the detailed site planning evolves. Indirect impacts may lead to the mortality of protected trees. Actual tree impact numbers may be lower than anticipated and as presented. In addition, the City would work with the design team to minimize tree removal and tree root/canopy encroachment where possible during final design development and during construction activities.

This section includes a discussion of impacts to trees protected under the City Tree Ordinance as well as RAP Tree Policy and BSS Trees based on the current proposed Project design.

City Tree Ordinance Protected Trees

A total of 47 protected trees and shrubs covered by the City Tree Ordinance were mapped within the proposed Project site, four (including two Southern California black walnut trees and two toyons) of which would require removal to accommodate the current proposed Project design. A total of approximately 43 protected trees would not be impacted and would be preserved in place (refer to Appendix D, Figures 7a through 7c). Implementation of PDF-BIO-4 through PDF-BIO-7 would avoid disturbance to the tree protection zone (TPZ) of all protected trees, including grading, trenching, filling (adding soils), grade changes, or paving within and around the TPZ, and would result in the least impact to protected trees. Additionally, PDF-BIO-8 and PDF-BIO-9 would

require maintenance standards for irrigation and landscaping to reduce impacts to protected trees. The TPZ is defined as a zone underneath and immediately outside the canopy of a protected tree. Per City requirements, the TPZ of the trees addressed by this report would be the area within fifteen feet of the trunk, or within the dripline and extending five feet beyond the dripline, whichever is greater.³ Within the TPZ, construction could affect a tree's health and must be carefully managed. PDF-BIO-4 through PDF-BIO-9 would be implemented to avoid/minimize impacts to the 43 trees. Implementation of Mitigation Measure BIO-1 would include a preconstruction training to contractors noting the location of these 43 trees to be avoided.

Four City Tree Ordinance trees would be removed, including two Southern California black walnut (tree identification numbers 738 and 739 depicted on Appendix D, Figure 7b) and two toyons (tree identification numbers 742 and 743 depicted on Appendix D, Figure 7b). It is unknown if these trees are naturally occurring or planted. As described in **Mitigation Measure BIO-4**, a tree salvage and planting plan would be prepared. According to the City Tree Ordinance and as outlined in PDF-BIO-13, removal of protected trees would require mitigation at a 4:1 ratio. The City Tree Ordinance has established this replacement ratio as an acceptable practice to mitigate for the loss of trees valued under the ordinance. A replacement ratio is intended to compensate for the loss of mature trees taking into account the temporal loss of the trees including the time required for a replacement tree to mature and establish equal habitat values. The ratio takes into account whether replacement trees would be re-established on site or at an off-site location. The ratio also takes into account the value of the habitat lost including whether the habitat is occupied by sensitive wildlife species that would be indirectly affected by the tree removals. Under PDF BIO-13, the replacement trees would mitigate loss of mature trees taking into account their maturity (trunk diameter) and species type. PDF BIO-13 requires replacement of like-to-like species within the SLRC at a 4:1 ratio. The replacement requirements in the ordinance including the 4:1 replacement ratio is established to compensate for the values of the trees to be affected resulting in a less than significant impact of the Project.

Based on previous coordination with CDFW on other projects, the City understands that CDFW may recommend a higher mitigation rate for native oak trees. As such, the proposed Project **Mitigation Measure BIO-5** requires a higher replacement ratio for impacted native oak trees covered under the City Tree Ordinance: protected native oak trees less than 12 inches DSH be replaced at 4:1; between 12 and 24 inches DSH be replaced at 5:1; and greater than 24 inches DSH be replaced at 10:1. However, no impacts to native oaks trees protected by the City Tree Ordinance are proposed at this time.

A summary of City Tree Ordinance trees that would be impacted by the proposed Project is provided in **Table 3.4-7**. To meet the minimal requirements of the City Tree Ordinance, 16 replacement trees would be required to replace the four trees that would be removed. Replacement mitigation tree plantings would be installed within the proposed Project site in the currently proposed native upland vegetation planting areas largely within the Knoll and Meadow zones, and

³ The dripline of a protected tree is a line which can be drawn around a tree under the tips of the outermost branches. It is the location where rainwater tends to drip from the tree.

along the Promenade. Southern California black walnut replacement trees would be placed in areas protected by the habitat fencing. All replacement trees would come from nursery stock.

**TABLE 3.4-7
 CITY TREE ORDINANCE APPROXIMATE NUMBER OF PROTECTED TREES TO BE REMOVED DURING
 CONSTRUCTION**

Tree Identification Number	Tree Species	Trunk DSH	Cumulative Trunk Diameters	Number of Mitigation Trees
738	Southern California black walnut	3.1, 2.8, 1.7, 1.0	8.6	4
739	Southern California black walnut	4.3, 4.2, 4.2, 3.8, 3.2	19.7	4
742	toyon	4.1, 3.8, 3.1	11	4
743	toyon	2.3, 1.1, 1.0, 1.0, 1.0	6.4	4
Total Mitigation Trees				16

SOURCE: Protected Tree Report (Appendix D, Subappendix E)

In order to avoid the spread of pests and diseases, the proposed Project would implement PDF-BIO-10 through PDF-BIO-12 to ensure trees are checked and treated prior to removal from the Project site and a Pest Management Plan is prepared if required.

RAP and BSS Trees

A total of 361 RAP and BSS street trees have been inventoried within the BSA; 105 RAP trees may require removal to accommodate the current proposed Project design and 149 RAP and 107 BSS trees would not be removed and would be preserved in place. No BSS trees are currently proposed for removal. PDF-BIO-4 through PDF-BIO-9 would be implemented to avoid and minimize impacts to the 149 RAP and 107 BSS trees that would be preserved in place. Implementation of Mitigation Measure BIO-1 would include a preconstruction training to contractors noting the location of these trees to be avoided.

RAP Tree Policy states that whenever trees are removed, the existing trees' aggregate diameter, measured at DSH (multi-trunk trees are to be measured immediately below the lowest trunk) shall be replaced at an equal or greater rate of caliper of new trees. Each one-inch DSH of existing tree shall be replaced with a minimum one-inch caliper new tree. Replacement trees shall have a minimum caliper of ¼-inch. For example, a single-trunk tree whose DSH is 9 inches may be replaced with 36 trees of ¼-inch caliper, or with three trees of 3-inch caliper. If the replacement ratio cannot be achieved on an individual project, it should be applied on an area-wide basis. All replacement trees shall be healthy and free of kinked, overgrown, or otherwise defective roots.

For the proposed Project, the City would be required to replace 105 trees protected by the RAP Tree Policy at a 1:1 ratio for trunk diameter. Actual number of trees planted for this replacement standard would need to have a sum total of 558 caliper inches to mitigate the removal 558 inches of measured trunk diameters (see Appendix D, Subappendix F). Of the 105 proposed removal

trees protected by the RAP Tree Policy, 11 are also native species as defined by the City Tree Ordinance. A summary of the 11 native RAP trees that would be impacted by the proposed Project and corresponding mitigation ratios are provided in **Table 3.4-8**. RAP Tree Policy requires at least a 4:1 ratio for native species regardless of the caliper requirements stated above and outlined in PDF-BIO-14. For compliance with the RAP Tree Policy, a minimum of 44 native trees would be planted to mitigate the 11 native species removed. These would contribute to the required 558 caliper inches needed to replace the total 105 tree removals. Under PDF-BIO-14, the replacement trees would mitigate loss of mature trees taking into account their maturity (trunk diameter), habitat value, and species type. The 1:1 replacement requirement sufficiently compensates for the values of the trees to be affected resulting in a less than significant impact of the project.

**TABLE 3.4-8
 NATIVE RAP TREES APPROXIMATE NUMBER TO BE REMOVED DURING CONSTRUCTION**

Tree Identification Number	Tree Species	Trunk DSH	Number of Mitigation Trees
748	coast live oak	6.2	4
749	Mexican elderberry	3.9, 3.8, 2.6, 2.4, 1.0, 1.0	4
750	Mexican elderberry	3.1, 2.7, 2.1, 1.2, 1.0	4
751	toyon	1.9, 1.8, 1.6, 1.7, 1.0, 1.0	4
758	Southern California black walnut	9	4
759	Southern California black walnut	3.2, 3.1, 3.1, 2.8	4
766	western sycamore	21	4
767	western sycamore	10.9	4
768	western sycamore	5.2	4
773	western sycamore	24.7	4
774	western sycamore	28.5	4
Total Mitigation Trees			44

SOURCE: Park and Street Tree Inventory Results Report (Appendix D, Subappendix F)

Additionally, as previously mentioned the CDFW has recommended higher mitigation ratios for impacted native oak trees with DSH larger than 12 inches to replace the habitat value of native oak tree removal (with mitigation ratios that vary from 4:1, 5:1, and 10:1 based on DSH of removed trees). The single native oak proposed for removal has a DSH of 6.2 inches and would only require the 4:1 mitigation ratio consistent with the RAP Tree Policy and would not change the minimum of 44 replacement trees. No larger DSH native oaks are proposed for removal at this time. Therefore, the mitigation shown in Table 3.4-8 for the proposed removals as outlined in Mitigation Measure BIO-5 would be required.

With implementation of Mitigation Measures BIO-1 and BIO-4 the proposed Project would result in less than significant impacts related to conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Mitigation Measures:

BIO-4: Tree Salvage and Replanting Plan. For impacts to trees protected under local policies and ordinances, the City shall prepare and implement a tree salvage and replanting plan. This salvage and replanting plan shall be prepared by a certified arborist familiar with the target species and in compliance with the specifications of the City Tree Ordinance or RAP Tree Policy (dependent on property location). The salvage and replanting plan shall include measures to salvage, replant, and monitor the new trees for a total of 10 years. The replanting plan will specify for planted trees to occur in the most naturalized habitat areas on-site (e.g., the Knoll) to maximize increasing habitat value and establishment success. The replanting plan shall also specify the appropriate spacing of planted trees to accommodate growth horizontally, vertically, and laterally below ground. The plan shall also specify recommended long-term monitoring, maintenance, and inspection until all planted trees survive to produce reproductive structures. Follow up inspections by the project arborist should be conducted after construction is completed for ten years. Preferably, follow up visits should be conducted quarterly during Years 1 and 2, biannually for Years 3 through 5, and annually for Years 6 through 10. More frequent monitoring and/or post-construction steps to improve any trees that are doing poorly should be carried out as recommended by the arborist. The plan will also include a measure to address if observations of stress or potential failure of planted trees occur (e.g., consulting with a certified arborist or tree specialist to provide recommendations so there is no net loss of trees). Any replacement trees that fail will be replaced at 1:1 with 15-gallon tree of like species.

BIO-5: Native Oak Trees. Native oak trees removed as a result of the Project with a trunk at DSH less than 12 inches shall be replaced at a 4:1 ratio, and if the diameter is between 12-24 inches at a 5:1 ratio, and greater than 24 inches at a 10:1 ratio.

Significance Determination:

Less than Significant with Mitigation Measures Incorporated

Habitat Conservation Plan

Impact 3.4-6: Would the proposed Project conflict with provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan?

Construction / Operation

The proposed Project is not located within the boundaries of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan. No impact would occur from construction or operational use.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Cumulative Impact

Impact 3.4-7: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulative impact to biological resources?

The Project area is located within the urbanized area of the Los Angeles Basin that is fully developed with only fragmented vegetated areas. The Project area primarily hosts urbanized wildlife though it does provide habitat for a variety of native and migratory birds. The proposed Project would be designed to enhance natural habitats. Project level impacts on Biological Resources during construction would be temporary, are not likely to contribute considerably to cumulative biological resource impacts caused by other projects in the vicinity. The proposed Project would minimize effects to biological resources with implementation of mitigation measures (Mitigation Measures BIO-1 through BIO-5) identified in Section 3.4, *Biological Resources*. In addition, other projects in the vicinity of the proposed Project (see Table 3-2) would be required to comply with all federal and state regulations and be consistent with local policies related to Biological Resources. Therefore, the proposed Project’s contribution to cumulative impacts would not be considerable.

Mitigation Measures:

Implementation of Mitigation Measures BIO-1 through BIO-5

Significance Determination:

Less Than Significant with Mitigation Measures Incorporated

3.4.6 Summary of Impacts

Table 3.4-9 summarizes the impact significance determinations related to biological resources.

**TABLE 3.4-9
 SUMMARY OF PROPOSED PROJECT IMPACTS TO BIOLOGICAL RESOURCES**

Impact	Mitigation Measure	Significance
3.4-1: Species Impacts	Mitigation Measures BIO-1 through BIO-3	LTSM
3.4-2: Sensitive Natural Communities	None required	NI
3.4-3: Wetlands	None required	NI
3.4-4: Wildlife Corridors	None required	LTS
3.4-5: Local Policies and Ordinances	Mitigation Measures BIO-1, BIO-4, and BIO-5	LTSM
3.4-6: Habitat Conservation Plan	None required	NI
3.4-7: Cumulative	Mitigation Measures BIO-1 through BIO-5	LTSM

NOTES:

NI = No Impact, no mitigation proposed
 LTS = Less than Significant, no mitigation proposed
 LTSM = Less than Significant Impact with Mitigation Incorporated
 SU = Significant and Unavoidable

3.4.7 References

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3.5 Cultural Resources

This section addresses the potential impacts to cultural resources associated with implementation of the proposed Project. Historical resources under CEQA include all properties (historic, archaeological, landscapes, traditional, etc.) eligible or potentially eligible for the National Register of Historic Places, as well as those that may be significant pursuant to state and local laws and programs. Archaeological resources include artifacts, structural remains, and human remains belonging to an era of history or prehistory. This section includes: a summary of applicable regulations related to cultural resources; a description of existing cultural resources in the proposed Project area; and an evaluation of the potential impacts of the proposed Project related to cultural resources in and around the proposed Project area. The Project includes the following Project Design Features (PDFs), **PDF-CR-1: Archaeological Resource Discovery During Construction**, and **PDF-CR-2: Human Remains Discovery During Construction**. With implementation of Mitigation Measures **CR-1: Archaeological Monitoring**, **CR-2: Archaeological Resources Sensitivity Training**, **CR-3: Discovery of Archaeological Resources**, and **CR-4: Archeological Monitoring Reports**, and **NOISE-5: Equipment Setbacks**, impacts to cultural resources are less than significant.

The analysis of historical resources and impacts analysis is based on four reports, listed below:

- Environmental Science Associates, *Silver Lake Reservoir Complex Master Plan: Supplemental Historical Report and Impacts Analysis* (2022) (Historical Report). This Historical Report is provided within Appendix F of this Draft EIR.
- GPA Consulting, *Silver Lake Reservoir Complex Master Plan, Secretary of the Interior's Standards for the Treatment of Historic Properties Analysis Memorandum* (2020). This report is provided within Appendix F.
- GPA Consulting, *Silver Lake Reservoir Complex Master Plan: Research & Analysis, Historical Resources* (2019). This report is provided within Appendix F.
- Greenwood & Associates, *Cultural Resources Assessment Report: Silver Lake Reservoir Complex Storage Replacement Project* (2004). This report is provided within Appendix F.

The analysis of archaeological resources is based on the *Silver Lake Reservoir Complex Master Plan Project*, Archaeological Resources Assessment Report prepared by ESA in February 2022. The Archaeological Resources Report are provided within Confidential Appendix E of this Draft EIR.

3.5.1 Environmental Setting

This section provides an overview of the ethnographic, pre-contact archaeological, and historic-age setting of the project area.

Archaeological Setting

The chronology of Southern California is typically divided into three general time periods: the Early Holocene (9,600 cal B.C. to 5,600 cal B.C.), the Middle Holocene (5,600 cal B.C. to 1,650 cal B.C.), and the Late Holocene (1,650 cal B.C. to cal A.D. 1769). This chronology is

manifested in the archaeological record by particular artifacts and burial practices that indicate specific technologies, economic systems, trade networks, and other aspects of culture.

While it is not certain when humans first came to California, their presence in Southern California by about 9,600 cal B.C. has been well documented. At Daisy Cave, on San Miguel Island, cultural remains have been radiocarbon dated to between 9,150 and 9,000 cal B.C. (Byrd and Raab 2007). During the Early Holocene (9,600 cal B.C. to 5,600 cal B.C.), the climate of Southern California became warmer and more arid and the human populations, who were represented by small hunter gathers until this point and resided mainly in coastal or inland desert areas, began exploiting a wider range of plant and animal resources (Byrd and Raab 2007).

During the Late Holocene (1,650 cal B.C. to cal A.D. 1769), many aspects of Millingstone culture persisted, but a number of socioeconomic changes occurred (Erlandson 1994; Wallace 1955; Warren 1968). The native populations of Southern California were becoming less mobile, and populations began to gather in small sedentary villages with satellite resource-gathering camps. Increasing population size necessitated the intensified use of existing terrestrial and marine resources (Erlandson 1994). Evidence indicates that the overexploitation of larger, high-ranked food resources may have led to a shift in subsistence, towards a focus on acquiring greater amounts of smaller resources, such as shellfish and small-seeded plants (Byrd and Raab 2007). Between about A.D. 800 and A.D. 1350, there was an episode of sustained drought, known as the Medieval Climatic Anomaly (MCA) (Jones et al. 1999). While this climatic event did not appear to reduce the human population, it did lead to a change in subsistence strategies in order to deal with the substantial stress on resources.

Given the increasing sedentism and growing populations during the Late Holocene, territorial conscription and competition became acute. Primary settlements or village sites were typically established in areas with available freshwater, and where two or more ecological zones intersected (McCawley 1996). This strategic placement of living space provided a degree of security in that when subsistence resources associated with one ecological zone failed, the resources of another could be exploited (McCawley 1996). Villages typically claimed and carefully defended fixed territories that may have averaged 30-square miles in size encompassing a variety of ecological zones that could be exploited for subsistence resources (McCawley 1996).

The Late Holocene marks a period in which specialization in labor emerged, trading networks became an increasingly important means by which both utilitarian and non-utilitarian materials were acquired, and travel routes were extended. Trade during this period reached its zenith as asphaltum (tar), seashells, and steatite were traded from Catalina Island (*Pimu* or *Pimugna*) and coastal Southern California to the Great Basin. Major technological changes appeared as well, particularly with the advent of the bow and arrow sometime after cal A.D. 500, which largely replaced the use of the dart and atlatl (Byrd and Raab 2007).

Ethnographic Setting

The Project site is located in a region traditionally occupied by one Native American group; the Gabrielino (including the Tongva and Kizh). The terms Tongva, Kizh are preferred by many

descendant groups over the Spanish words that have historically been used to describe them. The group is described below.

The main sources of historical information on the Gabrielino (Tongva and Kizh) include Hugo Reid (see Heizer 1968), Zephyrin Engelhardt, Alfred Kroeber, John P. Harrington, Bernice E. Johnston, Thomas C. Blackburn, and C. Hart Merriam. In 1978, the Smithsonian Institution compiled the *Handbook of North American Indians* – a 20-volume encyclopedia summarizing the work of previous ethnographers and what was known about the prehistory, history, and culture of indigenous North American groups. *Volume 8: California* serves as the primary source material for the information presented in this section. Where possible, this information has been supplemented with information gleaned from other published sources (such as McCawley 1996, and O’Neil and Evans, 1980). The following summaries are not intended to provide a comprehensive account of these groups but are instead brief historical overviews based on available information. However, tribes are the authority on their cultural history.

It should be noted that the information presented herein is related to living tribes who still reside in Los Angeles and Orange counties and who maintain a vested interest in their history, culture, practices, customs, and beliefs. Currently, there are five Gabrielino (Tongva and Kizh) groups that are recognized by the State as California Native American Tribes (as indicated by the California Native American Heritage Commission [NAHC]): Gabrieleño Band of Mission Indians – Kizh Nation; Gabrielino Tongva Indians of California Tribal Council; Gabrieleno-Tongva San Gabriel Band of Mission Indians; Gabrielino-Tongva Tribe; Gabrielino/Tongva Nation. These tribes are living communities who actively participate in the preservation of their culture and tribal resources.

Gabrielino (or Tongva and Kizh)

The term “Gabrielino” is a general term that refers to those Native Americans who were sent by the Spanish to the Mission San Gabriel Arcángel. The term first appears, spelled Gabrieleños, in an 1876 report by Oscar Loew (Bean and Smith 1978). Two indigenous terms are commonly used by tribal groups to refer to themselves and are preferred by descendant groups: Tongva and Kizh. The term Tongva was recorded by ethnographer C. Hart Merriam in 1903 (Heizer 1968). The term Kizh was first published by ethnologist Horatio Hale in 1846 (Heizer 1968). Since there are two terms that are used by different groups to refer to themselves, the term Gabrielino is used in this section to encompass both Tongva and Kizh groups.

The Gabrielino Indians were hunter-gatherers and lived in permanent communities located near the presence of a stable food supply. Subsistence consisted of hunting, fishing, and gathering. Small terrestrial game was hunted with deadfalls, rabbit drives, and by burning undergrowth, while larger game such as deer were hunted using bows and arrows. Fish were taken by hook and line, nets, traps, spears, and poison (Bean and Smith 1978). The primary plant resources were the acorn, gathered in the fall and processed in mortars and pestles, and various seeds that were harvested in late spring and summer and ground with manos and metates. The seeds included chia and other sages, various grasses, and islay or holly-leaved cherry. Community populations generally ranged from 50 to 100 inhabitants, although larger settlements may have existed. The

Gabrielino are estimated to have had a population numbering around 5,000 in the pre-contact period (Kroeber 1925).

The exact location of *Yangna*, within downtown Los Angeles continues to be debated, although some believe it to have been located at the present-day location of the Civic Center (McCawley 1996). Other proposed locations are near the present-day Union Station (Chartkoff and Chartkoff 1972:64), to the south of the old Spanish Plaza, and near the original site of the Bella Union Hotel located on the 300 Block of North Main Street (Robinson 1963:83, as cited in Dillon 1994:30). Dillon (1994:30) hypothesizes that the Union Station location is an unlikely spot for a large village or habitation, as it lies within the annual Los Angeles River flood zone. Local sources such as the Echo Park Historical Society, report that when Gaspar de Portola and Father Juan Crespi camped on the riverbank opposite the North Broadway Bridge entrance to Elysian Park, they were served refreshments by *Yangna* Indian villagers from the current location of the Los Angeles Police Academy (Echo Park Historical Society 2008). The Los Angeles Police Academy is located in the northern portion of Elysian Park, which appears an unlikely location for the Native American Village of *Yangna* because this location is more consistent with the location of the village of *Maawnga*, which was reported to have been originally located within the *Rancho de los Feliz*. This rancho originally encompassed Griffith Park and extended south to the northern portion of Elysian Park. The village of *Maawnga*, also recorded as *Maungna*, is believed to have been located “high on a bluff overlooking Glendale Narrows in the hills now occupied by Elysian Park” (Gumprecht 2001:31).

A third community or village, named *Geveronga*, may have been located in the vicinity of the current downtown Los Angeles’ city center, reported in the San Gabriel baptismal records as located “in the rancheria adjoining the Pueblo of Los Angeles” (McCawley 1996:57).

Historic Setting

The Gabrielino were virtually ignored between the time of Cabrillo’s visit and the Spanish Period, which began in 1769 when Gaspar de Portolá and a small Spanish contingent began their exploratory journey along the California coast from San Diego to Monterey. Passing through the Los Angeles area, they reached the San Gabriel Valley on August 2 and traveled west through a pass between two hills where they encountered the Los Angeles River and camped on its east bank near the present-day North Broadway Bridge and the entrance to Elysian Park (approximately 1.75 miles southeast of the proposed Project). This location has been designated California Historic Landmark Number 655, the Portolá Trail Campsite. Father Crespi (a member of Portolá’s party) indicated in his diaries that on that day they “entered a spacious valley, well grown with cottonwoods and alders, among which ran a beautiful river. This plain where the river runs is very extensive and...is the most suitable site for a large settlement” (The River Project 2001). He goes on to describe this “green, lush valley”; its “very full flowing, wide river”; the “riot of color” in the hills; and the abundance of native grapevines, wild roses, grizzly, antelope, quail and steelhead trout. Crespi observed that the soil was rich and “capable of supporting every kind of grain and fruit which may be planted.” The river was named *El Rio y Valle de Nuestra Señora La Reina de Los Angeles de la Porciúncula*.

On September 4, 1781, which was 12 years after Crespi's initial visit, the *Pueblo de la Reina de los Angeles* was established not far from the site where Portolá and his men camped. Watered by the river's ample flow and the area's rich soils, the original pueblo occupied 28 square miles and consisted of a central square, surrounded by 12 houses, and a series of 36 agricultural fields occupying 250 acres, plotted to the east between the town and the river (Gumprecht 2001).

An irrigation system that would carry water from the river to the fields and the pueblo was the communities' first priority and was constructed almost immediately. The main irrigation ditch, or *Zanja Madre*, was completed by the end of October 1781. It was constructed in the area of present-day Elysian Park and carried water south to the agricultural lands situated just east of the pueblo (Gumprecht 2001).

A constant struggle to bring water to the residents of the pueblo necessitated the construction of Echo Park Reservoir, the Silverlake Reservoir, and the further expansion of the *zanja* irrigation ditches. When these measures proved insufficient, a more permanent solution to Los Angeles' water shortage was sought. Under the direction of City engineer William Mulholland, the Los Angeles Bureau of Water Works and Supply constructed the 238-mile-long Los Angeles Aqueduct. This 5-year project, completed in 1913, employed the labor of more than 5,000 men and brought millions of gallons of water into the San Fernando (now Van Norman) Reservoir (Gumprecht 2001). Now able to offer water and sewer service at a grand scale, many smaller cities were voluntarily incorporated by Los Angeles (Robinson 1979:244).

From 1920 to 1930, Los Angeles experienced another population explosion, along with the rise of automobile transportation and the development of the entertainment industry. All told, between 1890 and 1930, the population of Los Angeles increased from 50,000 to 1.2 million people (Wild 2005).

Zanja Conduit System

For the Pueblo of Los Angeles, the *zanjas*, or publicly owned irrigation ditches, sustained the area and enabled ranching and cultivation of the Los Angeles River's fertile floodplains. The *zanjas* consisted of gravity-driven water conveyance systems, used for irrigation of lands at lower elevations from the water's source. The main ditch – the *Zanja Madre* (Mother Ditch) - was constructed in 1781 and carried water from the Los Angeles River south to the agricultural lands surrounding the pueblo. As the pueblo grew and more water was diverted from the river, the supply began to dwindle. Initially, however, there was little worry about the future water needs of the City, and no regulation of the water distribution itself. Typically, farmers would dig their own ditches from the main ditches or from the river. Private water carriers hauled and sold water to households for domestic use (Gumprecht 2001).

Prominent engineers and surveyors George Hanson and George Solano and several others formed The Los Angeles Canal & Water Company in 1867 to provide water from the Los Angeles River to the City of Los Angeles. In return for the company's providing water to the City, the Los Angeles Canal & Water Company received an undivided one-third of the City's original land grant. The City regained control of 33 acres of the concession in 1891, and that 33-acre tract became the basis for Echo Park and the Echo Park Lake. The mapping of the Canal & Reservoir

Ditch is approximate and further research provides more insight into the location. Also referred to as the *Zanja* Canal and Reservoir, the ditch was two miles in length (specifically 11,150 feet) and three feet wide on the bottom, eight feet wide on top and two- and one-half feet in depth. It fed Reservoir No. 4 (1.2-miles to the south of Silver Lake, now known as Echo Park Lake) from the Los Angeles River. It is likely that the mapping does not represent the full extent of the Canal which was a diversion from the Los Angeles River extending to Reservoir No. 4 (Hall 1888: 539-540). As described by Layne (1952: 24-25) the Canal extended from the west side of the river at Crystal Springs and ran through the base of the hills at Griffith and Elysian Parks, and then through the head of a pass where Glendale Boulevard crosses the river today at a point which was known as Division Point. The supply was then carried “southerly through a pass in the hills to the gulch which now holds Silver Lake Reservoir to a point below Berkeley Avenue and then into Reservoir No. 4” (Layne 1952:24).

Historical Architectural Setting

The neighborhood now known as Silver Lake first was subdivided into lots and put up for sale beginning in 1887, with the arrival of the railroad to Los Angeles and the ensuing real estate boom. The population continued to increase after the Pacific Electric railroad provided commuter access to the Silver Lake area from downtown Los Angeles in 1904. As a result, tracts were subdivided at this time on either side of Sunset Boulevard, which at the time was part of the streetcar line.¹ Many of these early tracts featured public stairways for the residents to navigate the hilly landscape. Nine of these early staircases are still extant. Glendale and Los Angeles were connected in 1915 by the completion of Glendale Boulevard which encouraged further development in the Silver Lake area.² The community is named for the Silver Lake Reservoir (Project site) that sits in the middle of the neighborhood. The reservoir was designed by William Mulholland in 1907 and named after Herman Silver, a City Councilman. The upper Reservoir is called the Ivanhoe Reservoir, named after the novel by Sir Walter Scott.³

Actor Antonio Moreno and his wife, Daisy Canfield were two early residents of Silver Lake, and helped promote and develop the neighborhood. After building the Canfield-Moreno Estate in 1923, the adjacent land was subdivided and developed in 1926 and named “Moreno Highlands,” one of the largest tracts developed in Silver Lake.⁴ Construction proliferated rapidly and by 1930, there were 193 homes on the tract. Eight years later, in 1938, the number of homes had ballooned to 313 with plans for an additional 300 homes underway.⁵

The rapid construction of single-family and multi-family residences was spurred by commuters who used the Sunset Boulevard streetcar line to commute to downtown Los Angeles for work. As automobile use became more widespread in the 1920s, corresponding infrastructure, such as

¹ *Historic Resources Survey Report: Silver Lake-Echo Park-Elysian Valley Community Plan Area*, City of Los Angeles, 11.

² Jenifer Palmer-Lacy, “Silver Lake History,” *Silver Lake Neighborhood Council*, by SLNC History Collective, accessed May 11, 2018, <http://silverlakenc.org/silver-lake-history/>.

³ Nathan Masters, “How Mulholland Made Ivanhoe Canyon into Silver Lake,” *Lost LA*, June 10, 2016, <https://www.kcet.org/shows/lost-la/how-mulholland-made-ivanhoe-canyon-into-silver-lake>.

⁴ *Historic Resources Survey Report: Silver Lake-Echo Park-Elysian Valley Community Plan Area*, City of Los Angeles, 11.

⁵ “New Structural Activity Slated,” *Los Angeles Times*, February 2, 1936.

nearby U.S. Highway 101, was constructed. Silver Lake reflected this trend toward private automobile travel versus public transportation and was an important hub of automobile-age architecture, including Streamline Moderne and Modern styles. Streamline Moderne and Modernist architects responded to the rise of the automobile and its attendant commercial development in Silver Lake and the City more broadly with designs intended to echo the horizontality of the new fast-paced, car-oriented culture. Many famous modern architects constructed buildings in Silver Lake, including Rudolph Schindler, Richard Neutra, Raphael Soriano, John Lautner, Gregory Ain, Harwell Hamilton Harris, and J.R. Davidson. Many of these avant-garde architects opened offices and made Silver Lake their home, including Richard Neutra, John Lautner, and A. E. Morris.⁶

During the period of residential development in the Silver Lake neighborhood, associated commercial, religious, and educational buildings were also constructed in the area. There was a small, automobile-oriented commercial district on Silver Lake Boulevard in the 1920s, which would later include several gas/service stations as automobile use became more popular. Most of the commercial development, however, was built along Glendale Boulevard, Sunset Boulevard, Rowena Avenue, and Hyperion Avenue.⁷

Current Setting

The proposed Project is in the Silver Lake neighborhood in the City of Los Angeles. The Silver Lake neighborhood is primarily residential in nature, with a handful of smaller commercial and recreational areas, including land adjacent to the SLRC that has been previously developed for public use. The Project area is defined by the outer boundary of the SLRC, including existing recreational facilities, but excluding the existing Los Angeles Department of Water and Power (LADWP) facilities. The proposed Project area would be bounded by Tesla Avenue on the north, Armstrong Avenue and Silver Lake Boulevard on the east, Van Pelt Place and Silver Lake Boulevard on the south, and West Silver Lake Drive on the west. Much of the Project area is zoned as Open Space (OS) and is contained within two Los Angeles civic jurisdictions, Council Districts 4 and 13.

The SLRC is located on a 127-acre site and includes two reservoirs, three dams, water and stormwater infrastructure, a variety of ancillary buildings and structures, interior thoroughfares, and public recreational facilities. The City of Los Angeles Recreation and Parks Department (RAP) currently operates and maintain approximately three acres within the SLRC, known as “The Meadow,” an open grassy area along the eastern side of the SLRC currently open to public access from dawn till dusk. Additionally, approximately four acres are owned and operated by RAP for the existing Silver Lake Recreation Center at the south end of SLRC. In the northeastern corner of the Project area is the Neighborhood Nursery School and associated playground. Currently, there are public pathways that run along the east and west sides of the reservoirs and along the top of Silver Lake Dam. Approximately four acres of existing paved surfaces around

⁶ *Historic Resources Survey Report: Silver Lake-Echo Park-Elysian Valley Community Plan Area*, City of Los Angeles, 12.

⁷ *Ibid.*

the reservoirs' perimeters are available for shared public use with LADWP. The entire SLRC is enclosed by a perimeter chain-link fence varying in height from 6 to 12 feet.

Previously Identified Cultural Resources

For the purposes of this section, cultural resources are defined as physical evidence or a place of past human activity, including sites, objects, landscapes, or structures of significance to a group of people traditionally associated with it. Archaeological resources can be both pre-contact and historic-age and consist of cultural resources which are on the surface or in the subsurface. Historic resources are historic-age (i.e., 45 years old or older) buildings or structures that have been determined as significant and eligible for, or listed on, the National Register of Historic Places (National Register) and/or California Register of Historical Resources (California Register) and/or by the City of Los Angeles as Historic-Cultural Monument (HCM), or otherwise determined by the Project analysis or by the agencies discretion to be historical resources under CEQA.

Identified Historic Resources

The SLRC itself is a Los Angeles Historic Cultural Monument (#422), designated in 1989. The SLRC has also been previously recorded by SurveyLA with a status code of 5S1, meaning that it is a designated City landmark. The SLRC was reevaluated in 2004 by Greenwood & Associates as part of the *Silver Lake Reservoir Complex Storage Replacement Project Environmental Impact Report* and was recommended as eligible for listing as a historic district in the California Register of Historical Resources (California Register). The Status Codes recommended for the Silver Lake and Ivanhoe Reservoir Complex were 5S1, an individual property that is listed or designated locally, and 3CB, appears eligible both individually and as a contributor to a district for listing in the California Register through survey evaluation.

The SLRC is a multi-component historic district that is both the focal point and historic setting of the surrounding residential area. As such, the Project has the potential to impact historical resources in the immediate surroundings through changes to the historic setting. Archival research was conducted to identify previously recorded historic resources located within 0.25-miles of the perimeter of the Project site. Due to the density of the existing development in the area, a search for previously identified historical resources was limited to a 0.25-mile radius of the Project site (study area). This study area is where the Project has the greatest potential for indirect impacts to adversely affect the eligibility of nearby historical resources.

This research included a review of the National Register and its annual updates, the California Register, the Built Environment Resource Directory (BERD) database maintained by the State Office of Historic Preservation (OHP), the California Historic Resource Information System (CHRIS) at the South Central Coastal Information Center (SCCIC), and SurveyLA findings.

A records search for the Project was conducted on December 2, 2021, at the SCCIC housed at California State University, Fullerton. The records search included a review of all previously documented historic architectural resources and studies within a 0.5-mile radius of the Project site and archaeological resources within or immediately adjacent to the Project site. Although the SCCIC search uses a standard 0.50-mile radius for its search, the review of historical resources

surrounding the Project Site is limited to 0.25-mile due to the size of the site and the density of the surrounding area. A review of documented resources in the project vicinity was conducted through the BERD on December 28, 2021. In addition, SurveyLA and the corresponding database HistoricPlacesLA were used to identify any previously recorded historical resources on the Project site or in the vicinity.

The records search resulted in a total of 650 previously recorded historic resources within a 0.25-mile radius of the perimeter of Project site, as well as two historic districts. The majority of these resources are contributors to the Silver Lake Residential Historic District, discussed below. A table containing all 650 identified resources is included in **Appendix F**. These resources included:

- 10 designated Los Angeles Historic Cultural Monuments (all are listed below, by repository)
- 3 resources listed on the National Register of Historic Places (One is the Garbutt Estate, discussed below; the other two, the VDL House and the Neutra Office Building, are also LAHCMs and are discussed below)
- 47 resources listed as potentially eligible at the City, State, and/or Federal level
- 9 public staircases recommended potentially eligible at the City level
- 7 resources identified as needing more research as they were not visible from the public right of way by SurveyLA
- 1 resource identified with status code 7R (“Identified in Reconnaissance Level Survey or in an Area of Potential Effect (APE): Not evaluated”)
- 1 resource identified with code 2D2 (“Contributor to a multi-component resource determined eligible for NR by consensus through Section 106 process. Listed in the CR.”). Note that this resource is the Silver Lake Recreation Building, part of the Project site.
- 2 historic districts: Silver Lake Residential Historic District and the Neutra Colony Residential Historic District, discussed below. The remaining resources are contributors to these districts.

Due to the high number of previously identified historic resources, only those resources that have views of the SLRC and consequently may experience an impact to their setting as a result of the proposed Project were analyzed for potential impacts. There are 103 previously recorded resources within 0.25-mile of the SLRC that have either direct or indirect views of the Project site. Direct views are defined as views of the open water from the resource's primary elevation from the public right-of-way. Indirect views are defined as watershed views that are partially obscured by other residences or foliage, or that have a direct view of the perimeter or parks around the complex but not of the water. These resources are broken down by repository below. A full table with all 103 resources is available in **Appendix F**.

SCCIC

The records search results indicate that 29 cultural resources studies have been conducted within a 0.50-mile radius of the Project site and 6 of which are located within the Project site. The entire Project site has been included in previous cultural resources assessments. The six reports

overlapping the Project site are: one (LA-02099) overlaps the west boundary; one LA-08254 intersects the northwest corner; one LA-12800 is on the west portion boundary, LA-05353 overlaps the eastern boundary, LA-09200 is located at the south end, and one (LA-13249) overlaps the south, west and east portions. Studies relevant to the current Project site (LA-2099 and LA-13249) and study area are described in further detail below. One study entitled, *Extent of Zanja Madre* (LA-13239) which includes maps depicting that a segment of the *Zanja* is located 0.10-mile from the Project site. The accompanying map to the record provided includes the entire *Zanja* conduit system in addition to the *Zanja Madre*. The segment close to the Project site is Canal and Reservoir Ditch. The map that this record is based on is from the 1880's and not completely accurate. Additional map research was conducted in order to see if additional mapping could be found to correct any inaccuracies but was not publicly available.

The SCCIC search identified 15 cultural resources within 0.50-mile of the Project site. These included the Project site (Silver Lake Reservoir Complex Historic District; P-19-192627; 3CD; designated LAHCM). For the purposes of this historic report, only those resources located within 0.25-mile of the Project site are included below. There were four resources within 0.25-mile of the Project site. All four were also identified by SurveyLA and two were also recorded in the BERD. No prehistoric resources have been recorded within the Project site or within the 0.50-mile radius.

Two of these resources have views of the SLRC and are included in the impacts analysis:

- **Richard and Dion Neutra VDL Research House and Landscape** (2300 N Silver Lake Boulevard; P-19-188871): Designated LAHCM and is a National Historic Landmark with a status code of 5S1 and 1S. This resource has direct views of the Project site and is analyzed in the impacts analysis. Also identified in SurveyLA with status codes of 5S and 1S.
- **Landa Street-Redesdale Avenue Public Stairway**: This resource was assigned a code of 6Z from the SCCIC report, meaning it appears ineligible as a historical resource through survey evaluation. Through SurveyLA, however, the resource was assigned a status code of 5S3, meaning that it appears eligible for local designation. This resource has views of the Project site and is analyzed in the impacts analysis. The other two resources do not have views of the SLRC from the public right-of-way and are not included in the impacts analysis because they would not be impacted by the Project:
- **Neutra Office Building** (2379 N Glendale Boulevard; P-19-187000): Designated LAHCM and listed on the National Register with status code of 5S1 and 1S. This resource does not have views of the Project site and is not analyzed in the impacts analysis. It is far enough away from the SLRC that it would not experience impacts as a result of the Project. Identified in both BERD and SurveyLA.
- **Garbutt House** (1809 Apex Avenue; P-19-166820): Listed on the National Register with a status code of 1S. This resource does not have views of the Project site from the public right-of-way and is not analyzed in the impacts analysis. Identified in both BERD and SurveyLA.

Built Environment Resources Database

The BERD search resulted in seven previously recorded resources within 0.25-mile of the reservoir. Two of these resources were also recorded by SurveyLA and the SCCIC; three were also recorded in SurveyLA; and two were only recorded in the BERD. The two resources also

identified in the SCCIC search are the Neutra Office Building and the Garbutt House and are consequently not included in the below list as they are discussed above.

- One resource, 1850 Silver Lake Boulevard (P19-175302), has a status code of 2D, meaning that it is a contributor to a multi-component resource determined eligible for the National Register by the Keeper. This address is referring to the Silver Lake Recreation Center. This is not a contributor to the SLRC Historic District. Although this resource has been identified with a status code of 2D in a 1994 report, it is not individually listed in the California Register or the National Register, it is not an LA HCM nor is it a part of the SLRC Historic District. The correct status for this resource is 6Z: found ineligible for NR, CR or local designation through survey evaluation.

The remaining BERD resources are as follows. They do not have views of the SLRC and are located far enough away from the Project site that there would not be other project impacts such as construction noise and vibration. They are not included in the impacts analysis:

- **Tierman House** (2323 Micheltorena Street; P19-167080): Designated LAHCM with a status code of 5S1. This resource does not have views of the Project site and is not analyzed in the impacts analysis. It is located 822 feet west of the SLRC.
- **Lautner Residence** (2007 N Micheltorena Street; no associated Primary Number recorded): Status codes of 3CS, 5S3, 3S, meaning that it appears eligible for local, state, and federal listing based on survey evaluation. This resource does not have views of the Project site and is not analyzed in the impacts analysis. It is located 1,275 feet west of the SLRC.
- **2443 N Moreno Drive** (no associated Primary Number): A single-family residence identified also identified in SurveyLA. The BERD notes this resource with a status code of 6U, meaning it was determined ineligible for the National Register pursuant to Section 106 without review by the Office of Historic Preservation. SurveyLA assigned the resource a status code of 5D3, meaning that it appears to be a contributor to a multi-component resource that appears eligible for local listing. This code is referring to the Silver Lake Residential Historic District, of which the property is a listed contributor. This resource does not have views of the Project site and is not analyzed in the impacts analysis. It is located 947 feet northwest of the SLRC.
- **1841 Redcliff Street** (P19-167485): A single family residence only identified in BERD. The building was given a status code of 7R, meaning that it was identified in a reconnaissance level survey or in an Area of Potential Effect. This resource was not identified in SurveyLA. This resource does not have views of the Project site and is not analyzed in the impacts analysis. It is located 1,270 feet southwest of the SLRC.

SurveyLA/HistoricPlacesLA

In addition to the LAHCMs identified by BERD and SCCIC (VDL Research House; Neutra Office Building; and the Tierman House), SurveyLA also identified seven additional LAHCMs. The following LAHCMs have a view of the SLRC and will be included in the impacts analysis:

- **O'Neil Duplex No. 1** (2342 W Cove Avenue): Mid-century modern residence designed by Rodney Walker. It has direct views of the SLRC and is located 380 feet west of the SLRC.
- **Edward Tink Adams House** (2331 W Cove Avenue): Mid-century Modern residence designed by Albert Cooling and James De Long. It has direct views of the SLRC and is located 550 feet east of the SLRC.

The remaining LAHCMs do not have views of the SLRC and are located far enough away from the Project site that there would not be other project impacts such as construction noise and vibration. They are not included in the impacts analysis:

- **Engine Company No. 56** (2838 W Rowena Avenue): Spanish Colonial Revival fire station. It is located 1,214 feet north of the SLRC.
- **Nin Pole Residence** (2335 N Hidalgo Avenue): 5S1. International style residence designed by Eric Lloyd Wright. It is located 1,113 feet east of the SLRC.
- **Droste House** (2025 N Kenilworth Avenue): International style residence designed by R.M. Schindler. It is located 431 feet west of the SLRC.
- **Lipetz House** (1843 N Dillon Street): First residential commission designed by Raphael Soriano. It is located 1,094 feet southwest of the SLRC.
- **Wilson House** (2090 N Redcliff Street): International style residence designed by R.M. Schindler. It is located 950 feet west of the SLRC.

SurveyLA further identified the Garbutt House, which is listed on the National Register and discussed in the SCCIC section above. SurveyLA also identified 47 resources listed as potentially eligible at the City, State, and/or Federal level; 9 public staircases recommended potentially eligible at the City level; 7 resources identified as needing more research as they were not visible from the public right of way.

SurveyLA also identified two historic districts located within 0.25-miles of the Project site: The Neutra Colony Residential Historic District Historic District and the Silver Lake Residential Historic District, both of which are described below. Both of these historic districts are discussed in the impacts analysis.

Neutra Colony Residential Historic District

The Neutra Colony Residential Historic District is located on the eastern side of the SLRC and is composed of Mid-Century or Late Modern residences. SurveyLA describes the district as follows:

The Neutra Colony Residential Historic District is located in the eastern portion of the Silver Lake neighborhood, directly east of the Silver Lake Reservoir. The district consists of ten architect-designed Mid-Century Modern or Late Modern residences concentrated near the intersection of Silver Lake Boulevard and Earl Street. All of the properties are contributors to the district. The district has a generally level grade and is divided into moderately sized rectangular lots, aside from one flag lot. The lots have dense vegetation, sometimes partially obscuring the residences from view. The residences are consistent in massing and scale; they are primarily two stories in height and are made up of rectangular volumes accented by ribbons of windows. Most of the residences have attached garages, generally to the rear of their respective parcels, a perimeter fence or hedge, and a deep setback from the street.⁸

⁸ HistoricPlacesLA, "Neutra Colony Residential Historic District," evaluated May 2, 2014, <http://historicplacesla.org/reports/807bdf03-da10-4258-a941-3fd56e4d45f5>.

The significance statement for this district from SurveyLA is as follows:

Excellent and cohesive collection of Mid-Century Modern residences designed by notable architects Richard and Dion Neutra.⁹

Silver Lake Residential Historic District

The majority of the identified resources were contributing buildings to the Silver Lake Residential Historic District, a winding and expansive district that extends from the western side of the Project site to its northern end. The description of the district from SurveyLA is as follows:

The Silver Lake Residential Historic District is located in the western section of Silver Lake, in the hills that lie to the west and northeast of the Silver Lake and Ivanhoe reservoirs. Large in size and irregular in shape, the district wraps around the west and north ends of the reservoirs and is approximately bounded by Angus Street and Ivan Hill Terrace on the north; Landa Street, Kenilworth Avenue, and Tesla Avenue on the south; Griffith Park Boulevard on the west; and Silver Lake Drive and Armstrong Avenue on the east. In total, the historic district contains 1,171 properties, of which approximately 60% are contributors. Non-contributors were identified as such primarily because they post-date the period of significance or have been dramatically altered. Common alterations include window, door, and cladding replacement as well as additions to primary facades and upper stories. The district is composed primarily of one and two-story single-family residences, most of which are sited on hillside parcels. A small number of multifamily duplexes and triplexes are also located within the district boundaries. Given the area's varied topography, the size and shape of individual parcels within the district vary considerably. District contributors were constructed on an incremental basis between 1925 and 1970, and thus embody a variety of architectural styles that correspond to their respective period of development. A small handful of residences predate the period of significance, but most of these earlier homes embody historical architectural styles and are established visual features of the neighborhood. Most residences within the district are designed in the Mid-Century Modern, Minimal Traditional, or one of several Period Revival styles, including primarily Tudor Revival and Spanish Colonial Revival. A total of 32 properties within the district boundaries were also identified as individually eligible resources. Vehicular circulation is provided by a network of curvilinear streets, all of which conform to the contour of the rolling hills that define the area's topography. Streets within the district are paved with concrete, feature concrete curbs, and are lined with single-post metal streetlights accented by ornamental bases. Seven public staircases supplement the street network by facilitating pedestrian circulation throughout the district. Most houses within the district feature minimal setback and are landscaped with grass or ivy, shrubs, and mature trees of various species. Perimeter walls, fences, and hedges surround many parcels and hinder access and visibility from the public right-of-way.¹⁰

⁹ Ibid.

¹⁰ HistoricPlacesLA, "Silver Lake Residential Historic District," evaluated May 13, 2014, <http://historicplacesla.org/reports/081681c9-d102-4331-b49c-4a82034d4949>.

The significance statement for this district from SurveyLA is as follows:

Excellent example of an early automobile-oriented residential neighborhood, exhibiting distinctive site planning and tract features to accommodate the automobile. Due to a relatively high percentage of non-contributors, may not retain sufficient integrity for the National Register.¹¹

Sacred Lands File Search

The NAHC maintains a confidential SLF database which contains resources of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on October 7, 2021, to request a search of the SLF. The NAHC responded to the request in a letter dated November 19, 2021, indicating that the results were positive. The response letter did not provide details on resources within the Project site, but suggested contacting the Gabrieleño Band of Mission Indians – Kizh Nation. The City contacted the Gabrieleño Band of Mission Indians – Kizh Nation through the AB 52 consultation process and discussed the positive SLF listing. The results of this consultation are summarized in the Tribal Cultural Resources section of this Draft EIR.

Geologic Map Review

The proposed Project falls within the greater Los Angeles Basin, a structural depression approximately 50 miles long and 20 miles wide in the northernmost Peninsular Ranges geomorphic province (Ingersoll and Rumelhart 1999). This basin can be broken down into subbasins that share a similar geological history (Yerkes et al. 1965; Sylvester and O’Black 2016). Each of these basins primarily formed from the migration of the San Andreas Fault Zone northward during the late Miocene (Irwin 1990; Powell and Weldon 1992; Critelli et al. 1995). Mountain ranges such as the Transverse Ranges bound these basins and are composed of older, uplifted rocks. As the various mountain ranges were folded and thrust upward, they eroded forming dissected surfaces and filling the intervening basins with thick piles of alluvium (Yerkes et al. 1965). While sediments dating back to the Cretaceous (66 million years ago) are preserved in the basin, continuous sedimentation began in the middle Miocene (around 13 million years ago) (Yerkes et al. 1965). Since that time, sediments have been eroded into the basin from the surrounding highlands, resulting in thousands of feet of accumulation. Most of these sediments are marine, until sea level dropped during the Pleistocene and deposition of the alluvial sediments that compose the uppermost units in the Los Angeles Basin began.

The Project, specifically, lies in a valley within Yerkes and others’ (1965) ‘Northeastern block’ dissected into uplifted Miocene-age marine sediments. The bedrock formed in deep marine conditions and comprises mostly fine-grained shale that is well-cemented (Yerkes and Graham 1997). Dibblee and Ehrenspeck (1991) refer to these sediments as the sandstone member of the Monterey Formation (Tmss). Earlier geologists ascribed these units to the Puente Formation (Lamar 1970; Yerkes et al. 1977; Weber 1980) or the Modelo Formation (Hoots 1931 and Durrell 1954). The uplift occurred in the Pliocene or Pleistocene and the eroded valleys became the site of deposition of Quaternary-age alluvium (Dibblee and Ehrenspeck 1991). The current Silver

¹¹ Ibid.

Lake Reservoir is entirely surrounded by alluvium though the proposed Project does impact the surrounding bedrock hills of the Monterey (Puente) Formation, dating to the Neogene or Upper Tertiary geological period that began 2.5 million years ago.

3.5.2 Regulatory Framework

Federal

National Historic Preservation Act and National Register of Historic Places

The National Historic Preservation Act of 1966 established the National Register of Historic Places (National Register) as “an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation’s historic resources and to indicate what properties should be considered for protection from destruction or impairment.”¹² The National Register recognizes a broad range of cultural resources that are significant at the national, state, and local levels and can include districts, buildings, structures, objects, prehistoric archaeological sites, historic-period archaeological sites, traditional cultural properties, and cultural landscapes. Within the National Register, approximately 2,500 (3 percent) of the more than 90,000 districts, buildings, structures, objects, and sites are recognized as National Historic Landmarks or National Historic Landmark Districts as possessing exceptional national significance in American history and culture.¹³

Whereas individual historic properties derive their significance from one or more of the criteria discussed in the subsequent section, a historic district “derives its importance from being a unified entity, even though it is often composed of a variety of resources. With a historic district, the historic resource is the district itself. The identity of a district results from the interrelationship of its resources, which can be an arrangement of historically or functionally related properties.”¹⁴

A district is defined as a geographic area of land containing a significant concentration of buildings, sites, structures, or objects united by historic events, architecture, aesthetic, character, and/or physical development. A district’s significance and historic integrity determine its boundaries. Other factors include:

- Visual barriers that mark a change in the historic character of the area or that break the continuity of the district, such as new construction, highways, or development of a different character;
- Visual changes in the character of the area due to different architectural styles, types, or periods, or to a decline in the concentration of contributing resources;
- Boundaries at a specific time in history, such as the original city limits or the legally recorded boundaries of a housing subdivision, estate, or ranch; and

¹² 36 Code of Federal Regulations (CFR) 60.

¹³ United States Department of the Interior, National Park Service, National Historic Landmarks Frequently Asked Question, 2021.

¹⁴ United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 5.

- Clearly differentiated patterns of historical development, such as commercial versus residential or industrial.¹⁵

Within historic districts, properties are identified as contributing and non-contributing. A contributing building, site, structure, or object adds to the historic associations, historic architectural qualities, or archaeological values for which a district is significant because:

- It was present during the period of significance, relates to the significance of the district, and retains its physical integrity; or
- It independently meets the criterion for listing in the National Register.

A resource that is listed in or eligible for listing in the National Register is considered “historic property” under Section 106 of the National Historic Preservation Act.

Criteria

To be eligible for listing in the National Register, a resource must be at least 50 years of age, unless it is of exceptional importance as defined in Title 36 of the Code of Federal Regulations (CFR), Part 60, Section 60.4(g). In addition, a resource must be significant in American history, architecture, archaeology, engineering, or culture. The following four criteria for evaluation have been established to determine the significance of a resource:

- 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 significant in our past;
- C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. Have yielded, or may be likely to yield, information important in prehistory or history.¹⁶

Context

To be eligible for listing in the National Register, a property must be significant within a historic context. National Register Bulletin #15 states that the significance of a historic property can be judged only when it is evaluated within its historic context. Historic contexts are “those patterns, themes, or trends in history by which a specific property or site is understood and its meaning is made clear.”¹⁷ A property must represent an important aspect of the area’s history or prehistory and possess the requisite integrity to qualify for the National Register.

¹⁵ United States Department of the Interior, National Register Bulletin #21: Defining Boundaries for National Register Properties Form, 1997, page 12.

¹⁶ United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 8.

¹⁷ United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, pages 7 and 8.

Integrity

In addition to meeting one or more of the criteria of significance, a property must have integrity, which is defined as “the ability of a property to convey its significance.”¹⁸ The National Register recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. In general, the National Register has a higher integrity threshold than State or local registers.

In the case of districts, integrity means the physical integrity of the buildings, structures, or features that make up the district as well as the historic, spatial, and visual relationships of the components. Some buildings or features may be more altered over time than others. In order to possess integrity, a district must, on balance, still communicate its historic identity in the form of its character defining features.

Criteria Considerations

Certain types of properties, including religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years are not considered eligible for the National Register unless they meet one of the seven categories of Criteria Considerations A through G, in addition to meeting at least one of the four significance criteria discussed above, and possess integrity as defined above.¹⁹ Criteria Consideration G is intended to prevent the listing of properties for which insufficient time may have passed to allow the proper evaluation of their historical importance.²⁰ The full list of Criteria Considerations is provided below:

- A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
- B. A building or structure removed from its original location, but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- C. A birthplace or grave of a historical figure of outstanding importance, if there is no other appropriate site or building directly associated with his or her productive life; or
- D. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
- E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

¹⁸ United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 44.

¹⁹ United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 25.

²⁰ United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 41.

- F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or
- G. A property achieving significance within the past 50 years, if it is of exceptional importance.

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

The National Park Service issued the Secretary's Standards with accompanying guidelines for four types of treatments for historic resources: Preservation, Rehabilitation, Restoration, and Reconstruction. The most applicable guidelines should be used when evaluating a project for compliance with the Secretary's Standards. Although none of the four treatments, as a whole, apply specifically to new construction in the vicinity of historic resources, Standards #9 and #10 of the Secretary's Standards provides relevant guidance for such projects. The Standards for Rehabilitation are as follows:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.²¹

²¹ United States Department of the Interior, National Park Service, the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, 2017.

It is important to note that the Secretary's Standards are not intended to be prescriptive but, instead, provide general guidance. They are intended to be flexible and adaptable to specific project conditions to balance continuity and change, while retaining materials and features to the maximum extent feasible. Their interpretation requires exercising professional judgment and balancing the various opportunities and constraints of any given project. Not every Standard necessarily applies to every aspect of a project, and it is not necessary for a project to comply with every Standard to achieve compliance.

State

California Environmental Quality Act

The California Environmental Quality Act (CEQA) is the principal statute governing environmental review of projects occurring in the state and is codified in Public Resources Code (PRC) Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological resources. Under CEQA Section 21084.1, a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.

CEQA Guidelines Section 15064.5 recognizes that historical resources include: (1) resources listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources; (2) resources included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any objects, buildings, structures, sites, areas, places, records, or manuscripts which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 apply. If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, then the site may be treated in accordance with the provisions of PRC Section 21083, if it meets the criteria of a unique archaeological resource. As defined in PRC Section 21083.2, a unique archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in PRC Section 21083.2, then the site is to be treated in accordance with the provisions of PRC Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place.²² If preservation in place is not feasible, mitigation measures shall be required. The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment.²³

A significant effect under CEQA would occur if a project results in a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5(a). Substantial adverse change is defined as “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.”²⁴ According to CEQA Guidelines Section 15064.5(b)(2), the significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics that:

- A. Convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
- B. Account for its inclusion in a local register of historical resources pursuant to PRC Section 5020.1(k) or its identification in a historical resources survey meeting the requirements of PRC Section 5024.1(g) Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- C. Convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a Lead Agency for purposes of CEQA.

In general, a project that complies with the Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings is considered to have impacts that are less than significant.²⁵

California Register of Historical Resources

The California Register of Historical Resources (California Register) is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change.”²⁶ The California Register was enacted in 1992, and its regulations became official on January 1, 1998. The California Register is administered by the California OHP. The criteria for eligibility for the California Register are based upon National Register criteria.²⁷ Certain resources are determined to be

²² California Public Resources Code Section 21083.1(a).

²³ State CEQA Statute and Guidelines, Section 15064.5(c)(4).

²⁴ State CEQA Guidelines, Section 15064.5(b)(1).

²⁵ State CEQA Guidelines, 15064.5(b)(3).

²⁶ California Public Resources Code, Section 5024.1[a].

²⁷ California Public Resources Code, Section 5024.1[b].

automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register. To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, State, and/or federal 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 California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

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

- California properties listed on the National Register and those formally determined eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the State OHP and have been recommended to the State Historical Resources Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historical resources;
- Historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Health and Safety Code

California Health and Safety Code Sections 7050.5, 7051, and 7054 address the illegality of interference with human burial remains (except as allowed under applicable PRC Sections), and the disposition of Native American burials in archaeological sites. These regulations protect such remains from disturbance, vandalism, or inadvertent destruction, and establish procedures to be

implemented if Native American skeletal remains are discovered during construction of a project, including treatment of the remains prior to, during, and after evaluation, and reburial procedures.

California Public Resources Code

California PRC Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods. In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the landowner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that would not be subject to further disturbance.

City of Los Angeles

Los Angeles General Plan – Conservation Element

The City of Los Angeles General Plan includes a Conservation Element. Section 3 of the Conservation Element, adopted in September 2001, includes policies for the protection of archaeological resources. As stated therein, it is the City’s policy that archaeological resources be protected for research and/or educational purposes. Section 5 of the Conservation Element recognizes the City’s responsibility for identifying and protecting its cultural and historical heritage. The Conservation Element establishes the policy to continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities, with the related objective to protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes.²⁸

In addition to the National Register and the California Register, two additional types of historic designations may apply at a local level:

1. Historic-Cultural Monument (HCM)
2. Classification by the City Council as a Historic Preservation Overlay Zone (HPOZ)

Silver Lake - Echo Park - Elysian Valley Community Plan

The Land Use Element of the City’s General Plan includes 35 community plans. Community plans are intended to provide an official guide for future development and propose approximate locations and dimensions for land use. The community plans establish standards and criteria for the development of housing, commercial uses, and industrial uses, as well as circulation and

²⁸ City of Los Angeles, Conservation Element of the General Plan, pages II-3 to II-5.

service systems. The community plans implement the City's General Plan Framework at the local level and consist of both text and an accompanying generalized land use map. The community plans' texts express goals, objectives, policies, and programs to address growth in the community, including those that relate to utilities and service systems required to support such growth. The community plans' maps depict the desired arrangement of land uses as well as street classifications and the locations and characteristics of public service facilities.

The Silver Lake - Echo Park - Elysian Valley Community Plan²⁹ was last updated in 2004. The plan addresses historic and cultural resources explicitly in Goal 16, but the community plan's other outlined goals also address historic and cultural resources tangentially by encouraging the preservation, rehabilitation, and reuse of the neighborhood's existing commercial buildings, residential buildings, and parks and open space. Because the community plan was developed and last updated in 2004, it does not specifically address the Los Angeles historic Resources Survey (SurveyLA), which was implemented and completed after the community plan. The goal, objective, and policy pertaining specifically to historic and cultural resources are as follows:

Goal 16: Identification, preservation and restoration of cultural resources, neighborhoods, and landmarks which have historical and/or cultural significance.

Objective 16-1: Ensure that the community's historically significant resources are protected, preserved and/or enhanced.

Policy 16-1.1: Assist private owners of existing historic resources and historically or architecturally significant structures to maintain and/or enhance their properties in a manner that will preserve the integrity of such resources in the best possible condition.

Los Angeles Cultural Heritage Ordinance

The Los Angeles City Council adopted the Cultural Heritage Ordinance in 1962 and most recently amended it in 2018 (Sections 22.171 et seq. of the Administrative Code). The Ordinance created a Cultural Heritage Commission (CHC) and criteria for designating an HCM. The CHC is comprised of five citizens, appointed by the Mayor, who have exhibited knowledge of Los Angeles history, culture, and architecture. The City of Los Angeles Cultural Heritage Ordinance states that a HCM designation is reserved for those resources that have a special aesthetic, architectural, or engineering interest or value of a historic nature and meet one of the following criteria. A historical or cultural monument is any site, building, or structure of particular historical or cultural significance to the City of Los Angeles. The criteria for HCM designation are stated below:

- The proposed HCM is identified with important events of national, state, or local history or exemplifies significant contributions to the broad cultural, economic, or social history of the nation, state, city, or community is reflected or exemplified; or
- The proposed HCM is associated with the lives of with historic personages important to national, state, city, or local history; or

²⁹ City of Los Angeles Department of Planning, "Silver Lake-Echo Park-Elysian Valley Community Plan Update," August 11, 2004, https://planning.lacity.org/odocument/e87507ac-8c40-49a0-aa1c-21df963f2298/Silver_Lake-Echo_Park-Elysian_Valley_Community_Plan.pdf, III-60.

- The proposed HCM embodies the distinct characteristics of style, type, period, or method of construction, or represents a notable work of a master designer, builder, or architect whose individual genius influenced his or her age.³⁰

A proposed resource may be eligible for designation if it meets at least one of the criteria above. When determining historic significance and evaluating a resource against the Cultural Heritage Ordinance criteria above, the CHC and OHR staff often ask the following questions:

- Is the site or structure an outstanding example of past architectural styles or craftsmanship?
- Was the site or structure created by a “master” architect, builder, or designer?
- Did the architect, engineer, or owner have historical associations that either influenced architecture in the City or had a role in the development or history of Los Angeles?
- Has the building retained “integrity”? Does it still convey its historic significance through the retention of its original design and materials?
- Is the site or structure associated with important historic events or historic personages that shaped the growth, development, or evolution of Los Angeles or its communities?
- Is the site or structure associated with important movements or trends that shaped the social and cultural history of Los Angeles or its communities?

Unlike the National and California Registers, the Cultural Heritage Ordinance makes no mention of concepts such as physical integrity or period of significance. However, in practice, the seven aspects of integrity from the National Register and California Register are applied similarly and the threshold of integrity for individual eligibility is similar. It is common for the CHC to consider alterations to nominated properties in making its recommendations on designations. Moreover, properties do not have to reach a minimum age requirement, such as 50 years, to be designated as HCMs. In addition, the LAMC Section 91.106.4.5 states that the Los Angeles Department of Building and Safety “shall not issue a permit to demolish, alter or remove a building or structure of historical, archaeological or architectural consequence if such building or structure has been officially designated, or has been determined by state or federal action to be eligible for designation, on the National Register of Historic Places, or has been included on the City of Los Angeles list of HCMs, without the department having first determined whether the demolition, alteration or removal may result in the loss of or serious damage to a significant historical or cultural asset. If the department determines that such loss or damage may occur, the applicant shall file an application and pay all fees for the CEQA Initial Study and Checklist, as specified in Section 19.05 of the LAMC. If the Initial Study and Checklist identifies the historical or cultural asset as significant, the permit shall not be issued without the department first finding that specific economic, social or other considerations make infeasible the preservation of the building or structure.”³¹

Los Angeles Historic Preservation Overlay Zone Ordinance

The Los Angeles City Council adopted the ordinance enabling the creation of Historic Preservation Overlay Zone (HPOZs) in 1979; most recently, this ordinance was amended in 2017.

³⁰ City of Los Angeles, Los Angeles Administrative Code, Section 22.171.7.

³¹ City of Los Angeles, Los Angeles Municipal Code, Section 91.106.4.5.1.

Angelino Heights became Los Angeles' first HPOZ in 1983. The City currently contains 35 HPOZs. An HPOZ is a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.³² Each HPOZ is established with a Historic Resources Survey, a historic context statement, and a preservation plan. The Historic Resources Survey identifies all Contributing and Non-Contributing features and lots. The context statement identifies the historic context, themes, and subthemes of the HPOZ as well as the period of significance. The preservation plan contains guidelines that inform appropriate methods of maintenance, rehabilitation, restoration, and new construction. Contributing Elements are defined as any building, structure, Landscaping, or Natural Feature identified in the Historic Resources Survey as contributing to the Historic significance of the HPOZ, including a building or structure which has been altered, where the nature and extent of the Alterations are determined reversible by the Historic Resources Survey.³³ For CEQA purposes, Contributing Elements are treated as contributing features to a historic district, which is the historical resource. Non-Contributing Elements are any building, structure, Landscaping, Natural Feature identified in the Historic Resources Survey as being built outside of the identified period of significance or not containing a sufficient level of integrity. For CEQA purposes, Non-Contributing Elements are not treated as contributing features to a historical resource.

Los Angeles Historic Resources Survey (SurveyLA)

The City of Los Angeles Historic Resources Survey (SurveyLA) is a Citywide survey that identifies and documents potentially significant historical resources representing important themes in the City's history. The survey and resource evaluations were completed by consultant teams under contract to the City and under the supervision of the Department of City Planning's OHR. The program was managed by OHR, which maintains a website for SurveyLA. The field surveys cumulatively covered broad periods of significance, from approximately 1850 to 1980 depending on the location, and included individual resources such as buildings, structures, objects, natural features and cultural landscapes as well as areas and districts (archaeological resources are planned to be included in future survey phases). The survey identified a wide variety of potentially significant resources that reflect important themes in the City's growth and development in various areas including architecture, city planning, social history, ethnic heritage, politics, industry, transportation, commerce, entertainment, and others. Field surveys, conducted from 2010 to 2017, were completed in three phases by Community Plan area. However, SurveyLA did not survey areas already designated as HPOZs or areas already surveyed by the Community Redevelopment Agency of the City of Los Angeles. All tools, methods, and criteria developed for SurveyLA were created to meet state and federal professional standards for survey work.

Los Angeles' Citywide Historic Context Statement (HCS) was designed for use by SurveyLA field surveyors and by all agencies, organizations, and professionals completing historical resources surveys in the City of Los Angeles. The context statement was organized using the Multiple Property Documentation (MPD) format developed by the National Park Service for use in nominating properties to the National Register. This format provided a consistent framework for evaluating historical resources. It was adapted for local use to evaluate the eligibility of

³² City of Los Angeles, Los Angeles Municipal Code, Section 12.20.3.

³³ City of Los Angeles, Los Angeles Municipal Code, Section 12.20.3.

properties for city, state, and federal designation programs. The HCS used Eligibility Standards to identify the character defining, associative features and integrity aspects a property must retain to be a significant example of a type within a defined theme. Eligibility Standards also indicated the general geographic location, area of significance, applicable criteria, and period of significance associated with that type. These Eligibility Standards are guidelines based on knowledge of known significant examples of property types; properties do not need to meet all of the Eligibility Standards in order to be eligible. Moreover, there are many variables to consider in assessing integrity depending on why a resource is significant under the National Register, California Register or City of Los Angeles HCM eligibility criteria. SurveyLA findings are subject to change over time as properties age, additional information is uncovered, and more detailed analyses are completed. Resources identified through SurveyLA are not designated resources. Designation by the City of Los Angeles and nominations to the California or National Registers are separate processes that include property owner notification and public hearings.

3.5.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. (Refer to Impact 3.5-1)
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. (Refer to Impact 3.5-2)
- Disturb any human remains, including those interred outside of dedicated cemeteries. (Refer to Impact 3.5-3)

In addition, the 2006 L.A. CEQA Thresholds Guide holds that the determination of significance shall be made on a case-by-case basis after considering the following factors:

Historical Resources

A Project would have a significant impact if a substantial adverse change in historic significance occurs due to any of the following:

- Demolition of a significant resource;
- Relocation that does not maintain the integrity and significance of a significant resource;
- Conversion, rehabilitation, or alteration of a significant resource which does not conform to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (Standards); or
- Construction that reduces the integrity or significance of important resources on the site or in the vicinity.³⁴ (Refer to Impact 3.5-1)

³⁴ Los Angeles CEQA Thresholds Guide, Section D.3. Historical Resources, City of Los Angeles, 2006, page D.3- 1.

Archaeological Resources

A project would normally have a significant impact upon archeological resources if it would disturb, damage, or degrade an archeological resource or its setting that is found to be important under the criteria of CEQA because it:

- Is associated with an event or person of recognized importance in California or American prehistory or of recognized scientific importance in prehistory;
- Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable archaeological research questions;
- Has a special or particular quality, such as the oldest, best, largest, or last surviving example of its kind;
- Is at least 100 years old and possesses substantial stratigraphic integrity; or
- Involves important research questions that historical research has shown can be answered only with archaeological methods. (Refer to Impact 3.5-2)

Methodology

Historic Architectural Resources

A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment. In general, a significant effect under CEQA would occur if a project results in a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5(a). Substantial adverse change is defined in CEQA Guidelines Section 15064.5(b)(1) as “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.”³⁵ In addition, while assessing the project’s impacts under CEQA, it is important to consider the ability of the historical resources to retain their integrity. The seven aspects of integrity as defined by the National Park Service are location, design, setting, workmanship, materials, feeling, association.³⁶ A project that diminishes the integrity of a resource such that the significance of a historical resource is materially impaired is a project that would result in a significant impact on the environment under CEQA.

The preparation of the technical report upon which this EIR is based involved the review of previous evaluations of the Silver Lake Reservoir Complex, including the Complex’s 1989 Los Angeles Historic Cultural Monument Nomination; a 2004 Greenwood & Associates report that evaluated the Project site; a 2019 GPA Consulting report that identified character-defining

³⁵ CEQA Guidelines Section 15064.5(b)(1)

³⁶ “Integrity of a Property” in National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation, (National Park Service, revised for internet 1995), pages 44-46.

features and alterations; and a 2020 GPA memorandum evaluating the proposed Project under the Secretary of the Interior's Standards.³⁷

The Historical Report supplements these previous studies with additional contextual research on the development of the Project site through an analysis and presentation of historical aerial photographs, as well as a pedestrian survey to verify the character-defining features previously identified. The Historical Report also includes an impacts analysis of direct, indirect, and cumulative impacts that may occur to the SLRC itself under the proposed Project. An archival records search of previously identified historic resources within 0.25-miles of the Project site was further conducted to obtain data on known historical resources in the vicinity to inform the indirect impacts analysis.

Archaeological Resources

The analysis of impacts to archaeological resources is also based on the Archaeological Resources Assessment Report, which included: (1) a cultural resource records search conducted at the SCCIC to review recorded archaeological resources within a 0.5-mile radius of the Project site, as well as a review of cultural resource reports and historic topographic maps on file, (2) a review of the California Points of Historical Interest (CPHI), the California Historical Landmarks (CHL), the California Register, the National Register, and the California State HRI listings, (3) an SLF search commissioned through the NAHC, (4) a review of available Sanborn Maps, historic aerial imagery; and other technical studies, and (5) a pedestrian survey of the Project site.

The potential for the Project site to contain buried archaeological resources is assessed based on the findings of the cultural resource records search (i.e., presence and proximity of known resources) and SLF search, land use history research, subsurface geological conditions, and the proposed excavation parameters for the Project.

Human Remains

The analysis of impacts to human remains is based on the Archaeological Resources Assessment Report. The potential for the Project site to contain human remains was assessed based on the findings of the cultural resource records search (i.e., presence and proximity of known resources), the SLF search, land use history research, subsurface geological conditions, and the proposed excavation parameters for the Project.

3.5.4 Project Design Features

The following Project Design Features (PDF) are applicable to the proposed Project.

PDF-CR-1: Archaeological Resource Discovery During Construction. If archaeological resources are discovered during excavation, grading, or construction activities, work shall cease in the area of the find until a qualified archaeologist has

³⁷ Greenwood & Associates, "Cultural Resources Assessment Report: Silver Lake Reservoir Complex Storage Replacement Project," prepared for CH2MHILL, August 2004.; GPA Consulting, "Silver Lake Reservoir Complex Master Plan: Research & Analysis, Historical Resources," September 13, 2019.; Teresa Grimes and Emily Rinaldi of GPA Consulting, "Silver Lake Reservoir Complex Master Plan, Secretary of the Interior's Standards for the Treatment of Historic Properties Analysis Memorandum," prepared for Hargreaves Jones, May 11, 2020.

evaluated the find in accordance with State and local guidelines, including those set forth in California PRC Section 21083.2. Personnel of the proposed Project shall not collect or move any archaeological materials and associated materials. Construction activity may continue unimpeded on other portions of the Project site. The found deposits would be treated in accordance with State and local guidelines, including those set forth in California PRC Section 21083.2. If the discovery proves significant under CEQA (Section 15064.5f; PRC 21082), additional work such as testing or data recovery may be warranted. Should any Native American artifacts be encountered, additional consultation with NAHC-listed tribal groups should be conducted immediately. The process for contacting the tribal group and the timing of the contact should be addressed in the management plan.

PDF-CR-2: Human Remains Discovery During Construction. If human remains are encountered unexpectedly during construction demolition and/or grading activities, Section 7050.5 of the California Health and Safety Code requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to California PRC 5097.98. Remains suspected to be Native American are treated under CEQA at CCR 15064.5; PRC 5097.98 illustrates the process to be followed if remains are discovered. If human remains are discovered during excavation activities, the following procedure shall be observed:

- Stop immediately and contact the County Coroner:
1104 N. Mission Road
Los Angeles, CA 90033
323-343-0512 (8 am to 5 pm Monday through Friday) or
323-343-0714 (After hours, Saturday, Sunday, and Holidays)
- If the remains are determined to be of Native American descent, the Coroner has 24 hours to notify the NAHC.
- The NAHC will immediately notify the person it believes to be the MLD of the deceased Native American.
- The MLD has 48 hours to make recommendations to the owner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods.
- If the owner does not accept the MLD's recommendations, the owner or the MLD may request mediation by the NAHC.

3.5.5 Impacts and Mitigation Measures

Historical Resource

Impact 3.5-1: Implementation of the SLRC Master plan would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section §15064.5.

Direct Impacts

Under CEQA Guidelines Section 15064.5 (b), the changes to a resource and its setting would only cause a substantial adverse change if they would detract from the integrity (location, design, setting, materials, workmanship, feeling, association) of the historical resource such that the

historical resource's ability to convey its significance would be materially impaired to the degree that it would no longer be eligible as a historical resource pursuant to CEQA Guidelines Section 15064.5 (b). What follows is an analysis of the potential impacts of the proposed Project to determine whether the integrity of the historical resources would be retained under the Project and its eligibility as a significant historical resource would be retained, or if the proposed Project would alter the resource such that its significance would be materially impaired, and it would no longer be eligible as a historical resource. The environmental analysis was conducted in consultation with the Los Angeles City Planning, Office of Historic Resources (Personal communication 2022).

The proposed Project would represent a natural evolution of the SLRC and its uses. Over time, the SLRC has changed to accommodate practical needs, such as being converted to a solely domestic water supply, and community needs, such as the development of outdoor space like the recreation center and associated facilities for community use. As the SLRC is now decommissioned, the proposed Project is a continuation of the SLRC's historical progression and adaptation to the changing needs to the community over time.

The complex's footprint and shape would remain intact; its significant landscape features (Knoll and the Eucalyptus Grove) would be preserved; and no significant viewsheds would be detrimentally affected as a result of the proposed Project's new construction or alterations. While there would be some changes to the grading and orientation of these open spaces, the overall footprint, feeling, and setting would remain intact. These spaces would remain green open spaces for passive recreation. The existing mature trees and plants would remain, and the overall footprint of these open spaces would not change. Further, the open water views of both reservoirs would remain intact.

Four new structures would be constructed as a result of the Project. The first is a new Environmental Education Center located at the base of the Knoll landscape. This building would be one-story, an appropriate scale for the surrounding residential neighborhood, and it would be built into the topography of the Knoll. It would be designed to fit into the neighborhood. Its roof would be an extension of the habitat of the Knoll and there would be outdoor classrooms. The Environmental Education Center is designed to be integrated into the Knoll's landscape and would not result in a substantial visual change to the historic Knoll landscape. Character-defining features of the Knoll including its elevation and its wooded nature would not be harmed or destroyed as a result of the new construction. Due to the topography of the Knoll and the SLRC at large, and the intentional integration of the design of the Environmental Education Center into the Knoll's existing topography, the new construction would largely be obscured from view from most vantage points. It would be, for all intents and purposes, a "hidden" building that would not substantially affect the SLRC's character defining features and major view sheds. Although the Knoll has historically not had structures on it, the construction of this facility would be a minor alternation with minimal visual impact and the rest of the Knoll would retain its topographical features and wooded character. As shown in aerial photographs showing the SLRC from 1923 to 2016 (referenced in the "Construction History" section above), the Knoll has been an open area with trees and foliage for decades; the proposed alterations to the Knoll would largely retain this

use, albeit with new infrastructure to support passive recreation. However, these changes would not adversely affect the character-defining features of the Knoll.

Two shade pavilions would also be constructed, one in the Knoll and one at the northwest corner of the Ivanhoe Reservoir. These shade pavilions would likely be constructed with the same oval footprints as the Environmental Education Center and would be designed in compatible, sustainable, and natural materials. The shade pavilions would be low-rise, matching the character of the surrounding area, and would not obscure major views. The construction of the low scale and sensitively designed shade pavilions would not adversely affect the character-defining features of the Knoll or Ivanhoe Reservoir or the larger SLRC and would retain and preserve their integrity.

The final new building is the new 5,800 sf Multi-Purpose Facility/Recreation Center, located at the South Valley. The new facility would provide a needed increase in square footage to accommodate community use. It would be designed to be compatible with the existing recreation center. This new construction would not visually detract from the existing structure and would be compatible with the existing recreation center infrastructure.

Additional changes to the SLRC include the construction of various footpaths and trails to provide more efficient circulation around the SLRC and increased accessibility. New pedestrian paths and trails would be added to the Ivanhoe Reservoir area, the Knoll on the west side of the Reservoir, the East and West Narrows, and the Eucalyptus Grove area. While the paths of the Complex would be altered as a result of the Project, the overall shape of the reservoirs would be retained, and the overall perimeter paths of both the Silver Lake Reservoir and the Ivanhoe Reservoir, which are character-defining features, would remain largely intact. On the East Narrows, the low historic concrete walls along the road edges, a character-defining feature of the Complex, would be recognized and incorporated into the Promenade design. While a handful of cuts would be made in these walls to allow for pedestrian ingress and egress, these minor modifications are in line with previous similar alterations to the wall over the lifetime of the reservoir and would not negatively impact this feature. Further, the perimeter paths would mostly be retained and preserved. Aerial photographs of the Complex indicate that paths have previously been changed and altered over the years. For example, walking paths were added when the Meadow became a passive recreation space in 2011. The alterations and additions to this path system represent a continuation of this historical development. Further, the walking paths' pavement is non-original. As a result, alterations to the pathways represent a progression of these developments and would only minimally affect the character of the walkways.

Further changes include the alteration of embankment edges of the Complex, which would be changed in order to construct habitat terraces, seating terraces, and habitat islands. When the reservoirs were first constructed, the embankments were unpaved earthen slopes. Over time, they were altered to become paved surfaces, once in 1920 as well as in subsequent years, notably in the 1951-1953 alterations to the Complex. The embankment around the Ivanhoe Reservoir was resurfaced approximately 25 years ago with concrete paving. The Silver Lake Reservoir's embankment is paved with asphalt and cracks have been infilled and repaired over time. The paving of the embankment of the Silver Lake Reservoir is a character-defining feature, but changes to this paving would not affect the overall eligibility of the Reservoir. Further, some of

the paving would remain in place. The changes to the embankment represent another iteration of the Complex's evolution. Although the embankments would be changed, their inherent configuration, shape, and orientation would remain.

Habitat islands would also be added to both the Ivanhoe and Silver Lake Reservoirs. The construction of these habitat island would not affect any character defining features and the open water views for both reservoirs would remain. Additional changes would include the construction of outlooks at various points around the reservoir, as well as the addition of outdoor seating, new plants and trees, and a fitness facility on the East Narrows. The addition of these features would not affect any character-defining features of the SLRC district and are indicative of the evolution of the Complex into a passive recreation area. Both reservoirs would remain intact and eligible as resources after the completion of these changes.

Contributing features that would experience no adverse effect to their character-defining features at the conclusion of the Project include: the North Ivanhoe Dam; the Ivanhoe Reservoir (overall shape, embankment configuration, and water level would be retained); the South Ivanhoe Dam; the Ivanhoe Inlet Tower which would remain in place; the Ivanhoe Reservoir Chlorination Station which would remain intact; the Caretaker's House (Sunshine House), garage, shed (old caretaker's house), landscape building and bathroom building, located on the east side of the SLRC, which would all remain intact; stone retaining walls; the Chlorine Plant, which would remain in place and intact; the main entrance and access road which would retain their configuration and asphalt paving; Armstrong secondary entrance; the West landscaped area, which would retain its mature trees and would undergo additional planting and seating on the embankment; and the grassy patch, which would retain its mature trees.

The Silver Lake Reservoir would also retain its shape, boat launches, embankment configuration, and water level. While changes would occur to the embankment paving and appearance as a result of new park infrastructure, these changes would not detrimentally affect the eligibility of the resources. Further, embankment changes have occurred over time. As such, the Silver Lake Reservoir would remain eligible despite minimal changes to its embankment paving.

The Knoll would also undergo changes, but these changes would not affect the overall shape or feeling of the Knoll. The character-defining features of mature trees and the Knoll's grading would remain intact. New construction would be sensitively and compatibly designed, as described above, and would not adversely affect the Knoll's eligibility as a resource and would have a less than significant impact.

However, construction activities at the Project Site have the potential to generate groundborne vibration that could damage character-defining features of the SLRC, as the operation of heavy equipment (e.g., vibratory pile driver, backhoe, dozer, excavators, drill rig, loader, scraper, and haul trucks) generates vibrations that propagate through the ground. Depending on the construction procedures and the equipment used, Project construction would generate varying degrees of ground vibration that could cause damage to historic structures. The PPV vibration velocities for several types of construction equipment measured at increasing distances are identified in Table 3.12-23, *Construction Vibration Impacts – Building Damage*. This table

includes the estimated vibration velocity levels at the South Outlet Chlorination Station and the Meter House (V8), both considered historic resources and Category IV building (buildings extremely susceptible to vibration damage). South Valley construction activities, including construction of the new multi-purpose building, would occur in the vicinity of these historic resources, including dozers or loaded trucks within approximately 15 feet of these buildings. Vibration levels from these activities would be up to approximately 0.191 inches per second PPV, which would exceed the significance threshold of 0.12 inches per second PPV. Therefore, vibration impacts associated with structural damage from on-site construction activities would be potentially significant at the SLRC prior to implementation of mitigation measures.

Mitigation Measures:

Implementation of Mitigation Measure NOISE-5.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

Indirect Impacts

Indirect impacts were analyzed to determine if the Project would result in a substantial material change to the integrity of historical resources within the Project vicinity, as well as their immediate surroundings, that would detract from their ability to convey their significance. There are a total of 650 previously recorded historical resources (located in Appendix F). Due to the high volume of previously identified resources within 0.25-mile of the SLRC, the impacts analysis is limited to only those resources that have views of the Project site. Direct views are defined as views of the open water from the resource's primary elevation from the public right-of-way. Indirect views are defined as watershed views that are partially obscured by other residences or foliage, or that have a direct view of the perimeter or parks around the complex but not of the water. These 103 resources that have views of the Project site and/or the SLRC are listed in Appendix F.

Richard and Dion Neutra VDL Research House and Landscape (2300 N Silver Lake Boulevard; P-19-188871)

The VDL Research House and Landscape, designed by master modern architect Richard Neutra and his son Dion Neutra, is a designated LAHCM and a National Historic Landmark. It is located approximately 85 feet east of the SLRC on a sloping hillside amongst other residential resources. Originally, there was another house on the site constructed in 1932 that burnt down in a fire in March 1963. Dion Neutra, along with his father, rebuilt the house with the original footprint, albeit with changes. The house was Neutra's residence as well as a professional hub where many modern architects like Gregory Ain, Harwell Harris, and Raphael Soriano started their careers. Over decades, hundreds of Neutra's projects were designed at the VDL House.

The VDL Research House and Landscape is located on the east side of the complex, on West Silver Lake Boulevard, and overlooks the Silver Lake Meadows and the Silver Lake Reservoir. The view from the VDL House celebrates the expansive meadow, trees, and the open water of the Silver Lake Reservoir. The VDL House was explicitly designed to incorporate water views of the Silver Lake Reservoir, as demonstrated by a small reflecting pond on the second-floor level that was designed to serve as an infinity pool with the open water views of the Reservoir in the background.

Changes to the SLRC under the Project that would be visible from the VDL House would result from the reconfiguration of the existing open space of the Meadow, including slight elevation changes, a picnic grove, the addition of footpaths and informal play paths, and an ornamental garden. However, these changes would be consistent with the current character of the Meadow. The ornamental garden and picnic grove appear to be graded so that they would be minimally visible from the VDL House. While walking paths and an informal play area would be added, there are already walking paths in this part of the Meadow and this change would not introduce a visually obtrusive or new design element to the view shed from the VDL House. While these alterations would minimally change the view from the VDL House, the overall views of open grass and open water would not be substantially changed and would not adversely affect the design intent of the VDL House or the character of its intended views of the surrounding setting.

Another change to this area is the construction of an entry and overlook plaza near the intersection of Silver Lake Boulevard and Earl Street. The VDL House is a block north of this intersection, and multiple houses and trees separate the house from the new plaza. As a result, this new construction would not adversely affect the VDL House.

There would also be habitat islands added to the Silver Lake Reservoir under the Project that would likely be visible from the VDL House. The open water of the reservoir, however, would still be visible upon completion of the Project. Further, the views from the VDL House have changed over the years as a result of the changing setting and the alterations to the reservoir. The addition of habitat islands would not substantially impact or change the character of the views from the VDL House and would continue the evolution of the use and views of the reservoir.

Shade trees would be planted and a promenade along Silver Lake Boulevard would be created with additional trees planted along the promenade. Although there are currently trees in this area, the new plantings would actually be less obtrusive to the original view from the VDL House, which has been partially obstructed due to plantings and a traffic light, and would be somewhat restored. The VDL House would not be physically or materially impaired as a result of the Project, and the visual connection of the VDL infinity pool to the Reservoir would be partially reestablished. All its physical character-defining features would remain intact at the conclusion of the Project. While the design intent of the VDL House regarding its view shed and associated setting would be affected by changes under the Project, the proposed changes would minimally detract from the integrity of the resource and would not substantially detract from the setting, feeling, and association of the VDL Research House and Landscape. The VDL House and Landscape is eligible under criterion C/3 for its design and association with Richard and Dion Neutra as well as an example of mid-century modern architecture. Its integrity of design, workmanship, materials, and location would remain intact at the conclusion of the proposed Project.

Therefore, potential indirect impacts of the proposed Project and offsite improvements are less than significant to the VDL Research House and Landscape because the Project would not materially impair this resource or interrupt primary views in a manner that would adversely affect the ability of the historical resource to convey its significance. At the conclusion of the proposed Project, the significance and integrity of the resources would remain intact.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

102 Historic Resources with Direct or Indirect Views of the Project Site

The remaining 102 resources have views of the SLRC that may be slightly altered as a result of the proposed Project. All of these resources are residential buildings, most of which are contributors to the Silver Lake Residential Historic District. The residences are designed in a variety of styles, including Period Revival styles like Spanish Colonial, American Colonial Revival, and Tudor Revival, and date from 1915 to 1979. Many of the later resources were constructed in the Mid-Century Modern and International styles, including designs by such notable architects as Rodney Walker, Eugene Choy, Harwell Hamilton Harris, and Richard and Dion Neutra. Because the SLRC is expansive and the Silver Lake Residential Historic District extends from the west side of the Complex to the north with varied topography that affect individual resources' view of the Complex, contributors to the district have very different views of the SLRC. As a result, they have been pulled out separately for analysis based on views.

The resources are all located in residential neighborhoods that have been consistently residential since their earliest development. The Project would not introduce a new use or typology to the area and all the adjacent neighborhoods would remain residential in nature. The use of the SLRC would be passive recreation, consistent with how much of the SLRC is already used, and the overall footprint and size of the complex would remain the same. The Project would not introduce a substantial new scale or massing to the existing setting, nor would it physically impact or materially impair the adjacent resources.

The integrity of setting for these resources would be slightly changed as result of the proposed Project, but these changes do not significantly detract from the neighborhood setting. The SLRC is not being demolished or removed; it would remain extant with its character-defining features intact. As a result of proposed alterations, residences would experience some change in view – for example, those resources that are located on the West side of the SLRC may see changes to their view as a result of the planting of additional trees and vegetation in the Eucalyptus Grove, but these changes in settings and view are minor. New construction at the SLRC would be minimal and is limited to small-scale sensitively designed construction that is the same scale as the surrounding neighborhood.

Although there would be slight view changes for some of these residences which may marginally affect their integrity of setting, the setting would largely remain intact. The resources would all still be located in a residential neighborhood around the Reservoir, which would remain a neighborhood nucleus. The layout of the streets is not changing as a result of the Project, nor is the topography or scale. The residences would still have views of the SLRC. The changes would not affect the eligibility of individual resources or historic districts.

Consequently, the minor change in views and setting would not detract from these resource's ability to convey their significance. No character-defining features of these resources would be

changed or impacted at the conclusion of the Project. The Project would not have a physical or material effect on any of these resources. At the conclusion of the Project, the resources' integrity of location, design, materials, workmanship, setting, feeling, and association would remain intact and these resources would not experience a substantial material change.

Therefore, indirect impacts of the Project to historical resources in the surrounding vicinity (0.25-mile radius) are less than significant because the Project would not materially impair these resources or their setting or interrupt primary views in a manner that would adversely affect the ability of these historical resources to convey their significance. At the conclusion of the Project, the significance and integrity of these resources would remain intact.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant

Neutra Colony Residential Historic District

The Neutra Colony Residential Historic District is a small district located on the eastern side of the SLRC. It contains ten Mid-Century Modern or Late Modern residences designed by Richard and Dion Neutra that are concentrated near the intersection of Silver Lake Boulevard and Earl Street. While most of these resources were specifically designed to incorporate views of the Silver Lake Reservoir, some do not have views of the SLRC from the public right-of-way. Six residences have direct views of the SLRC and four have no views of the SLRC from the public right-of-way. For the purposes of CEQA, only views from the public-right-of-way are considered. Therefore, of the setting of those resources with existing views from the public right of way would not change substantially as a result of the proposed project. More importantly, any small change to the setting and views would not affect the integrity of any of these resources. The feeling, association, workmanship, design, materials, and location would all remain intact. The setting would change slightly with the proposed alterations to the Meadow, which most of these resources face, but this alteration would be minimal. The spatial relationship between these residences and the SLRC would remain intact and the character of the neighborhood as a whole would remain unchanged. There would be no introduction of a new scale or massing as a result of the Project. At the conclusion of the Project, the individual resources within the District and the District as whole would remain intact and eligible as an excellent and cohesive example of a collection of Modern residences designed by Richard and Dion Neutra.

Therefore, the Project would not materially impair the significance of these contributing resources or the historic district as a whole. As such, indirect impacts are less than significant. At the conclusion of the Project, the significance and integrity of these resources and historic district would remain intact.

Mitigation Measures:

None Required

Significance Determination:

Less than significant

Silver Lake Residential Historic District

The Silver Lake Residential Historic District includes 1,171 residential properties with a period of significance that spans from 1925 to 1970. The homes are located in a large area to the west and north of the Reservoirs and 60 percent of the properties are district contributors.

While the Project would affect the view sheds of several of the contributing resources, included in the analysis above, it would not result in a material change to any of these resources that would affect their eligibility as contributors to the district. The proposed Project would not introduce a substantial new scale or massing to the existing setting, nor would it physically impact or materially impair the district and, therefore, would have no impact to the integrity of location, design, workmanship, or materials of the resources. While the view from some individual residences would be considered a character-defining feature of their setting and part of their design intent, far more of these resources currently have no views of the SLRC at all. More importantly, the specific views of the SLRC from individual resources is not a character defining for the district as a whole. Therefore, the potential impact of these changes to the setting and views as a result of the project would be minimal and only effect a small percentage of contributing resources.

The orientation and spatial relationship of these residences to the SLRC would remain intact. At the conclusion of the Project, all resources would remain eligible as district contributors and the district as a whole would remain eligible. The district would still remain an example of early automobile-oriented residential neighborhood, exhibiting distinctive site planning and tract features to accommodate the automobile.

Therefore, the Project would not materially impair the significance of these contributing resources or the historic district as a whole. As such, indirect impacts are less than significant. At the conclusion of the Project, the significance and integrity of these resources and historic district would remain intact.

Mitigation Measures:

None Required

Significance Determination:

Less than significant

Archaeological Resource

Impact 3.5-2: Would the proposed Project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

No archaeological resources are documented within the proposed Project site. However, the Canal & Reservoir Ditch is depicted on maps as described above, adjacent to the east side of the Project site. This resource therefore may be preserved under the pavement and may have a

connection within the Project site. The City of Los Angeles has treated the *Zanja* system as a historical resource under CEQA Guidelines Section 15064.5(a)(3).

The records search through the CHRIS-SCCIC revealed that no prehistoric or historic archaeological resources have been previously recorded within the Project site; however, the one historic period archaeological resource was previously recorded within 0.10-mile from the Project site, the Canal and Reservoir Ditch, was described as running through the Project site. There may be evidence of the early uses of the marshland, the Canal and Reservoir Ditch, and early water infrastructure associated with the development of the reservoir.

The records search through NAHC's SLF yielded positive results, although specific details of the nature and location of the resource(s) were not provided. The NAHC suggested contacting the Gabrieleño Band of Mission Indians – Kizh Nation for information regarding these positive results. The NAHC also provided a list of other Native American tribes to contact as they may have knowledge of cultural resources within the Project site. It is possible the finding was due to the nearby Canal and Reservoir Ditch, which is described as having previously run through the Project site. The City is conducting consultation with appropriate tribes per AB 52 requirements and the results of this consultation will be summarized in the Tribal Section of the Draft Environment Impact Report for the proposed Project.

Archaeological resources were not identified during the pedestrian survey of the Project site. Surface visibility was impeded due to the Project site being largely developed with surface parking lots or buildings.

Therefore, there is potential for ground disturbing activities to encounter archaeological materials associated with the former historic uses of the Project site. The Project site is also considered to have higher sensitivity for prehistoric archaeological resource due to the proximity to fresh water and riparian resources offered by the marsh that was present within the Project site that could have attracted prehistoric inhabitants for subsistence, if not necessarily sustained occupation.

However, research into site disturbance indicated that multiple phases of construction within the reservoir complex have resulted in substantial disturbance to the complex. Fill was used from the bottom of the reservoir and subjected to processing and compaction in the Meadow and Dams. In addition, portions of the Project site also have the Puente Formation at the surface which is 2.5 million years old or older and although could have potentially have prehistoric resources present on the surface at one time, due to the disturbance over more than 100 years, this is highly unlikely and the formation is too old to contain prehistoric resources related to past human civilization in the area. Therefore, monitoring has been recommended as mitigation for the areas containing native quaternary alluvium within the Knoll and the Eucalyptus Grove which has not been impacted by Reservoir development. Historic archaeological resources could be preserved within fill at the South Valley, the East West Narrows, the Eucalyptus Grove, and areas of quaternary alluvium within the Knoll.

Although no known archaeological sites or unique archaeological resources that may be considered historical resources under CEQA are known to be located within the Project's potential areas of impact, unanticipated resources could be encountered. As a result of these

findings, Project excavations have a high potential for encountering buried historic and prehistoric archaeological resources in the South Valley, East West Narrows, Eucalyptus Grove, and areas of quaternary alluvium within the Knoll. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If, in coordination with the City, it is determined that preservation in place is not feasible, appropriate treatment of the resource shall be developed by the Qualified Archaeologist in coordination with the City and may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing, analysis, and reporting. Therefore, the following Project Design Features as well as Mitigation Measures for the Project would be implemented to ensure that if any archaeological resources are found during the construction of the Project, they would be handled in compliance with State law such that any potential impacts would be reduced to less than significant levels. These measures were developed in conformance with, and incorporate the performance standards of California PRC Sections 5097.98 and 21083.2, the guidelines of the City of Los Angeles General Plan Conservation Element, and Section 6-3.2 “Archaeological and Paleontological Discoveries” from the Standard Specifications for Public Works Construction (“The Greenbook”; Public Works Standards, Inc. 2018).

In accordance with PDF-CR-1 which applies to the Project for areas where monitoring is not required, and in order to avoid project construction delays, the following Mitigation Measures would be implemented to define performance standards and provide additional avoidance of impacts within the specific locations in the Project area as well as activities that are defined in the mitigation measures. With adherence to PDF-CR-1 and implementation of **Mitigation Measures CR-1 through CR-4**, impacts to archaeological resources would be less than significant.

Mitigation Measures:

CR-1: Archaeological Monitoring. The City shall retain a qualified Archaeologist who meets the Secretary of the Interior’s Professional Qualifications Standards for professional archaeology (qualified Archaeologist) to carry out and ensure proper implementation of mitigation measures that address archaeological resources. The qualified Archaeologist shall oversee an archaeological monitor who shall be present during construction activities on the Project Site deemed by the qualified Archeologist to have the potential for encountering archeological resources, such as demolition, clearing/grubbing, drilling/auguring, grading, trenching, excavation, or other ground disturbing activity associated with the Project in areas of historic fill or previously undisturbed sediments, and in the vicinity of the Canal & Reservoir Ditch, within the South Valley, the East West Narrows, the Eucalyptus Grove, and areas of quaternary alluvium within the Knoll. The archeological monitor shall have the authority to direct the pace of construction equipment activity in areas of higher sensitivity and to temporarily divert, redirect or halt ground disturbance activities to allow identification, evaluation, and potential recovery of archaeological resources in coordination with the qualified Archaeologist. Full-time monitoring may be reduced to part-time inspections, or ceased entirely, if determined appropriate by the qualified Archaeologist.

CR-2: Archaeological Resources Sensitivity Training. Prior to commencement of construction activities, a Sensitivity Training shall be given by the qualified Archaeologist for construction personnel. The training shall focus on how to identify archaeological resources that may be encountered during construction activities, and the

procedures to be followed in such an event. Within 5 days of completing the training, a list of those in attendance shall be provided by the qualified Archaeologist to the City.

CR-3: Discovery of Archaeological Resources. In the event that historic-period (e.g., bottles, foundations, early infrastructure, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A 50-foot buffer shall be established by the Qualified Archaeologist around the find where construction activities shall not be allowed to continue. Work may continue outside of the buffer area. All archaeological resources unearthed by Project construction activities shall be evaluated by the Qualified Archaeologist. If a resource is determined by the Qualified Archaeologist to constitute a “historical resource” pursuant to CEQA Guidelines Section 15064.5(a) or a “unique archaeological resource” pursuant to Public Resources Code Section 21083.2(g), the Qualified Archaeologist shall coordinate with the Applicant and the City to develop a formal treatment plan that would serve to reduce impacts to the resources. If any prehistoric archaeological sites are encountered within the project area, consultation with consulting Native American parties will be conducted to apprise them of any such findings and solicit any comments they may have regarding appropriate treatment and disposition of the resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment and shall be explored to see if Project activities can avoid archaeological resources, such as: if the archaeological site can be deeded into a permanent conservation easement, if the resources can be capped with chemically stable soil or if the resource can be incorporated within open space.

If, in coordination with the City, it is determined that preservation in place is not feasible, and in order to mitigate potential impacts to significant resources pursuant to Section 15064.5 of CEQA, data recovery is feasible. Appropriate treatment of the resource shall be developed by the Qualified Archaeologist in coordination with the City. A data recovery plan shall be implemented. A data recovery plan will make provision for adequately recovering the scientifically consequential information from and about the historical resources. and may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing, analysis, reporting, and commemoration in the form of signage or other public education and awareness.

Any archaeological material collected shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be donated to a local school or historical society in the area for educational purposes.

CR-4: Archeological Monitoring Reports. At the conclusion of the archaeological monitoring, the qualified Archaeologist shall prepare a memorandum stating that the archaeological monitoring requirement of the mitigation measure has been fulfilled and summarize the results of any archaeological finds. The memorandum shall be submitted to the City. Following submittal of the memorandum, the qualified Archaeologist shall prepare a technical report that follows the format and content guidelines provided in California Office of Historic Preservation’s Archaeological Resource Management

Reports (ARMR). The technical report shall include a description of resources unearthed, if any, treatment of the resources, results of the artifact processing, analysis, and research, and evaluation of the resources with respect to the California Register of Historical Resources and CEQA. Appropriate California Department of Parks and Recreation Site Forms (Site Forms) shall also be prepared and provided in an appendix to the report. The technical report shall be prepared under the supervision of the qualified Archaeologist and submitted to the City within 150 days of completion of the monitoring. The final draft of the report shall be submitted to the South Central Coastal Information Center.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

Human Remains

Impact 3.5-3: Would the proposed Project disturb any human remains, including those interred outside of dedicated cemeteries?

No human remains were identified during the pedestrian survey of the Project site and no known human remains have been recorded within the Project site or a 0.50-mile radius. Archaeological deposits are frequently located in relatively close proximity to water sources (such as the Los Angeles River, located 0.5-miles west of the Project site), or marsh lands, and these deposits could contain human remains. Therefore, some potential for the presence of human remains may exist.

However, the proposed Project site has been previously disturbed by the original construction of the reservoir complex; and if present would have likely been detected previously. However, although unlikely, Project grading and excavation into deeper previously undisturbed subsurface areas may encounter buried human remains. If such remains were to be encountered, they would be protected under applicable regulations.

California PRC Section 5097.98, as amended by Assembly Bill 2641, protects cultural resources on public lands and provides procedures in the event human remains of Native American origin are discovered during project implementation and are required to address the Project's potential impacts to human remains. PRC Section 5097.98 requires notification of the County Coroner in the event of the unanticipated discovery of human remains and a prescribed protocol for their disposition in accordance with applicable regulations, notification of the NAHC and subsequent tribal coordination if remains are determined to be of Native American descent. PDF-CR-2: Human Remains Discovery During Construction for the proposed Project would be implemented to ensure that if any human remains are found during the construction of the Project, they would be handled in compliance with State law in conformance with California PRC Sections 5097.98. Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Cumulative Impact

Impact 3.5-4: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively considerable impact to cultural resources?

Historic Resources

Construction impacts to historical resources, both direct and indirect, tend to be site specific. However, cumulative impacts can occur if a project and other related projects in the adjacent area would together cumulatively affect in an adverse manner the eligibility of a historical resource and/or resources. A significant cumulative impact associated with the Project would occur if the impact would render an individual historical resource or historic district no longer eligible for historic listing, and the Project's contribution to the impact would be cumulatively considerable.

In assessing cumulative impacts on historical resources, the focus is on related projects that are located in the immediate vicinity of the Project that have the potential to contribute to changes in the setting of identified historical resources on the Project Site and in the vicinity, including historic districts. A list of thirteen related projects that are planned or under construction in the immediate vicinity of the Project Site was compiled to support the analysis of cumulative impacts for the Project. Table 3-2 identifies thirteen related projects that are planned or are under construction within the Project area:

- Related Project 1: 1629 North Griffith Park Boulevard, planned conversion of a historic (1932) church into a 26-room hotel with associated pool, restaurant, and lounge, located approximately 3,200 feet from the Project Site.
- Related Project 2: 1750 North Glendale Boulevard, a 5-story apartment building with 70 units totaling 61,000 square feet, located approximately 2,200 feet from the Project Site.
- Related Project 3: 2828 North Glendale Boulevard, planned conversion of a three-story church and an adjacent three-bedroom house into a childcare center for up to 175 kids. The project is located approximately 1,400 feet from Project Site.
- Related Project 4: 2280 North Glendale, residential development of six condominium units across three lots, located approximately 2,200 feet from the project site.
- Related Project 5: 3301 West Sunset Boulevard, a mixed-use project that includes apartments, commercial and retail space located 3,100 feet from the project site.
- Related Project 6: 3225 West Sunset Boulevard, a mixed-use development including 82 apartments, 2,500 square feet of retail space, 4,600 square feet of office space and a 2,900 square foot restaurant, located approximately 3,200 feet from the Project Site.
- Related Project 7: 2600 West Riverside Drive, a residential building to include 120 condo units, located approximately 4,400 feet from the Project Site.
- Related Project 8: 3012 West Sunset Boulevard, a residential building to include 74 apartment units, located approximately 4,000 feet from the Project Site.
- Related Project 9: 2225 West Sunset Boulevard, demolition of existing residential and commercial buildings and construction of a new multi-family residential building with 176 units, located approximately 5,000 feet from the Project Site.

- Related Project 10: 4311 West Sunset Boulevard, a mixed-use development including 108 residential units, 1,000 sf of restaurant space and a 4,500 sf fitness center, located approximately 5,000 feet from the Project Site.
- Related Project 11: 4100 West Sunset Boulevard, a mixed-use development including 91 residential units, and 10,000 sf of commercial/retail space, located approximately 4,300 feet from the Project Site.
- Related Project 12: LADWP Aeration and Recirculation System Project: includes installation of a bubble plume aeration system and a recirculation pipe system to ensure oxygenation and destratification of the reservoirs, located within the Project Site.
- Related Project 13: Sidewalk Repair Program: includes sidewalk repairs south of the Silver Lake recreation Center, adjacent to West Silverlake Drive, Van Pelt Place, Silverlake Boulevard, and at the intersection of Duane Street and Silverlake Boulevard.

Related projects 1, 5, 6, 7, 8, 9, 10 and 11 are located over a half a mile from the Project Site and would in no way alter the setting or views of the Project Site or any of the adjacent historical resources. While the structure associated with Related Project 1 is likely a historical resource, it is a church and is in no way a similar type or style of historic resource as the SLRC.

Related projects 2 and 4 include the development of multi-family residential buildings, up to a height of 5-stories. While there is a possibility for views of these projects from the SLRC, they would not alter the setting of the resource or any of the adjacent resources. Modern infill and multi-family residential are already present within the immediate setting of the SLRC as well as the setting of nearly all the adjacent resources. While the majority of the structures in the immediate vicinity of the SLRC are single-family residential, and the majority of the adjacent resources are also single-family residential, the addition of a three-story or five-story apartments building to the viewscape of any of these resources is not unusual. Modern infill and multi-family residential already exist within their immediate setting and neither contributes to nor detracts from their historic setting. The addition of this modern infill and multi-family residential structures would not alter the neighborhood surrounding the SLRC, or the residential neighborhood of the adjacent resources.

Related project 3 also would not alter the setting or character of the SLRC or any of the adjacent resource. The structures that presently exist on the site would simply be converted in use, and there would be very little actual alterations to the buildings and their current appearance. Additionally, there is a childcare center located on the Project Site, so there would no introduction of a new use to the setting of the SLRC or to the setting of any of the adjacent resources.

Additionally, while there is potential for these related projects to be under construction at the same time as the Project, all of them are located at least .15 miles from the Project Site and there is no potential for damage to this historical resource due to construction-related vibration and settlement.

Related Projects 12 and 13 are City infrastructure projects that are currently in progress. While they are located within (12) or immediately adjacent (13) to the Project Site, both related projects

are expected to be completed before the commencement of construction of the Project and, therefore, would not contribute to cumulative noise or vibration impacts.

For these reasons, the Project, considered together with the related projects, would not contribute considerably to a cumulatively significant impact on historical resources.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Archaeological Resources and Human Remains

Many of the related projects, including the nine related projects in the Project vicinity, would be expected to require grading and excavation that have the potential to encounter archaeological resources and human remains, although in some cases, these related projects are located in developed urban areas with sites that have been previously disturbed, which would reduce the likelihood of encountering archaeological resources and human remains. As discussed above, the Project has the potential to for inadvertent archaeological discovery and would be required to implement PDF-CR-1 and PDF-CR-2 and Mitigation Measures CR-1 through CR-4, which would reduce the Projects impacts on archaeological resources to less than significant. Similarly, as part of environmental review for the related projects, it is expected that mitigation measures would be imposed where necessary to reduce the potential for significant impacts on archaeological resources, as is required by the City.

In addition, each related project would be required to comply with applicable regulatory requirements, such as CEQA Guidelines Section 15064.5 and PRC Section 21083.2, which address archaeological resources, and PRC Section 5097.98 and State Health and Safety Code Section 7050.5, which address human remains. Compliance with regulatory requirements and implementation of required mitigation measures for each individual development project would ensure that impacts to archaeological resources remain less than significant and reduce the potential for the individual related projects to contribute to cumulative impacts. As such, Project impacts to archaeological resources and human remains are not cumulatively considerable and cumulative impacts would be less than significant. For these reasons, the proposed Project, considered together with the related projects, would not contribute considerably to a cumulative adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.5.6 Summary of Impacts

Table 3.5-1 summarizes the impact significance determinations and lists mitigation measures related to cultural resources.

**TABLE 3.5-1
 SUMMARY OF PROPOSED PROJECT IMPACTS TO CULTURAL RESOURCES**

Impact	Mitigation Measure	Significance
3.5-1: Historical Resource	None Required	LTS
3.5-2: Archaeological Resource	Mitigation Measures CR-1 through CR-4	LTSM
3.5-3: Human Remains	None Required	LTS
3.5-4: Cumulative	None Required	LTS

NOTES:

NI = No Impact, no mitigation proposed
 LTS = Less than Significant, no mitigation proposed
 LTSM = Less than Significant Impact with Mitigation Incorporated
 SU = Significant and Unavoidable

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3.6 Energy

This section analyzes impacts on energy resources due to construction and operation of the proposed Project. Section 15126.2 (b) of the California Environmental Quality Act (CEQA) Guidelines states that a project's energy use shall be analyzed to determine the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy, as well as being compliant with building codes and renewable energy features. Appendix G of the State CEQA Guidelines checklist, Section VI, Energy, includes questions to assist lead agencies when assessing a project's potential energy impacts. Additionally, State CEQA Guidelines Appendix F provides guidance on information to use when evaluating a project's energy use.

In accordance with the applicable State CEQA Guidelines Appendix G sections and utilizing guidance from State CEQA Guidelines Appendix F, this EIR includes relevant information and analyses that address the following three energy resources: electricity, natural gas, and transportation-related energy (petroleum-based fuels). Detailed energy demand calculations can be found in Appendix G of this Draft EIR. Information found herein, as well as other aspects of the proposed Project's energy implications, are discussed in greater detail elsewhere in this Draft EIR, including in Chapter 2, *Project Description*, and Sections 3.8, *Greenhouse Gas Emissions*, and Section 3.18, *Utilities and Service Systems*. Project design features include **PDF-UTIL-1: Drought-Tolerant Landscaping** and **PDF-UTIL-2: Water-Efficient Irrigation**. Impacts to energy are less than significant, and no mitigation is required.

3.6.1 Environmental Setting

Existing Conditions

Electricity

Electricity, a consumptive utility, is a man-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, for distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W) while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is one million watts, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is one billion watt-hours.

The Los Angeles Department of Water and Power (LADWP) provides electrical service throughout the City, including the proposed Project site, serving approximately 4 million people within a service area of approximately 465 square miles. Electrical service provided by LADWP is divided into two planning districts: Valley and Metropolitan. The Valley Planning District

includes the LADWP service area north of Mulholland Drive, and the Metropolitan Planning District includes the LADWP service area south of Mulholland Drive. The proposed Project site is located within LADWP's Metropolitan Planning District.

LADWP generates power from a variety of energy sources, including hydropower, coal, gas, nuclear sources, and renewable resources, such as wind, solar, and geothermal sources. According to LADWP's 2017 Power Strategic Long-Term Resource Plan, LADWP has a net dependable generation capacity greater than 7,531 MW (LADWP 2017a). On August 31, 2017, LADWP's power system experienced a record instantaneous peak demand of 6,502 MW (LADWP 2022). Approximately 34 percent of LADWP's 2019 electricity purchases were from renewable sources, which is similar to the 32 percent statewide percentage of electricity purchases from renewable sources (CEC 2020). The annual electricity sale to customers for the 2017–2018 fiscal year was approximately 25,833 million kWh (LADWP 2017b).

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs but relies upon out-of-state imports for nearly 90 percent of its natural gas supply (CEC 2022a).¹ A majority of natural gas consumed in California is for electricity generation, along with the industrial, residential, and commercial sections (CEC 2022a). Among energy commodities consumed in California, natural gas accounts for one-third of them (CEC, 2022b). Natural gas is measured in terms of cubic feet (cf).

Natural gas is provided to a majority of the City, including portions of the proposed Project vicinity, by SoCalGas. SoCalGas is the principal distributor of natural gas in Southern California, serving residential, commercial, and industrial markets. SoCalGas serves approximately 21.6 million customers in more than 500 communities encompassing approximately 20,000 square miles throughout Central and Southern California, from the City of Visalia to the Mexican border (SoCalGas 2022).

SoCalGas receives gas supplies from several sedimentary basins in the western U.S. and Canada, including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), the Rocky Mountains, and Western Canada as well as local California supplies (California Gas and Electric Utilities 2020). The traditional, southwestern U.S. sources of natural gas will continue to supply most of SoCalGas' natural gas demand. The Rocky Mountain supply is available but is used as an alternative supplementary supply source, and the use of Canadian sources provide only a small share of SoCalGas supplies due to the high cost of transport (California Gas and Electric Utilities 2020). Gas supply available to SoCalGas from California sources averaged 97 million cubic feet (cf) per day in 2019 (the most recent year for which data are available) (California Gas

¹ California Energy Commission, Supply and Demand of Natural Gas in California, <https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california>, accessed December 5, 2020.

and Electric Utilities 2020). Also, the annual natural gas sale to customers in 2019 was approximately 879,285 million cf (California Gas and Electric Utilities 2020).²

With the introduction of Los Angeles's Green New Deal in 2019, the City aims to reduce greenhouse gas emissions, which involves electrification of all new municipally-owned buildings and major building renovations. Building electrification is a key step in achieving the 2030 goal of carbon neutrality. Building electrification requires no use of fossil fuels on-site, including natural gas. The proposed Project would not implement natural gas in areas where it is typically used for buildings and instead would use electric alternatives that are available. Natural gas may still be used in the proposed Project for mobile sources (i.e., natural gas-fueled vehicles).

Transportation Energy

According to the CEC, transportation accounted for about 41 percent of California's total energy consumption in 2017 based on a carbon dioxide equivalent basis (CEC 2019). In 2019, California consumed 15.4 billion gallons of gasoline and 3.6 billion gallons of diesel fuel (CEC 2021).³ Petroleum-based fuels currently account for more than 90 percent of California's transportation fuel use (CEC 2016). However, the state is now working on developing flexible strategies to reduce petroleum use. Over the last decade, California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce VMT. Accordingly, gasoline consumption in California has declined. The CEC predicts that the demand for gasoline and transportation fossil fuels in general will continue to decline over the next 10 years primarily due to improvements in fuel efficiency and increased electrification (CEC 2019). According to fuel sales data from the CEC, fuel consumption in Los Angeles County was approximately 3.56 billion gallons of gasoline and 0.56 billion gallons of diesel fuel in 2019 (CEC 2021).

3.6.2 Regulatory Framework

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding energy at the federal, state, regional, and City of Los Angeles levels. As described below these plans, guidelines, and laws include the following:

- Energy Independence and Security Act of 2007
- Corporate Average Fuel Economy (CAFE) Standards
- Federal Energy Policy and Conservation Act
- Senate Bill 1389
- Renewables Portfolio Standard
- California Building Standards Code
 - California Building Energy Efficiency Standards (Title 24, Part 6)
 - California Green Building Standards (Title 24, Part 11)

² Daily natural gas usage in 2019 was 2,409 million cf, annual value derived by multiplying daily values by 365 days.

³ Diesel is adjusted to account for retail (49 percent) and non-retail (51 percent) diesel sales.

- California Assembly Bill 1493
- California Air Resources Board
 - Climate Change Scoping Plan
 - Advanced Clean Car Program
 - Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
 - In-Use Heavy-Duty Diesel-Fueled Fleets Regulation
- SB 375 (Sustainable Communities Strategy)
- Regional Transportation Plan/Sustainable Communities Strategy
- Green New Deal
- Green Building Code
- City of Los Angeles Mobility Plan 2035

Federal

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national greenhouse gas (GHG) emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting mandatory Renewable Fuel Standards (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the United States Environmental Protection Agency (USEPA) and National Highway Traffic Safety Administration (NHTSA) actions described above (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”⁴

⁴ A “green job,” as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.

Corporate Average Fuel Economy Standards

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) Standards (49 CFR Parts 531 and 533) reduce energy consumption by increasing the fuel economy of cars and light trucks. The NHTSA and USEPA jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the “maximum feasible level” with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy. When these standards are raised, automakers respond by creating a more fuel-efficient fleet. In 2012, the NHTSA established final passenger car and light truck CAFE standards for model years 2017 through 2021, which the agency projects will require in model year 2021, on average, a combined fleet-wide fuel economy of 40.3 to 41.0 miles per gallons (mpg). Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by USEPA and NHTSA. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018, and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type (USEPA 2011). USEPA and NHTSA have also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (USEPA 2018).

In March 2020, the USEPA and NHTSA issued the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule that would maintain the CAFE standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE standards for model year 2020 are 43.7 miles per gallon (mpg) for passenger cars and 31.3 mpg for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. However, consistent with President Biden’s executive order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, USEPA and NHTSA are now evaluating whether and how to replace the SAFE Rule (*Union of Concerned Scientists v. NHTSA* 2021).

Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 (EPCA) is a United States Act of Congress that responded to the 1973 oil crisis by creating a comprehensive approach to federal energy policy. The primary goals of EPCA are to increase energy production and supply, reduce energy demand, provide energy efficiency, and give the executive branch additional powers to respond to disruptions in energy supply. Most notably, EPCA established the Strategic Petroleum Reserve, the Energy Conservation Program for Consumer Products, and Corporate Average Fuel Economy regulations.

State

Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323; SB 1389) requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state’s electricity, natural gas, and

transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code Section 25301[a]). The 2020 Integrated Energy Policy Report, the latest published report from CEC, provides the results of the CEC's assessments related to energy sector trends, building decarbonization and energy efficiency, zero-emission vehicles (ZEV), energy equity, climate change adaptation, electricity reliability in Southern California, natural gas assessment, and electricity, natural gas, and transportation energy demand forecasts.

Renewables Portfolio Standard

First established in 2002 under SB 1078, California's Renewables Portfolio Standards (RPS) requires retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent by 2020 and 50 percent by 2030 (CPUC 2018a). SB 350, signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. The objectives of SB 350 are: (1) to increase the procurement of electricity from renewable sources from 33 percent to 50 percent; and (2) to double the energy savings in electricity and natural gas final end uses of retail customers through energy efficiency and conservation. On September 10, 2018, former Governor Jerry Brown signed SB 100, which further increased California's RPS and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, and that the California Air Resources Board (CARB) should plan for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045.

The California Public Utilities Commission (CPUC) and the CEC jointly implement the RPS program. The CPUC's responsibilities include: (1) determining annual procurement targets and enforcing compliance; (2) reviewing and approving each investor-owned utility's renewable energy procurement plan; (3) reviewing contracts for RPS-eligible energy; and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy (CPUC 2018b).

In March 2021, the CEC, CPUC, and CARB issued an SB 100 Joint Agency Report that assesses barriers and opportunities to implementing the 100 percent clean electricity policy (CEC 2021b). The report's initial findings suggest that the goals of SB 100 are achievable, though opportunities remain to reduce overall system costs; however, the report also notes that the findings are intended to inform state planning and are not intended as a comprehensive nor prescriptive roadmap to 2045 and future work is needed on critical topics such as system reliability and land use and further address energy equity and workforce needs (CEC 2021b). Refer to Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR for additional details regarding this regulation.

California Building Standards

California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020

(CEC 2018c). The 2019 Title 24 standards continue to improve upon the 2016 Title 24 standards for new construction of, and additions and alterations to, residential and nonresidential buildings which include efficiency improvements to the residential standards for attics, walls, water heating, and lighting, and efficiency improvements to the non-residential standards include alignment with the American Society of Heating and Air-Conditioning Engineers (ASHRAE) 90.1-2017 national standards (CEC 2018c).

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11) is commonly referred to as the CALGreen Code. The 2019 CALGreen Code includes mandatory measures for non-residential development related to site development; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality (California Green Building Standards Commission 2018). The 2019 CALGreen Code improves upon the 2016 CALGreen Code by updating standards for bicycle parking, electric vehicle charging, and water efficiency and conservation. The 2019 CALGreen Code went into effect on January 1, 2020. Refer to Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR for additional details regarding these standards.

California Assembly Bill 1493 (AB 1493, Pavley)

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO₂) emissions, Assembly Bill (AB) 1493 (commonly referred to as CARB's Pavley regulations), enacted on July 22, 2002, requires CARB to set GHG emission standards for new passenger vehicles, light duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009–2016 and Phase II established standards for model years 2017–2025 (CARB 2002; USEPA 2012). In September 2019, the USEPA published the SAFE Vehicles Rule in the federal register (Federal Register, Vol. 84, No. 188, Friday, September 27, 2019, Rules and Regulations, 51310–51363) that maintains the vehicle mpg standards applicable in model year 2020 for model years 2021 through 2026. In November 2019, California and 23 other states and environmental groups filed a petition in the U.S. District Court in Washington, DC for the USEPA to reconsider the published rule. The Court has not yet ruled on these petitions.

As discussed in the *Federal* subsection above, in March 2020, despite the pending petitions, the U.S. DOT and the U.S. EPA issued the SAFE Vehicles Rule, which amends existing CAFE standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks. Refer to Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR for additional details regarding this regulation.

California Air Resources Board

Scoping Plan

CARB adopted the 2017 Climate Change Scoping Plan in December 2017 (CARB 2017a). The 2017 Climate Change Scoping Plan identifies technologically feasible and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Climate Change Scoping Plan includes policies to

require direct GHG reductions at some of the state’s largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade program, which constraints and reduces emissions at covered sources (CARB 2017a). The 2017 Climate Change Scoping Plan strategies have co-benefits of improving energy and transportation fuel efficiency. Refer to Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR for additional details regarding this plan.

Advanced Clean Car Program

The Advanced Clean Cars emissions-control program was approved by CARB in 2012 and is closely associated with the Pavley regulations (CARB 2017b). The program requires a greater number of zero-emission vehicle models for years 2015 through 2025 to control smog, soot and GHG emissions. This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and the ZEV regulations to require manufacturers to produce an increasing number of pure ZEVs (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025. In particular, implementation of the ZEV and PHEV regulations reduce transportation fuel consumption by increasing the number of vehicles that are partially or fully electric-powered. Effective November 26, 2019, the federal SAFE Vehicles Rule Part One: One National Program withdraws the California waiver for the GHG and ZEV programs under Section 209 of the Clean Air Act, which revokes California’s authority to implement the Advanced Clean Cars and ZEV mandates.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 California Code of Regulations [CCR] Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than five minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

In-Use Heavy-Duty Diesel-Fueled Fleets Regulation

Because off-road vehicles that are used in construction and other related industries can last 30 years or longer, most of those that are in service today are still part of an older fleet that do not have emission controls.

In 2007, CARB approved the “In-Use Off-Road Diesel Fueled Fleets Regulation” to reduce emissions from existing (in-use) off-road diesel vehicles that are used in construction and other industries (13 CCR Section 2449). It also establishes emission rates targets for the off-road vehicles that decline over time to accelerate turnover to newer, cleaner engines and require exhaust retrofits to meet these targets. Revised in October 2016, the regulation enforced off-road restrictions on fleets adding vehicles with older tier engines and started enforcing beginning July

1, 2014. By each annual compliance deadline, a fleet must demonstrate that it has either met the fleet average target for that year or has completed the Best Available Control Technology requirements (BACT). Large fleets have compliance deadlines each year from 2014 through 2023, medium fleets each year from 2017 through 2023, and small fleets each year from 2019 through 2028. While the goal of this regulation is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in energy savings in the form of reduced fuel consumption from the use of more fuel-efficient engines.

SB 375 (Sustainable Communities Strategy)

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan (since updated to 2017 Climate Change Scoping Plan) for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce vehicle miles traveled (VMT) and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Regional

Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

SB 375 requires each MPO to prepare a Sustainable Communities Strategy (SCS) in their regional transportation plan. In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled from automobiles and light duty trucks and thereby reduce GHG emissions from these sources. For the SCAG region, the 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), adopted on September 3, 2020, is the current RTP/SCS and is an update to the 2016–2040 RTP/SCS.

The 2020–2045 RTP/SCS focuses on the continued efforts of the previous RTP/SCS plans for an integrated approach in transportation and land use strategies in development of the SCAG region through horizon year 2045. The 2020–2045 RTP/SCS projects that the SCAG region will meet the GHG per capita reduction targets established for the SCAG region of 8 percent by 2020 and 19 percent by 2035. Additionally, its implementation is projected to reduce VMT per capita for the year 2045 by 4.1 percent compared to baseline conditions for the year. Rooted in the 2008 and 2012 RTP/SCS plans, the 2020–2045 RTP/SCS includes “Core Vision” that centers on maintaining and better managing the transportation network for moving people and goods while expanding mobility choices by location housing, jobs, and transit closer together, and increasing investments in transit and complete streets. In addition, refer to Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR for additional details regarding these requirements.

Local

Green New Deal

In April 2019, Mayor Eric Garcetti released the Green New Deal, a program of actions designed to create sustainability-based performance targets through 2050 designed to advance economic, environmental, and equity objectives (City of Los Angeles 2019). L.A.'s Green New Deal is the first four-year update to the City's first Sustainable City pLAN that was released in 2015 and therefore replaces and supersedes the Sustainable City pLAN (City of Los Angeles 2015). It augments, expands, and elaborates in more detail L.A.'s vision for a sustainable future and it tackles the climate emergency with accelerated targets and new aggressive goals.

Within the Green New Deal, climate mitigation is one of eight explicit benefits that help define its strategies and goals. These include reducing GHG emissions through near-term outcomes:

- Reduce potable water use per capita by 22.5 percent by 2025; 25 percent by 2035; and maintain or reduce 2035 per capita water use through 2050.
- Reduce building energy use per square foot for all building types 22 percent by 2025; 34 percent by 2035; and 44 percent by 2050 (from a baseline of 68 thousand British thermal units per square foot (mBTU/sqft) in 2015).
- All new buildings will be net zero carbon by 2030 and 100 percent of buildings will be net zero carbon by 2050.
- Increase cumulative new housing unit construction to 150,000 by 2025; and 275,000 units by 2035.
- Ensure 57 percent of new housing units are built within 1,500 feet of transit by 2025; and 75 percent by 2035.
- Increase the percentage of all trips made by walking, biking, micro-mobility/matched rides or transit to at least 35 percent by 2025, 50 percent by 2035, and maintain at least 50 percent by 2050.
- Reduce VMT per capita by at least 13 percent by 2025; 39 percent by 2035; and 45 percent by 2050.
- Increase the percentage of electric and zero emission vehicles in the city to 25 percent by 2025; 80 percent by 2035; and 100 percent by 2050.
- Increase landfill diversion rate to 90 percent by 2025; 95 percent by 2035 and 100 percent by 2050.
- Reduce municipal solid waste generation per capita by at least 15 percent by 2030, including phasing out single-use plastics by 2028 (from a baseline of 17.85 pounds (lbs.) of waste generated per capita per day in 2011).
- Eliminate organic waste going to landfill by 2028.
- Reduce urban/rural temperature differential by at least 1.7 degrees by 2025; and 3 degrees by 2035.
- Ensure the proportion of Angelenos living within 1/2 mile of a park or open space is at least 65 percent by 2025; 75 percent by 2035; and 100 percent by 2050.

Green Building Code

Chapter IX of the Los Angeles Municipal Code (LAMC) is referred to as the “Los Angeles Green Building Code.” which incorporates by reference portions of the CALGreen Code. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings. The Los Angeles Green Building Code includes mandatory measures for newly constructed nonresidential and high-rise residential buildings. The Los Angeles Green Building Code includes some requirements that are more stringent than state requirements such as increased requirements for electric vehicle charging spaces and water efficiency, which results in potentially greater energy demand reductions from improved transportation fuel efficiency and water efficiency. Refer to Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR for additional details.

City of Los Angeles Mobility Plan 2035

In August 2015, the City Council adopted Mobility Plan 2035 (Mobility Plan), which serves as the City’s General Plan circulation element. The City Council has adopted several amendments to the Mobility Plan since its initial adoption, including the most recent amendment on September 7, 2016 (Los Angeles City Planning Department 2016). The Mobility Plan incorporates “complete streets” principles and lays the policy foundation for how the City’s residents interact with their streets. The Mobility Plan includes five main goals that define the City’s high-level mobility priorities:

- (1) Safety First
- (2) World Class Infrastructure
- (3) Access for All Angelenos
- (4) Collaboration, Communication, and Informed Choices
- (5) Clean Environments and Healthy Communities

Each of the goals contains objectives and policies to support the achievement of those goals.

3.6.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to energy are based on Appendix G of the State CEQA Guidelines. According to Appendix G of the State CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. (Refer to Impact 3.6-1)
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (Refer to Impact 3.6-2)

For this analysis, the State CEQA Guidelines Appendix G Thresholds are relied upon. Appendix F of the State CEQA Guidelines was prepared in response to the requirement in Public Resources Code Section 21100(b)(3), which states that an EIR shall include a detailed statement setting

forth “[m]itigation measures proposed to minimize significant effects of the environment, including, but not limited to, measures to reduce the wasteful, inefficient, and unnecessary consumption of energy.” The analysis utilizes factors and considerations identified in Appendix G and Appendix F of the State CEQA Guidelines, as appropriate, to assist in answering the Appendix G questions. The factors to evaluate energy impacts under Impact 3.6-1 include:

- a) The Project’s energy requirements and its energy use efficiencies by amount and fuel type for each stage of the Project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed. In addition, this analysis considers whether the Project would consume a substantially greater amount of energy, in either the construction or operational phase, than similar projects, in order to evaluate whether the Project would use energy that is “wasteful, inefficient, and unnecessary”;
- b) The effects of the Project on local and regional energy supplies and on requirements for additional capacity;
- c) The effects of the Project on peak and base period demands for electricity and other forms of energy;
- d) The effects of the Project on energy resources; and
- e) The Project’s projected transportation energy use requirements and its overall use of efficient transportation alternatives.

In addition, with regard to potential impacts to energy, the 2006 L.A. CEQA Thresholds Guide states that a determination of significance shall be made on a case-by case basis considering the following factors:

- The extent to which the project would require new (off-site) energy supply facilities and distribution infrastructure; or capacity-enhancing alterations to existing facilities;
- Whether and when the needed infrastructure was anticipated by adopted plans; and
- The degree to which the project design and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements.

The first and second bullet list items from the 2006 L.A. CEQA Thresholds Guide are addressed in Section 3.18, *Utilities and Service Systems*, of this Draft EIR (see Impact 3.18-1). The third bullet list item is evaluated under Impact 3.6-1 as follows:

- f) The degree to which the project design and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements.

In accordance with Appendix G and Appendix F of the State CEQA Guidelines, the degree to which the proposed Project complies with existing energy standards and whether the Project conflicts with adopted energy conservation plans are considered, as appropriate, to evaluate impacts under Impact 3.6-2.

Methodology

This analysis addresses the proposed Project’s potential energy usage, including electricity, natural gas, and transportation fuel. Energy consumption during both construction and operation is assessed. Specific analysis methodologies are discussed below. Energy calculations are

provided in Appendix G of this Draft EIR, and are based on the same assumptions used in Section 3.3, *Air Quality*, and Section 3.8, *Greenhouse Gas Emissions*.

3.6.4 Project Design Features

The following Project Design Features (PDF) are applicable to the Project.

PDF-UTIL-1: Drought-Tolerant Landscaping and PDF-UTIL-2: Water-Efficient Irrigation, as described in Section 3.18, *Utilities and Service Systems*.

3.6.5 Impacts and Mitigation Measures

The proposed Project would consume energy during construction and operational activities. Sources of energy for these activities would include electricity usage, natural gas consumption, and transportation fuels (diesel and gasoline).

Consumption of Energy Resources

Impact 3.6-1: Would the proposed Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

- a) The proposed Project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the proposed Project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

Construction

During proposed Project construction, energy would be consumed in the form of electricity on a limited basis for powering lights, electronic equipment, and for water conveyance for dust control. Proposed Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the proposed Project site, construction workers traveling to and from the proposed Project site, and delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities).

Table 3.6-1 provides a summary of the annual average electricity, gasoline fuel, and diesel fuel estimated to be consumed during proposed Project construction. Each of these is discussed and analyzed in greater detail in the subsections below. As specified earlier, these figures represent a highly conservative estimate in that it assumes the maximum volume of on-road and off-road construction equipment usage every day for each phase of construction.

**TABLE 3.6-1
 SUMMARY OF ENERGY USE DURING PROPOSED PROJECT CONSTRUCTION ^a**

Energy Type	Total Quantity	Annual Average Quantity During Construction
Electricity		
Construction Office	181,824 kWh	38,970 kWh
Electricity from Water (Dust Control)	78,321 kWh	16,786 kWh
Total Electricity	260,145 kWh	55,756 kWh
Gasoline		
On-Road Construction Equipment	88,858 gallons	19,045 gallons
Off-Road Construction Equipment	0 gallons	0 gallons
Total Gasoline	88,858 gallons	19,045 gallons
Diesel		
On-Road Construction Equipment	230,727 gallons	49,451 gallons
Off-Road Construction Equipment	747,950 gallons	160,306 gallons
Total Diesel	978,539 gallons	209,758 gallons

NOTES: kWh = kilowatt-hours
^a Detailed calculations are provided in Appendix G of this Draft EIR.

Electricity

During construction electricity would be supplied to the proposed Project site by LADWP and would be obtained from the existing electrical lines that connect to the proposed Project site. As shown in Table 3.6-1, annual average construction electricity usage would be approximately 55,756 kWh and would be within the supply and infrastructure capabilities of LADWP (forecasted to be 25,445 GWh net energy load in the 2025–2026 fiscal year) (LADWP 2017a).⁵ The annual average construction electricity usage of approximately 55,756 kWh is equivalent to approximately five residential units, based on the average annual electricity consumption for a United States residential utility customer in 2020 (USEIA 2020). The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. Electricity use from construction would be short-term, limited to working hours, used for necessary construction-related activities, and represent a small fraction of the proposed Project’s net annual operational electricity. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Construction of the Education Center and Multi-Purpose Facility would utilize environmentally sustainable materials. Furthermore, the electricity used for off-road light construction equipment would have the co-benefit of reducing construction-related air pollutant and GHG emissions from more traditional construction-related energy in the form of diesel fuel. Therefore, impacts from construction electrical demand would be less than significant and would not result in the wasteful, inefficient, and unnecessary consumption of energy.

⁵ Los Angeles Department of Water and Power defines its future electricity supplies in terms of sales that will be realized at the meter.

Natural Gas

As stated above, construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support proposed Project construction activities; thus, there would be no expected demand generated by construction of the proposed Project. Therefore, the proposed Project would result in no impacts from construction natural gas demand and would not result in the wasteful, inefficient, and unnecessary consumption of energy.

Transportation Energy

Table 3.6-1 reports the estimated amount of petroleum-based transportation energy that is expected to be consumed during proposed Project construction. Energy calculations are provided in Appendix G of this Draft EIR. During proposed Project construction, on- and off-road vehicles would consume an estimated annual average of approximately 19,045 gallons of gasoline and approximately 209,758 gallons of diesel. Proposed Project construction activities would last for approximately 56 months. The fuel usage during proposed Project construction would represent approximately 0.0005 percent of the 2019 annual on-road gasoline-related energy consumption of 3,559,000,000 gallons and 0.037 percent of the 2019 annual diesel fuel-related energy consumption of 563,265,306 gallons in Los Angeles County (CEC 2021a),⁶ as shown in Appendix G of this Draft EIR.

Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current petroleum production and consumption and future trends, oil production and consumption will grow through 2050 (USEIA 2022). Crude oil supply and utilization in the United States is expected to return to pre-pandemic levels starting in 2023 and stabilize in the long term and therefore would be sufficient to sustain the projected oil consumption through 2050 (USEIA 2022).

Construction of the proposed Project would utilize fuel-efficient equipment consistent with state and federal regulations, such as fuel efficiency regulations in accordance with the CARB Pavley Phase II standards, the anti-idling regulation in accordance with Section 2485 in 13 CCR, and fuel requirements in accordance with 17 CCR Section 93115. The proposed Project would benefit from fuel and automotive manufacturers' compliance with CAFE standards, which would result in more efficient use of transportation fuels (lower consumption). Further, the Project would source construction materials locally and would reduce the length of truck trips to and from the Project Site therefore conserving diesel fuel use compared to a similar project using globally-sourced materials. As stated in Chapter 2, *Project Description*, of this Draft EIR, the Project would also be designed with gradients and elevations that would balance the amount of earthwork material so that no off-haul or import of soil would be required.⁷ Typical construction projects in urban areas often require the export of earthwork material. Within Los Angeles earthwork material is often exported to landfills such as Sunshine Canyon or other locations in the Azusa

⁶ While fuel consumptions data for year 2020 is available, year 2019 is used as it represents pre-COVID-19 pandemic conditions. Diesel is adjusted to account for retail (49 percent) and non-retail (51 percent) diesel sales.

⁷ It is noted that the Draft EIR conservatively assumes export of earthwork for the quantitative assessments (e.g., in air quality, energy, greenhouse gas emissions, noise, and transportation) in order to provide a worst-case analysis if some export of earthwork is required. However, the Project is intended to be designed to balance earthwork material on the site.

and Irwindale areas, necessitating truck travel of approximately 20 to 30 miles or more for a one-way trip. Because the Project is intended to be designed to balance earthwork material on the site and avoid the need to export earthwork materials to these landfill locations, the Project would require fewer gallons of fossil fuels to be consumed for construction transportation, due to the avoidance of earthwork material export compared to more typical urban projects. As such, the proposed Project would indirectly comply with applicable regulatory measures and be designed in a manner to reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation fuels. While applicable regulations are intended to reduce construction emissions, compliance with the anti-idling and emissions regulations discussed above would also result in fuel savings from the use of more fuel-efficient engines.

In addition, the proposed Project would divert mixed construction and demolition debris to City-certified construction and demolition waste processors using City-certified waste haulers, consistent with the Los Angeles City Council approved Ordinance No. 181519 (LAMC Chapter VI, Article 6, Section 66.32-66.32.5). Diversion of mixed construction and demolition debris would reduce truck trips to landfills, which are typically located some distance away from City centers, and would increase the amount of waste recovered (e.g., recycled, reused, etc.) at material recovery facilities, thereby further reducing transportation fuel consumption.

Based on the analysis above, construction would utilize energy only for necessary on-site activities and to transport construction materials and demolition debris to and from the proposed Project site. As discussed above, idling restrictions and the use of cleaner, energy-efficient equipment and fuels would minimize the proposed Project's construction-related energy use. Therefore, construction of the proposed Project would not result in the wasteful, inefficient, and unnecessary consumption of energy and impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

During operation of the proposed Project, energy would be consumed for multiple purposes, including, but not limited to, on-road mobile sources (i.e., transportation fuel), area sources (i.e., landscape maintenance equipment and natural gas heating), energy (i.e., electricity, water conveyance and wastewater treatment, and solid waste). Usage of these energy sources was calculated for the proposed Project buildout year (2030). **Table 3.6-2** summarizes the proposed Project's annual net new operational energy demand for electricity, natural gas for mobile sources, and gasoline and diesel transportation fuels.

**TABLE 3.6-2
SUMMARY OF ANNUAL NET NEW ENERGY USE DURING PROPOSED PROJECT OPERATION ^a**

Energy Type	Annual Quantity ^{b, c}
Electricity	
Building Energy	774,850 kWh
Water Conveyance	499,521 kWh
Total Electricity	1,274,371 kWh
Natural Gas	
Building Energy	0 cf
Mobile Sources	190,649 cf
Total Natural Gas	190,649 cf
Transportation	
Gasoline	81,952 gallons
Diesel	14,376 gallons

NOTES: kWh = kilowatt-hours; cf = cubic feet

^a Detailed calculations are provided in Appendix G of this Draft EIR.

^b Totals may not add up exactly due to rounding of decimals.

^c Proposed Project electricity and natural gas estimates for buildings assume compliance with applicable 2019 Title 24 and CALGreen requirements

Electricity

With compliance with 2019 Title 24 standards and applicable 2019 CALGreen requirements, at buildout, the proposed Project would result in a projected increase in the on-site annual demand for electricity totaling 1,274,371 kWh, as shown in Table 3.6-2. The proposed Project would include building heating, ventilation, and air conditioning (HVAC) systems that would be sized and designed in compliance with the CALGreen Code to maximize energy efficiency caused by heat loss and heat gain; high efficiency, low-e insulated glass units to be used for the recreation center and education center building envelope; glazing to be protected from direct sunlight with deep overhangs and window screening to reduce glare and solar radiation and heat gain; and new and existing tree canopies to be utilized to protect building walls from sun exposure and provide shade for the ground area.⁸ These measures were generally accounted for based on compliance with 2019 Title 24 standards.

Further, the Project would optimize natural ventilation and daylighting at the new Education Center and Multi-Purpose Facility which would reduce the amount of electricity needed for lighting and heating/cooling. The Education Center would also include shade trees and architectural features to minimize the heat gain and regulate indoor temperatures without the need for additional electrical capacity. The Project would also improve the energy efficiency of the existing Multi-Purpose Facility and would be updated to meet current building energy and safety codes. The Education Center, updated Recreation Center, and Multi-Purpose Facility would be designed to be all-electric and would eliminate the use of natural gas. While this does result in

⁸ Low-e insulated glass refers to low emissivity glass which minimize the amount of ultra-violet and infrared light that can pass through, thereby improving the temperature insulating properties of the glass.

higher electricity usage, it results in more sustainable development by eliminating fossil fuel (i.e. natural gas) use for building energy.

The proposed Project would include strategies to reduce irrigation water demand. The proposed Project would include ornamental garden areas consisting of a combination of native and drought-tolerant species appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses. Irrigation water would be pumped from the reservoirs to the proposed Meadow park zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette proposed under the proposed Project. This irrigation strategy would be validated by reservoir water quality testing and soil analysis under proposed operations. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. If recycled water is available in the future, it could be used to irrigate ornamental planting. The Education Center would include a rainwater harvesting system to recycle water and The Meadow would include a series of depressions in the ground which would function as rain collectors. These features would decrease the amount of water needed to maintain the landscaping and would reduce the amount of electricity needed for water conveyance.

LADWP was required to procure at least 33 percent of its energy portfolio from renewable sources by 2020 and LADWP has met this requirement. With the passage of SB 100 in September 2018, LADWP will be required to update its long-term plans to demonstrate compliance including providing 60 percent of its energy portfolio from renewable sources by December 31, 2030, and ultimately planning for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. LADWP's current sources include biomass and biowaste, geothermal, eligible hydroelectric, solar, and wind sources. These sources accounted for 34 percent of LADWP's overall energy mix in 2019, the most recent year for which data are available, and represent the available off-site renewable sources of energy that would meet the proposed Project's energy demand (CEC 2020).

LADWP generates its load forecast to account for regional economic and population growth based on multiple forms of data from various agencies, including historical sales from the General Accountings Consumption and Earnings report, historical Los Angeles County employment data provided from the state's Economic Development Division, plug-in electric vehicle (PEV) projections from the CEC account building permits when determining electricity Load Forecasts, solar rooftop installations from the Solar Energy Development Group, electricity price projections from the Financial Services organization, and LADWP program efficiency forecasts (LADWP 2017a). In addition, LADWP considers projected Los Angeles County building permit amounts calculated by the UCLA Anderson School of Management when determining its load forecast and would, therefore, account for the proposed Project's electricity demand (LADWP 2017a).

Based on LADWP's collected data in its 2018 Power Strategic Long-Term Resource Plan, LADWP forecasts that its net energy for load in the 2030–2031 fiscal year (the proposed Project's buildout year) will be 26,360 GWh of electricity (LADWP 2017a).⁹ As such, the proposed Project-related net increase in annual electricity consumption of 1,309,123 kWh would represent 0.005 percent of LADWP's projected sales in 2030 and would be within LADWP's projected electricity supplies.

As previously described, the proposed Project incorporates a variety of energy and water conservation measures and features that are consistent with and go beyond state and local energy policies to reduce energy usage and minimize energy demand. To meet project objectives of sustainability, several efficiency features would be incorporated into the design of the proposed station, including all-electric development, measures to improve water efficiency (e.g., rainwater collection systems, drought tolerant plants), utilizing recycled material during construction, energy efficiency (e.g., shade trees, natural ventilation), and lighting (e.g., use of natural sunlight, double-glazed and energy-efficient lighting). Specifically, as described in Section 3.18, *Utilities and Service Systems*, of this Draft EIR, the Project would include PDF-UTIL-1 (Drought-Tolerant Landscaping), which requires that the Project use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses. The Project would also include PDF-UTIL-2 (Water-Efficient Irrigation), which requires that the Project use irrigation water that will be pumped from the reservoirs to the proposed Meadow park zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. Recycled water may also be used to irrigate ornamental planting, should such water supplies become available in the future. Implementation of PDF-UTIL-1 and PDF-UTIL-2 would reduce the Project's water demand and associated energy needs for water supply, conveyance, distribution and treatment better than regulatory requirements, and thus better than typical projects that only comply with regulatory requirements. As determined in Section 3.18, *Utilities and Service Systems*, of this Draft EIR, the City's existing water supplies are expected to be sufficient to serve the proposed buildings and structures, as they would not include water-intensive amenities, or substantial amounts of new employees and visitors that would consume substantial amounts of water. Further, it is determined that the proposed Project would contribute to a beneficial impact on groundwater supplies and that the proposed Project would have sufficient water supplies available to serve the proposed Project and reasonably foreseeable future development during normal, dry, and multiple dry years and that water supply impacts would be less than significant.

Therefore, with the incorporation of the Project's energy and water saving measures and features, operation of the proposed Project would not result in the wasteful, inefficient, or unnecessary consumption of electricity.

⁹ Los Angeles Department of Water and Power defines its future electricity supplies in terms of sales that will be realized at the meter.

Natural Gas

With compliance with the City of Los Angeles' Green New Deal, all new municipally-owned buildings and major building renovation projects will utilize electricity instead of natural gas. Accordingly, natural gas would not be supplied to support proposed Project operation activities related to building energy. However, 190,649 cf of natural gas would be used for proposed Project operation activities related to transportation sources (i.e., natural gas-fueled vehicles), as indicated in Table 3.6-2 which is discussed in further detail under *Transportation Energy*. Therefore, the proposed Project would result in no impacts from operational natural gas demand and would not result in the wasteful, inefficient, and unnecessary consumption of energy.

Transportation Energy

During operation, proposed Project-related traffic would result in the consumption of petroleum-based fuels related to vehicular travel to and from the proposed Project site. A majority of the vehicle fleet that would be used by proposed Project visitors and employees would consist of light-duty automobiles and light-duty trucks, which are subject to fuel efficiency standards. Annual trips for the proposed Project were estimated using trip rates provided in the proposed Project's TIA included in Appendix K of this Draft EIR (Jano Baghdanian & Associates 2022).¹⁰

As shown in Table 3.6-2, the proposed Project's estimated annual increase in petroleum-based fuel usage would be 190,649 cubic feet of natural gas, 81,952 gallons of gasoline and 14,376 gallons of diesel for transportation sources for the proposed Project. SoCalGas accounts for anticipated regional demand based on various factors, including growth in employment by economic sector, growth in housing and population, and increasingly demanding state goals for reducing GHG emissions. SoCalGas accounts for an increase in employment and housing between 2018 to 2035. Furthermore, the 2020 California Gas Report estimates that natural gas supplies within SoCalGas' planning area will be 778,180 million cf in 2030 (the proposed Project's buildout year) (California Gas and Electric Utilities 2020). As stated above, the proposed Project's annual net increase in demand for natural gas is estimated to be 190,649 cf for transportation sources. The proposed Project would account for 0.00002 percent of the 2030 forecasted annual consumption in SoCalGas' planning area and would fall within SoCalGas' projected consumption for the area and would be consistent with SoCalGas' anticipated regional demand from population or economic growth. Based on the California Energy Commission's *California Annual Retail Fuel Outlet Report*, Los Angeles County consumed 3,559,000,000 gallons of gasoline and 563,265,306 gallons of diesel fuel in 2019 (CEC 2021a). The proposed Project would account for 0.002 percent of County gasoline consumption and 0.003 percent of County diesel consumption based on the available County fuel sales data for the year 2019.

Based on current petroleum production and consumption and future trends, oil production and consumption will grow through 2050 (USEIA 2022). Crude oil supply and utilization in the United States is expected to return to pre-pandemic levels starting in 2023 and stabilize in the long term and therefore would be sufficient to sustain the projected oil consumption through 2050 (USEIA 2022). The proposed Project would benefit from fuel and automotive manufacturers' compliance with CARB's Low-Emission Vehicle (LEV-III) Program and CAFE standards, which

¹⁰ The Transportation Assessment is provided in Appendix K of this Draft EIR.

would result in more efficient use of transportation fuels (lower consumption). Project-related vehicle trips would also indirectly benefit from Pavley Standards, which are designed to reduce vehicle GHG emissions by mandating increasingly stringent emissions standards on new vehicles but would also result in fuel savings from more efficient engines in addition to compliance with CAFE standards.

Based on the above, the proposed Project would minimize operational transportation fuel demand consistent with state, regional, and City goals. Therefore, operation of the proposed Project would not result in the wasteful, inefficient, and unnecessary consumption of energy.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

- b) The effects of the proposed Project on local and regional energy supplies and on requirements for additional capacity

Construction

As discussed above, electricity would be consumed during proposed Project construction activities. The electricity demand at any given time would vary throughout the construction period based on the construction activities being performed and would cease upon completion of construction. Electricity would be supplied to the proposed Project site by LADWP and would be obtained from the existing electrical lines that connect to the proposed Project site. While temporary power poles would be installed to provide electricity during proposed Project construction, the existing off-site infrastructure would not have to be expanded or newly developed to provide electrical service to the proposed Project site during construction or demolition. Electricity demand during proposed Project construction would be 4.4 percent of the proposed Project's net annual operational electricity consumption, which would be within the supply and infrastructure capabilities of LADWP and, thus, would not result in an increase in demand for electricity that exceeds available supply or distribution infrastructure capabilities that could result in the construction of new facilities or expansion of existing facilities. Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would not be supplied to support proposed Project construction activities; thus, there would be no demand generated by construction. The proposed Project would not result in installation of any new natural gas infrastructure. The Project is subject to the City of Los Angeles' Green New Deal requirements that include electrification of all new municipally-owned buildings and major building renovations. As stated above, transportation fuel usage during proposed Project construction activities would represent 0.0005 percent of gasoline usage and 0.04 percent of diesel usage within Los Angeles County, respectively. Construction transportation energy would be provided by existing retail service stations and from existing mobile fuel services that are typically needed to deliver fuel to a construction site to refuel the off-road construction equipment at the proposed Project site, and, as such, no new facilities would be required. As energy consumption during construction would not

be substantial, would be temporary and short-term, and as energy supplies of the existing purveyors are sufficient to serve the Project in addition to existing commitments, the proposed Project would not affect the local and/or regional energy supplies and would not require additional capacity. Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Electricity

Based on LADWP's 2018 Power Strategic Long-Term Resource Plan, LADWP forecasts that its net energy for load in the 2030–2031 fiscal year (the proposed Project's buildout year) will be 26,360 GWh of electricity (LADWP 2017a).¹¹ The Project-related increase in annual electricity consumption of 1,309,123 kWh/year would represent 0.005 percent of LADWP's projected sales for the 2030–2031 fiscal year and would be consistent with LADWP's anticipated regional demand from population or economic growth. During peak conditions, the proposed Project would represent 0.005 percent of the LADWP estimated peak load. Based on these factors, it is anticipated that LADWP's existing and planned electricity capacity and electricity supplies would be sufficient to serve the proposed Project's electricity demand, and, thus, the proposed Project would not require additional infrastructure (i.e., a substation) beyond the aforementioned proposed utilities installed on-site during construction.

Natural Gas

As stated above, the proposed Project would not include natural gas supply infrastructure for the Project buildings. Project buildings would use exclusively electricity for building power needs. The estimated 190,649 cf of natural gas shown in Table 3.6-2 would be utilized for transportation sources (i.e., natural gas-fueled vehicles). Based on the 2020 California Gas Report, the California Energy and Electric Utilities estimates that natural gas consumption within SoCalGas' planning area will be 778,180 million cf in 2030 (the proposed Project's buildout year) (California Gas and Electric Utilities 2020). This report predicts gas demand for all sectors (residential, commercial, industrial, energy generation and wholesale exports) and presents best estimates, as well as scenarios for hot and cold years. The proposed Project would account for 0.00002 percent of the 2030 forecasted consumption in SoCalGas' planning area and would fall within SoCalGas' projected consumption and supplies for the area. SoCalGas expects overall natural gas demand to decline through 2035, even accounting for population and economic growth, with efficiency improvements and the state's transition away from fossil fuel-generated electricity to increased renewable energy. The 2020 California Gas Report states, "SoCalGas projects total gas demand to decline at an annual rate of 1.0 percent per year from 2020 to 2035 (California Gas and Electric Utilities 2020). The decline in throughput demand is due to modest growth in the natural gas vehicle market and across-the-board declines in other market segments."

¹¹ Los Angeles Department of Water and Power defines its future electricity supplies in terms of sales that will be realized at the meter.

As such, SoCalGas' existing and planned natural gas capacity, supplies and infrastructure would be sufficient to serve the proposed Project's demand.

Transportation Energy

As stated above, at buildout, the proposed Project would consume a net increase of 190,649 cubic feet of natural gas, 81,952 gallons of gasoline and 14,376 gallons of diesel per year. The transportation-related fuel usage for the proposed Project would represent 0.00002 percent of SoCalGas' 2030 forecasted consumption, 0.002 percent of the 2019 annual on-road gasoline-, and 0.003 percent of the 2019 annual on-road diesel-related energy consumption in Los Angeles County (based on the available County fuel sales data). Detailed calculations are shown in Appendix G of this Draft EIR.

Operational transportation energy would be provided by existing retail service stations, and, as such, no new retail service stations would be required. Based on current petroleum production and consumption and future trends, oil production and consumption will grow through 2050 (USEIA 2022). Crude oil supply and utilization in the United States is expected to return to pre-pandemic levels starting in 2023 and stabilize in the long term and therefore would be sufficient to sustain the projected oil consumption through 2050 (USEIA 2022). As such, existing and planned transportation fuel supplies would be sufficient to serve the proposed Project's demand. As energy consumption during operation would be relatively negligible and within existing and planned supplies, the proposed Project would not affect the local and/or regional energy supplies and would not require additional capacity. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

- c) The effects of the proposed Project on peak and base period demands for electricity and other forms of energy

Construction / Operation

As discussed above, electricity demand during construction and operation of the proposed Project would have a negligible effect on the overall capacity of the LADWP's power grid and base load conditions and would be consistent with expected levels of electricity demand. With regard to peak load conditions, the LADWP power system experienced an all-time high peak of 6,502 MW on August 31, 2017 (LADWP 2017a). LADWP also estimates a peak load based on two years of data known as base case peak demand to account for typical peak conditions. LADWP's peak demand forecast accounts for a growth rate of 0.4 percent over the next ten years (approximately 30 MW per year) (LADWP 2017a). Based on LADWP estimates for 2030–2031 (closest forecasted year to first project operational year), the base case peak demand for the power grid is 6,183 MW (LADWP 2017a). Under peak conditions, the proposed Project would consume a net increase of 1,274,371 kWh on an annual basis which, assuming 12 hours of active electricity demand per day, would be equivalent to 291 kW (peak demand assuming 4,380 hours per year of

active electricity demand).¹² In comparison to the LADWP power grid base peak load of 6,183 MW for 2030–2031, based on the assumption above, the proposed Project would represent 0.005 percent of the LADWP base peak load conditions and, therefore, would not create any new peak demand impacts that are inconsistent with LADWP demand projections.¹³ In addition, as noted above, LADWP’s peak demand forecast accounts for a growth rate of 0.4 percent over the next ten years. Therefore, the proposed Project’s electrical consumption during operational activities would have a negligible effect on peak load conditions of the power grid and is within existing and planned demand. Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

- d) The effects of the proposed Project on energy resources

Construction / Operation

As discussed above, LADWP’s electricity generation is derived from a mix of non-renewable and renewable sources, such as coal, natural gas, solar, geothermal wind and hydropower. The LADWP 2018 Power Strategic Long-Term Resource Plan identifies adequate energy resources to support future generation capacity, and, as discussed above, LADWP’s existing and planned electricity capacity and supplies would be sufficient to serve the proposed Project’s electricity demand (LADWP 2017a). As discussed above in the Regulatory Framework, one of the objectives of SB 350 was to increase the procurement of California’s electricity from renewable sources from 33 percent to 50 percent by 2030. Accordingly, LADWP is required to procure at least 33 percent to 50 percent of its energy portfolio from renewable sources by 2030. LADWP has met its 2020 requirement. The current sources of LADWP’s renewable energy include biomass and biowaste, geothermal, eligible hydroelectric, solar, and wind sources. These sources account for 34 percent of LADWP’s overall energy mix in 2019, which is the most recent year for which data are available (CEC 2020). LADWP has committed to providing an increasing percentage of its energy portfolio from renewable sources so as to exceed the RPS requirements. Prior to the passage of SB 100 in September 2018, LADWP committed to exceeding the then-current RPS requirements by increasing to 50 percent by 2025, 55 percent by 2030, and 65 percent by 2036 (LADWP 2017a). With the passage of SB 100, LADWP will be required to update its long-term plans to demonstrate compliance with the updated requirements including providing 60 percent of its energy portfolio from renewable sources by December 31, 2030 and ultimately planning for 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. This represents the available off-site renewable sources of energy that would meet the proposed Project’s energy demand.

¹² Calculated as follows: 1,274,371 kWh / 4,380 hours = 291 kW.

¹³ Calculated as follows: 291 kW / 6,183,000 kW = 0.005 percent.

With regard to on-site renewable energy sources, the proposed Project would meet the applicable requirements of the Los Angeles Green Building Code and the CALGreen Code.

As discussed above, natural gas supplied to the Southern California area is mainly sourced from out-of-state with a small portion originating in California. According to the U.S. Energy Information Administration (EIA), the U.S. currently has approximately 90 years of natural gas reserves based on 2016 consumption (USEIA 2018). Compliance with energy standards is expected to result in more efficient use of natural gas (lower consumption) in future years (CEC 2018). Therefore, as the proposed Project would comply with energy efficiency standards for natural gas, proposed Project construction and operation activities would have a negligible effect on natural gas supply.

As stated earlier, transportation fuels (gasoline and diesel) are produced from crude oil, which can be provided domestically or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption (BP Global 2018). Therefore, proposed Project construction and operation activities would have a negligible effect on the transportation fuel supply.

Based on the above, the proposed Project would minimize construction and operational energy and transportation fuel demand to the extent feasible and would not substantially impact energy resources. Therefore, construction and operation of the proposed Project would not have a significant impact on energy resources.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

- e) The proposed Project's projected transportation energy use requirements and its overall use of efficient transportation alternatives

Construction / Operation

As discussed in Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR, the SCAG 2020–2045 RTP/SCS presents the transportation vision for the region through the year 2045 and provides a long-term investment framework for addressing the region's transportation and related challenges. The proposed Project is a recreational land use development located within an established residential community served by existing public transportation options. The proposed Project site is located near the Los Angeles County Metropolitan Transit Authority (Metro) Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the proposed Project site and Line 92 which runs on Glendale Boulevard with multiple stops that are a short walking distance from the proposed Project site. The proposed Project would support pedestrian activity by providing various trails and providing park amenities for the community. The proposed Project site's location within an existing residential community would be consistent with and would not conflict with SCAG's land use types for the area and would encourage pedestrian activity, which

would result in a reduction in overall VMT (refer to the detailed VMT analysis provided in Section 3.8, *Greenhouse Gas Emissions*, and Section 3.16, *Transportation*, of this Draft EIR).

As a result, operation of the proposed Project would encourage reduced transportation energy and provide proposed Project visitors and employees with multiple convenient alternative transportation options. Therefore, the proposed Project encourages the use of efficient transportation energy use and efficient transportation alternatives.

Mitigation Measures:

None Required

Significance Determination:

No Impact

- f) The degree to which the project design and/or operations incorporate energy-conservation measures, particularly those that go beyond City requirements.

Construction / Operation

The Project includes construction of the Education Center and Multi-Purpose Facility, which will meet the City's forward-thinking sustainability goals by utilizing sustainably sourced materials, and using LEED to assess the projects. The LEED assessment of the sourcing of construction materials would reduce the length of truck trips to and from the Project Site thereby conserving diesel fuel use compared to materials sourced from a long distance. As stated in Chapter 2, *Project Description*, of this Draft EIR, the Project would also be designed with grade levels and elevations that would attempt to balance the amount of earthwork material so that little or no off-haul or import of soil would be required, as feasible.¹⁴ Typical construction projects in urban areas often require the export of earthwork material. Within Los Angeles earthwork material is often exported to landfills such as Sunshine Canyon or other locations in the Azusa and Irwindale areas, necessitating truck travel of approximately 20 to 30 miles or more for a one-way trip. Because the Project is intended to be designed to balance earthwork material on the site and avoid the need to export earthwork materials to these landfill locations, as feasible, the Project would require fewer gallons of fossil fuels to be consumed for construction transportation, due to the avoidance of earthwork material export compared to more typical urban projects. As such, the proposed Project would incorporate construction designs that would reduce transportation fuel demand beyond City requirements.

With respect to operations, the Project would incorporate a variety of energy and water conservation measures and features that are consistent with and go beyond state and local energy policies to reduce energy usage and minimize energy demand. To meet project objectives of sustainability, several efficiency features would be incorporated into the design of the proposed Project, including measures to improve water efficiency (e.g., rainwater collection systems, drought-tolerant plants), utilizing sustainably sourced materials during construction, energy

¹⁴ It is noted that the Draft EIR conservatively assumes export of earthwork for the quantitative assessments (e.g., in air quality, energy, greenhouse gas emissions, noise, and transportation) in order to provide a worst-case analysis if some export of earthwork is required. However, the Project is intended to be designed to balance earthwork material on the site.

efficiency (e.g., shade trees, overhangs, natural ventilation), and lighting (e.g., use of natural sunlight, double-glazed and energy-efficient lighting). As described in Section 3.18, *Utilities and Service Systems*, of this Draft EIR, the Project would include PDF-UTIL-1 (Drought-Tolerant Landscaping), which requires that Project use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. The Project would also include PDF-UTIL-2 (Water-Efficient Irrigation), which requires that the Project use irrigation water that will be pumped from the reservoirs to the proposed Meadow park zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. Recycled water may also be used to irrigate ornamental planting, should such water supplies become available in the future. Implementation of PDF-UTIL-1 and PDF-UTIL-2 would reduce the Project's water demand and associated energy needs for water supply, conveyance, distribution and treatment better than regulatory requirements.

With respect to Project operational transportation energy demand, the Project would represent an urban infill recreational development, since it would be undertaken in an existing urban area within an established residential community at a location served by several local and regional bus lines. Existing transit options serving the Project include Metro's Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the SLRC and 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Complex and Metro Line 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Project. In addition, as described in Section 2.5.7, *Sustainability Design Features*, although the Project is not required to provide any bicycle parking spaces per the LAMC, the Project would also provide on-site bicycle parking spaces and improve existing bike lanes along Silver Lake Boulevard, and the proposed Project would provide drop-off space for micro-mobility initiatives such as Metro Micro (see Section 2.0, *Project Description*, for additional details). The Project would provide visitors and employees with the ability to access nearby public transit and opportunities for walking and biking, which would facilitate a reduction in VMT. Additional detailed information regarding these land use characteristics are provided in Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR. As such, the Project includes transportation features beyond City requirements.

In summary, the proposed Project includes Project Design Features and other design considerations that would reduce energy use beyond City requirements and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

State and Local Plans

Impact 3.6-2: Would the proposed Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction

As discussed below, the proposed Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. With respect to truck fleet operators, the USEPA and NHTSA have adopted fuel efficiency standards for medium- and heavy-duty trucks. The Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles and are phased in for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type (USEPA 2011). USEPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which would be phased in from model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and vehicle type (USEPA 2016). The energy modeling for trucks does not take into account specific fuel reductions from these regulations, since they would apply to fleets as they incorporate newer trucks meeting the regulatory standards; however, these regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

In addition, construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of five minutes at a location and the phase-in of off-road emission standards that result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these regulations are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy.

Operation of the proposed Project would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles for the reasons provided below. The proposed Project would not conflict with the 2020–2045 RTP/SCS goals and benefits intended to improve mobility and access to diverse destinations, provide better “placemaking,” provide more transportation choices, and reduce vehicular demand and associated emissions. The proposed Project is a recreational land use development located within an established residential community with existing public transportation options. The proposed Project site is located near the Los Angeles County Metropolitan Transit Authority (Metro) Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the proposed Project site and Line 92 which runs on Glendale Boulevard with multiple stops that are a short walking distance from the proposed Project site. By locating the proposed Project’s proposed recreational land uses within an existing residential community that is served by existing public transportation options, and by including features that support and encourage pedestrian activity and other non-vehicular transportation, the proposed Project would reduce vehicle trips and VMT (refer to the detailed VMT analysis provided in Section 3.8, *Greenhouse Gas Emissions*, and Section 3.16, *Transportation*, of this Draft EIR). Therefore, the Project would be consistent with and would not conflict with SCAG’s land use types for the area and would encourage pedestrian activity.

Based on the above, proposed Project construction activities would not conflict with energy conservation plans and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

A detailed discussion of the proposed Project's comparison with the applicable actions and strategies in the L.A.'s Green New Deal is provided in Section 3.8, *Greenhouse Gas Emissions*. As discussed, the proposed Project is designed in a manner that is consistent with and not in conflict with relevant energy conservation plans that are intended to encourage development that results in the efficient use of energy resources. The proposed Project would comply with applicable regulatory requirements for the design of new buildings, including the provisions set forth in the Title 24 standards and CALGreen Code, which have been incorporated into the City's Green Building Code as amended by the City, to be more stringent than state requirements in LAMC Chapter 9, Article 9 (Green Building Code).

Electricity usage during proposed Project operations, as presented in Table 3.6-2, would be minimized through incorporation of applicable 2019 Title 24 standards, applicable 2019 CALGreen requirements, the Los Angeles Green Building Code, and the Los Angeles Green New Deal.

The proposed Project would also be consistent with and not conflict with regional planning strategies that address energy conservation. As discussed above and in Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR, SCAG's 2020–2045 RTP/SCS focuses on creating livable communities with an emphasis on sustainability and integrated planning, and identifies mobility, economy, and sustainability as the three principles most critical to the future of the region. As part of the approach, the 2020–2045 RTP/SCS focus on reducing fossil fuel use by decreasing VMT and encouraging alternative modes of transit. The proposed Project is a recreational land use development located within an established residential community with existing public transportation options. By locating the proposed Project's proposed recreational land uses within an existing residential community that is served by existing public transportation options, and by including features that support and encourage pedestrian activity and other non-vehicular transportation, the proposed Project would reduce vehicle trips and VMT. Additional detailed information regarding these land use characteristics are provided in Section 3.3, *Air Quality*, and Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR. With respect to operational transportation-related fuel usage, the proposed Project would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. The proposed Project would also benefit from fuel and automotive manufacturers' compliance with CAFE fuel economy standards and the Pavley Standards, which are designed to result in more efficient use of transportation fuels.

As stated above, the proposed Project would include strategies to reduce irrigation water demand and recycled water is available in the future, it could be used to irrigate ornamental planting. As a result, the proposed Project would implement project design features and incorporate water conservation, energy conservation, landscaping, and other features consistent with applicable actions and strategies in the L.A.'s Green New Deal, including features that go beyond those specified by regulations, such as the City's Green Building Code. The proposed Project's design would comply with existing energy standards and incorporate project design features to reduce energy consumption. Therefore, the proposed Project would not conflict with energy conservation plans and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Cumulative Impact

Impact 3.6-3: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to energy?

As presented in Table 3-2, the City has identified 13 related projects located within the vicinity of the proposed Project site. The geographic context for the analysis of cumulative impacts on electricity is LADWP's service area, and the geographic context for the analysis of cumulative impacts on natural gas in SoCalGas' service area, because the proposed Project and related projects are located within the service boundaries of LADWP and SoCalGas. While the geographic context for transportation-related energy use is more difficult to define, the City has determined to consider the proposed Project in the context of County-wide consumption given the tendency for vehicles to travel within and through the County and the availability of County-level data. Growth within these geographies is anticipated to increase the demand for electricity, natural gas, and transportation energy, as well as the need for energy infrastructure, such as new or expanded energy facilities.

Electricity

Buildout of the proposed Project, related projects, and additional forecasted growth in LADWP's service area would cumulatively increase the demand for electricity supplies and on infrastructure capacity. However, LADWP, in coordination with the CEC, account for future increases in service area demand based on various economic, population, and efficiency factors. LADWP relies on multiple forms of data from various agencies, including historical sales from the General Accountings Consumption and Earnings report, historical Los Angeles County employment data provided from the state's Economic Development Division, PEV projections from the CEC account building permits when determining electricity Load Forecasts, solar rooftop installations from the Solar Energy Development Group, electricity price projections from the Financial Services organization, and LADWP program efficiency forecasts (LADWP 2017a). As described in LADWP's 2017 Power Strategic Long-Term Resource Plan, LADWP would continue to expand delivery capacity as needed to meet demand increases within its service area at the lowest

cost and risk consistent with LADWP's environmental priorities and reliability standards (LADWP 2017a). The 2017 Power Strategic Long-Term Resource Plan takes into account future energy demand, advances in renewable energy resources and technology, energy efficiency, conservation, and forecast changes in regulatory requirements (LADWP 2017a). Accordingly, LADWP considers projected Los Angeles County building permit amounts calculated by the UCLA Anderson School of Management when determining its load forecast and would, therefore, account for the proposed Project's and the related projects' electricity demand within its forecasts (LADWP 2017a). Thus, LADWP considers growth from related projects within its service area for the increase in demand for electricity, as well as the need for energy infrastructure, such as new or expanded energy facilities.

LADWP has achieved its goal of procuring a minimum of 33 percent of its energy portfolio from eligible renewables sources by 2020. LADWP's current sources of renewable energy include biomass and biowaste, geothermal, eligible hydroelectric, solar and wind, and accounted for 34 percent of LADWP's overall energy mix, the most recent year for which data are available (CEC 2020). Therefore, the energy use of the proposed Project and related projects would benefit from LADWP's energy conservation plans and efficiency standards. The proposed Project would not increase energy use beyond regional demand estimates and would not contribute considerably to cumulative increases in energy demand or inefficient uses. When considered together with related projects, the proposed Project would not contribute considerably to planned energy demands. The cumulative impact would be less than significant.

Natural Gas

Based on the 2020 California Gas Report, the CEC estimates natural gas consumption within SoCalGas' planning area will be approximately 778,180 million cubic feet in 2030 (the proposed Project's buildout year) (California Gas and Electric Utilities 2020). The proposed Project would account for 0.00002 percent of the 2030 forecasted consumption in SoCalGas' planning area. The Project's contribution to natural gas consumption would come from solely from mobile sources in the form of natural gas-powered vehicles. Project buildings are required to be all-electric pursuant to the City of Los Angeles' Green New Deal. As a result, the proposed Project would not contribute considerably to cumulative natural gas demands. SoCalGas forecasts consider projected population growth and development based on local and regional plans, and the proposed Project's growth and development would not conflict with those projections. Cumulative impacts would be less than significant.

Transportation Energy

Buildout of the proposed Project, related projects, and additional forecasted growth would cumulatively increase the demand for transportation-related fuel in the state and region. As described above, at buildout, the proposed Project would consume a total net increase of 190,649 cubic feet of natural gas for mobile sources, 81,952 gallons of gasoline and 14,376 gallons of diesel per year. The transportation-related fuel usage for the proposed Project would represent 0.00002 percent of the 2030 forecasted consumption in SoCalGas' planning area, 0.002 percent of the 2019 annual on-road gasoline- and 0.003 percent of the annual on-road diesel-related energy consumption in Los Angeles County (based on the available County fuel sales data), as

shown in Appendix G of this Draft EIR. As a result, the proposed Project would not contribute considerably to the cumulative gasoline demands.

Petroleum currently accounts for 90 percent of California’s transportation energy sources; however, over the last decade the state has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce VMT, which would reduce reliance on petroleum fuels.

The proposed Project would not conflict with the energy efficiency policies emphasized by the 2020–2045 RTP/SCS. The proposed Project would be consistent with and not conflict with SCAG’s land use type for the area and would encourage alternative transportation and a reduction in overall VMT. The proposed Project is a recreational land use development located within an established residential community with existing public transportation options. The proposed Project site is located near the Los Angeles County Metropolitan Transit Authority (Metro) Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the proposed Project site and Line 92 which runs on Glendale Boulevard with multiple stops that are a short walking distance from the proposed Project site. By locating the proposed Project’s proposed recreational land uses within an existing residential community that is served by existing public transportation options, and by including features that support and encourage pedestrian activity and other non-vehicular transportation, the proposed Project would reduce vehicle trips and VMT. Since the proposed Project would not conflict with the 2020–2045 RTP/SCS, the proposed Project’s contribution to cumulative impacts due to wasteful, inefficient or unnecessary use of transportation fuel would not be cumulatively considerable, and, thus, cumulative impacts would be less than significant.

The proposed Project’s contribution to cumulative impacts related to energy consumption (i.e., electricity, natural gas, and transportation energy) would not result in a cumulatively considerable effect related to potentially significant environmental impacts due to the wasteful, inefficient and unnecessary consumption of energy during construction or operation. As such, cumulative energy impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.6.6 Summary of Impacts

Table 3.6-3 summarizes the impact significance determinations and lists mitigation measures related to energy.

**TABLE 3.6-3
SUMMARY OF PROPOSED PROJECT IMPACTS TO ENERGY**

Impact	Mitigation Measure	Significance
3.6-1: Consumption of Energy Resources	None Required	LTS
3.6-2: State and Local Plans	None Required	LTS
3.6-3: Cumulative	None Required	LTS

NOTES: NI = No Impact, no mitigation proposed; LTS = Less than Significant, no mitigation proposed; LTSM = Less than Significant Impact with Mitigation Incorporated; SU = Significant and Unavoidable

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3.7 Geology, Soils, and Mineral Resources

This section addresses the potential impacts to geology, soils, mineral, and paleontological resources associated with implementation of the proposed Project. This section includes a description of the existing geology, soils, mineral resource, and paleontological resource conditions in the proposed Project site; a summary of applicable regulations related to geology and soil hazards, mineral resources, and paleontological resources in the proposed Project site; and an evaluation of the potential impacts of the proposed Project related to geology and soil conditions, mineral resources, and paleontological resources in the proposed Project area.

The information included in this section is partly based on the Paleontological Resources Assessment (PRA) prepared for the proposed Project and included as confidential **Appendix H** to this Draft EIR. In addition, the existing geology and soil conditions in this section are based on a review of previous geotechnical studies prepared for the reservoirs at the SLRC, which are included by reference. Impacts to geology, soils, and mineral resources are less than significant with the incorporation of Mitigation Measures **PALEO-1: Construction Personnel Paleontological Resources Sensitivity Training, PALEO-2: Paleontological Monitoring, PALEO-3: Paleontological Resource Discovery, and PALEO-4: Reporting.**

3.7.1 Environmental Setting

Topography

The proposed Project site would be located in a valley within the low-lying hills west of the Los Angeles River and southeast of the eastern end of the Santa Monica Mountains (LADWP 2013). The topography in surrounding neighborhood areas is characterized by steep slopes which ascend from the reservoir to the north, west, and east, and descend to the south. The proposed Project site is generally flat but includes several areas with significant changes in elevation. For example, the Knoll is an approximately 45-foot high hill with varied slopes, and the south Silver Lake Dam and the Ivanhoe Dam have 40-foot and 10-foot slopes, respectively. The reservoirs themselves are deep basins with paved side slopes of 30 vertical feet which extend to an approximate elevation of 428 above mean sea level (amsl). The bottom of Silver Lake Reservoir is graded to drain to a low point in the center at elevation 414 amsl, while Ivanhoe Reservoir's bottom slopes to the southwest to an elevation of 422 amsl (CWE 2020).

Regional Geology

Regionally, the proposed Project would be located in the northern Peninsular Ranges geomorphic province, near the boundary between the Peninsular Ranges and Transverse Ranges geomorphic provinces (California Department of Conservation [DOC] 2018).¹ The Peninsular Ranges province is characterized by a series of northwest-trending mountain ranges and sediment-filled valleys, subparallel to faults branching from the San Andreas Fault.² The geology in the Peninsular Ranges is comparable to the Sierra Nevada province, with granitic rock intruding into

¹ A geomorphic province is an area that possesses similar bedrock, structure, history, and age. California has 11 geomorphic provinces.

² Almost parallel, but diverging or converging slightly.

older metamorphic rock. The Peninsular Ranges extend into lower California and are bound on the east by the Colorado Desert (California Geologic Survey [CGS] 2002; LADWP 2013).

The proposed Project site falls within the greater Los Angeles Basin, a structural depression approximately 50 miles long and 20 miles wide in the northeastern Peninsular Ranges province (Ingersoll and Rumelhart 1999). This basin can be broken down into subbasins that share a similar geological history (Yerkes et al. 1965; Sylvester and O’Black, 2016). Each of these basins primarily formed from the migration of the San Andreas Fault Zone northward during the late Miocene (Irwin, 1990; Powell and Weldon 1992; Critelli et al., 1995). As the mountain ranges bounding the basins were folded and thrust upward, they eroded forming dissected surfaces and filling the intervening basins with thick piles of alluvium (Yerkes et al. 1965). While sediments dating back to the Cretaceous (66 million years ago) are preserved in the basin, continuous sedimentation began in the middle Miocene (around 13 million years ago) (Yerkes et al., 1965). Since that time, sediments have been eroded into the basin from the surrounding highlands, resulting in thousands of feet of accumulation. Most of these sediments are marine, until sea level dropped during the Pleistocene and deposition of the alluvial sediments that compose the uppermost units in the Los Angeles began.

Local Geology

This proposed Project site, specifically, would be within the “Northeastern Block” of the Los Angeles Basin dissected into uplifted Miocene-age marine sediments. The bedrock formed in deep marine conditions and comprises mostly fine-grained shale that is well-cemented (Yerkes and Graham 1997). Dibblee and Ehrenspeck (1991) refer to these sediments as the sandstone member of the Monterey Formation (Tmss). Earlier geologists ascribed these units to the Puente Formation (Lamar 1970; Yerkes et al. 1977; Weber 1980) or the Modelo Formation (Hoots 1931 and Durrell 1954). The uplift occurred in the Pliocene or Pleistocene and the eroded valleys became the site of deposition of Quaternary-age alluvium (Qa) (Dibblee and Ehrenspeck 1991). The SLRC is surrounded by alluvium deposits and the bedrock hills of the Monterey Formation.

The composition of subsurface materials at the proposed Project site was investigated in a recent geotechnical engineering report that was prepared for the Silver Lake Reservoir Bypass and Regulating Station Project (LADWP 2013). It should be noted that exploratory boring was limited to SLRC areas adjacent and northwest of Silver Lake Reservoir. However, absent Project-specific geotechnical investigations, the results of the report are useful in that they provide a range of materials that may be encountered during proposed ground disturbing activities. In addition, geologic settings included in the PRA (see Appendix H) and the SCLRMP Geotechnical Research Report (Beyaz and Patel 2019) provide additional general information about the geologic units and material compositions at the proposed Project site.

The geologic units encountered during the investigations include artificial fill (Af) materials associated with previous site improvements, as well as native Quaternary alluvium (Qa) and Miocene-age marine sedimentary bedrock (Tmss) underlying the artificial fill materials. The geologic units are summarized below from fill materials to the bedrock materials:

Artificial Fill (Af)

Subgrades of the reservoir embankments, access roads, and dams, are composed of compacted fill materials and have been paved over with asphaltic concrete. South Valley park areas located south of Silver Lake Dam are also underlain by fill materials. The results of the geotechnical investigation found that fill materials at the SLRC generally consist of sandy and clayey silts, sandy and silty clays, and clayey sands.

Quaternary Alluvium (Qa)

The majority of the SLRC is built into and surrounded by Quaternary alluvium. Exceptions include the reservoir basin, which was excavated to bedrock during reconstruction of the Silver Lake Reservoir, South Valley, and northeast portions of the Project site. Geotechnical investigations determined that younger alluvium generally consists of stiff to very stiff silty clay with sand, sandy clay, and sandy silt. The underlying older alluvium generally consists of silty sand, very stiff sandy clay, and dense clayey sand (Beyaz and Patel 2019; LADWP 2013).

Miocene Monterey Formation Sandstone (Tmss)

The northeast corner of the proposed Project site encompasses Miocene-age sedimentary bedrock assigned to the sandstone member of the Monterey Formation. Locally, the Monterey Formation consists of marine sandstone, siltstone, and shale that dates from the early Pliocene to the Miocene (Critelli et al., 1995, Morton and Miller, 2006). The sedimentary bedrock encountered during geotechnical investigations consists of fine- to coarse-grained sandstone with interbedded silty fine-grained sandstone, clayey siltstone, and silty claystone.

Soils

Soils differ in origin, composition, and slope development. When evaluating potential impacts of development, soils are typically considered for their resource value in agricultural production or for their potential development characteristics or constraints. Some soils are susceptible to erosion and/or expansive behavior while others are more suitable for compaction. Soils are classified by their distinguishing characteristics and are arranged within soil associations, which are groups of soil units that occur together in a pattern over a geographic region.

On review of the Natural Resources Conservation Service (NRCS) *Web Soil Survey*, soil units at the SLRC (outside of the reservoir basin) are listed as Urban Land complex soils, which consist of an uncertain mix of fill and disturbed local soil (NRCS 2022). Most of the previously disturbed areas where facilities are proposed would generally be well suited for development.

Groundwater

The groundwater table was encountered at a depth of approximately 20 feet below the ground surface (bgs) during the geotechnical explorations (LADWP 2013).

Regional Faults and Seismicity

Faults are planar features within the earth's crust that have formed to release strain caused by the dynamic movements of the earth's major tectonic plates. An earthquake on a fault is produced when these strains overcome the inherent strength of the earth's crust, and the rock ruptures. The

rupture causes seismic waves that propagate through the earth’s crust, producing the groundshaking effect known as an earthquake. The rupture also causes variable amounts of slip along the fault, which may or may not be visible at the earth’s surface.

Seismic activity and seismically-induced ground rupture is more likely along historically active faults. The state has established Alquist-Priolo Zones that are buffers around active faults which have been determined to be especially prone to surface fault rupture. The CGS defines an active fault as one that has had surface displacement within Holocene time (within the last 11,700 years; the U.S. Geological Survey (USGS) uses within the last 15,000 years) (CGS 2007).

The proposed Project site is located in a seismically active region of California that contains both active (Holocene age) and potentially active (Quaternary age) faults. Throughout the proposed Project region, there is the potential for damage resulting from movement along any one of a number of active faults, seismic shaking, and seismically induced ground failures (e.g., liquefaction). The Working Group on California Earthquake Probabilities (WGCEP), comprised of the USGS, the CGS, and the Southern California Earthquake Center, evaluates the probability of one or more earthquakes of Mw 6.7 or higher occurring in the state of California over the next 30 years (WGCEP 2015a). It is estimated that the Los Angeles region as a whole has a 60 percent chance of experiencing an earthquake of Mw 6.7 or higher over the next 30 years.

Table 3.7-1 identifies both historically active (i.e., within last 150 years) and active (i.e., within last 11,700 years) faults in the vicinity of the Project site and their corresponding characteristics that are capable of generating significant ground shaking at the proposed Project site.

**TABLE 3.7-1
 ACTIVE FAULTS IN THE PROJECT VICINITY**

Fault	Distance to and Direction from SLRC (Miles)	Maximum Moment Magnitude (Mw)¹	Historical Seismicity (Last 150 Years)	Slip Rate (mm/year)	Fault Classification
San Andreas (Mojave section)	37 north	7.4	M 7.0 (1899)	30.0	Historically Active
Newport-Inglewood	8 southwest	7.1	M 6.4 (1933)	1.0	Historically Active
Sierra Madre (San Fernando section)	12 northwest	6.7	M 6.4 (1971)	2.0	Historically Active
Whittier-Elsinore	17 southeast	6.8	M 5.9 (1987)	2.5	Historically Active
San Gabriel	20 miles north	7.2	-	1.0	Active
Verdugo	17 northwest	6.9	-	0.5	Active
Santa Monica	7.5 southwest	6.6	-	1.0	Active
Raymond	3.0 northeast	6.5	-	1.5	Active
Hollywood	0.8 northwest	6.4	-	1.0	Active

NOTES:

¹ While Richter magnitude was historically the primary measure of earthquake magnitude, seismologists now use Moment Magnitude (Mw) as the preferred way to express the size of an earthquake.

SOURCES: CGS 2003, CGS 2021; WCGEP 2015b

The proposed Project site itself is not mapped within an Alquist-Priolo Earthquake Fault Zone, and no active or historically active faults are known to pass through the SLRC (CGS 2021). The nearest faults to the proposed Project, the Hollywood and Raymond faults, are considered active by CGS and mapped within an Alquist-Priolo Earthquake Fault Zone (CGS 2003). Therefore, the risk of ground rupture at the sites is considered very low.

In addition to the faults listed above in Table 3.7-1, several concealed thrust faults, commonly referred to as blind thrusts, underlie the Los Angeles Basin at depth. These faults are not exposed at ground surface and are typically identified at depths greater than 3 kilometers. These faults do not present a potential surface fault rupture hazard; however, they are considered active and potential sources for future earthquakes. The closest blind thrust fault is the Upper Elysian Park fault, which is approximately 1.6 miles beneath the Project site as measured perpendicular to the fault, dips 50 degrees northward, and the thrust tip is at 3 km depth (LADWP 2013).

Geologic Hazards

Potential geologic hazards at the proposed Project site are discussed below. Liquefaction and lateral spreading, while possible without seismic shaking, are more commonly triggered by a seismic event, as discussed further below in seismic hazards.

Erosion and Landslides

The term landslide refers to the downward movement of large masses of rocks, soil, mud, and/or organic debris. Areas with steep slopes are particularly susceptible to landslide hazards. Most landslides are caused by one or more factors that act together to destabilize the slope. The primary driving force of slope failure is the influence of gravity acting on weakened materials that make up a sloping area of land. While some landslides occur slowly over time, the most destructive landslides happen suddenly after a triggering event, such as heavy rainfall or an earthquake. Landslides can be triggered by human activities that weaken the stability of a slope, such as excavation of the toe of a slope removing a restraining force to slope failure, the addition of water at the head of a slope increasing the weight of the materials within the upper slope area and adding a lubricant (i.e., water) to the materials, and construction activities that disturb soil conditions and create unstable slopes.

CGS mapping identifies an area on the west side of Silver Lake Drive towards the south end of Silver Lake Reservoir as a landslide hazard zone. The potential for landslides in this area is presumably due to the steep topography of the Monterey Formation hillside located across the road from the southwest portion of the proposed Project site. However, the proposed Project site itself is not mapped within the landslide hazard zone (CGS 2021).

Expansive Soil

Expansive soils are subject to volume changes from changes in moisture content such as swelling with increases in moisture or shrinkage with decreases in moisture. The shrinking and swelling can damage foundations and other infrastructure. Expansive soils consist of certain clays and some silts. As previously discussed, soils in the proposed Project site consist mostly of disturbed fill, sandy loams, and silty clays that would be less susceptible to expansion since their clay content would not be anticipated to be very high.

Subsidence

Subsidence is characterized as a sinking of the ground surface relative to surrounding areas and can generally occur where deep soil deposits are present. Subsidence in areas of deep soil deposits is typically associated with regional groundwater withdrawal or other fluid withdrawal from the ground, such as oil and natural gas. Subsidence can result in the development of ground cracks and damage to sidewalks, pipelines, and other improvements. According to USGS, southern parts of Los Angeles Basin that have historically been used for oil extraction and groundwater pumping have had various degrees of land subsidence. However, the proposed Project is not included in USGS-mapped subsidence areas (USGS 2022).

Seismic Hazards

Seismic hazards are generally classified into two categories: primary seismic hazards (surface fault rupture and groundshaking) and secondary seismic hazards (liquefaction and other types of seismically induced ground failure, along with seismically induced landslides).

Surface Fault Rupture

Seismically-induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude, sense, and nature of fault rupture can vary for different faults or even along different segments of the same fault. Ground rupture is considered more likely along active faults. As described previously, no known active faults have been mapped through the proposed Project site and risk associated with ground rupture at the sites is considered very low.

Seismic Ground Shaking

As discussed previously, it is estimated that a major earthquake has a 60 percent chance of affecting the Los Angeles region in the next 30 years and would produce strong ground shaking throughout the region, including the proposed Project site. Earthquakes on active or potentially active faults could produce a range of ground shaking intensities at the Project site. Historically, earthquakes have caused strong ground shaking and damage in the Los Angeles Basin.

Areas most susceptible to intense ground shaking are those located closest to an earthquake-generating fault, and areas underlain by thick, loosely unconsolidated and saturated sediments. Ground movement during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geologic material. While the earthquake magnitude measures the energy released in an earthquake, intensity is a measure of the ground shaking effects at a particular location. Areas underlain by bedrock typically experience less severe ground shaking than those underlain by loose, unconsolidated materials. Unconsolidated materials, even when located relatively distant from faults, can intensify ground shaking.

This complex Los Angeles regional fault system's interaction with alluvial soils and other geologic conditions in the hills and basins appears to pose a potential seismic threat for every part of the City, regardless of the underlying geologic and soils conditions (City of Los Angeles 1996). Due to the numerous active faults in the vicinity of the proposed Project site, such as the Hollywood fault which has the potential to generate an earthquake of 6.7 Mw approximately 0.8-

mile north of the Project site, high-intensity ground shaking could cause some degree of damage to Project facilities. However, the reservoirs have undergone several seismic stability improvements to ensure safety in the event of an earthquake, including using modern compaction methods based on recommendations of the Division of Safety of Dams (DSOD) (Beyaz and Patel 2019). As the proposed facilities would be founded on bedrock underlying the proposed Project site, well-designed structures are not anticipated to experience serious damage or collapse.

Liquefaction and Lateral Spreading

Liquefaction is the rapid loss of shear strength experienced in saturated, predominantly granular soils below the groundwater level during strong earthquake groundshaking and occurs due to an increase in pore water pressure. Liquefaction-induced lateral spreading is defined as the finite, lateral displacement of gently sloping ground as a result of pore-pressure buildup or liquefaction in a shallow underlying deposit during an earthquake (Virginia Polytechnic Institute and State University [VT] 2013). The occurrence of this phenomenon is dependent on many complex factors, including the intensity and duration of groundshaking, particle-size distribution, and density of the soil.

The potential damaging effects of liquefaction include differential settlement, loss of ground support for foundations, ground cracking, heaving and cracking of structure slabs due to sand boiling, and buckling of deep foundations due to ground settlement. Dynamic settlement (i.e., pronounced consolidation and settlement from seismic shaking) may also occur in loose, dry sands above the water table, resulting in settlement of and possible damage to overlying structures. In general, a relatively high potential for liquefaction exists in loose, sandy soils that are within 50 feet of the ground surface and are saturated (below the groundwater table). Lateral spreading can move blocks of soil, placing strain on levees and roads that can lead to ground failure.

The proposed Project is mapped in a liquefiable area in the City of Los Angeles Safety Element due to occurrences of shallow groundwater and recent alluvial deposits (City of Los Angeles 1996). Maps prepared by CGS also identify most of the proposed Project within a liquefaction zone, though the reservoir basin and southern portions of the site are excluded (CGS 2021).

The potential for liquefaction in the reservoir basin is presumed to be very low due previous excavation of sandy silt in the reservoir beds to bedrock elevation, and the use of artificial fill to compact the embankments to 95 percent (Beyaz and Patel 2019). However, as described above in Section 3.7.1, *Environmental Setting, Local Geology*, young alluvial deposits underlie most of the Project site, not including the reservoir basin. These geologic units typically contain soils which may be susceptible to saturation if they are low in density and underlain by shallow groundwater (less than 40 feet bgs) (DOC 1998). Due to the presence of young alluvium and the shallow groundwater table beneath the Project site, there is the potential for liquefaction to occur in areas other than the reservoirs in the event of an earthquake. Liquefaction risk would vary based on specific subsurface characteristics beneath each park zone and the structures that would be constructed upon them. As described above in Section 3.7.1, *Environmental Setting, Soils*, most of the facilities are proposed in areas that have been previously excavated or developed, and thus are not anticipated to be built into loose or sandy soils susceptible to saturation and liquefaction.

Collapse and Settlement

Settlement of the ground surface can occur under static forces (e.g., due to gravity or groundwater removal) but can also be accelerated and accentuated by earthquakes. During an earthquake, settlement can occur from rapid rearrangement, compaction, and settling of subsurface materials (particularly loose, non-compacted, and variable sandy sediments). Settlement can occur both uniformly and differentially (i.e., where adjoining areas settle at different rates). In addition, areas are susceptible to differential settlement if underlain by compressible sediments, such as poorly engineered artificial fill or poorly graded gravels. As described previously, the reservoirs at the proposed Project site were reconstructed using modern compaction methods to comply with DSOD seismic standards and are not considered susceptible to settlement. Areas not previously reworked or developed at the proposed Project site could be susceptible to settlement.

Paleontological Setting

The Society of Vertebrate Paleontology (SVP) has established standard guidelines (SVP 2010) that outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most state and local regulatory agencies accept and use the professional standards set forth by the SVP.

Paleontological resources are the fossilized remains or impressions of plants and animals, including vertebrates (animals with backbones; mammals, birds, fish, etc.), invertebrates (animals without backbones; starfish, clams, coral, etc.), and microscopic plants and animals (microfossils). They are valuable, nonrenewable, scientific resources used to document the existence of extinct life forms and to reconstruct the environments in which they lived. Fossils can be used to determine the relative ages of the depositional layers in which they occur and of the geologic events that created those deposits. The age, abundance, and distribution of fossils depend on the geologic formation in which they occur and the topography of the area in which they are exposed. The geologic environments within which the plants or animals became fossilized usually were quite different from the present environments in which the geologic formations now exist.

Paleontological sensitivity is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its "Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontologic Resources," the SVP (2010) defines four categories of paleontological sensitivity (potential) for rock units: high, low, undetermined, and no potential, and makes recommendations for the level of monitoring for each.

Paleontological Resources Records Search

A paleontological resources database search was conducted by the Natural History Museum of Los Angeles County (LACM) on November 2, 2021 (Bell, 2021). The search entailed an

examination of current geologic maps and known fossil localities within the proposed Project and vicinity. The purpose of the records search was to: (1) determine whether any previously recorded fossil localities occur in the proposed Project Site or vicinity; (2) assess the potential for disturbance of these localities during construction; and (3) assist in evaluating the paleontological sensitivity of the proposed Project.

The results of the paleontological resources database search indicate that while no recorded fossil localities occur within the proposed Project site, fossil localities do exist nearby and within the same sedimentary deposits that occur in the Project site, including the Monterey Formation and older Quaternary Alluvium, either at surface or at depth (Bell, 2021). The Quaternary Alluvium underlying the proposed Project site is of low paleontological sensitivity, increasing to high sensitivity with depth. While the exact depth is not known, similar geological settings suggest greater than 10 feet bgs is a reasonable expectation. Excavations below this depth have the potential to expose and destroy paleontological resources unless properly mitigated. Furthermore, excavations in the northwest portion of the Project Site could impact the Miocene Monterey Formation that is known to contain significant vertebrate fossils.

Paleontological Sensitivity Analysis

The review of the geologic mapping, scientific literature, and database search results from the LACM were used to assign paleontological sensitivity to the geologic units present at the surface and in the subsurface of the proposed project area, following the guidelines of the SVP (2010) and are as follows:

- **Younger Quaternary Alluvium (Qa)** – The current reservoir is built into and surrounded by young, surficial sediments. While these units are too young to contain significant fossil resources at the surface, they are deemed to have **Low-to-High Potential**, increasing with depth. The exact depth at which the transition from low to high potential occurs is unknown in the proposed project though it is likely over 10 feet below current ground surface. The notation in LACM records of Pleistocene fauna from the area justifies the increase to “high potential” at this depth.
- **Miocene Monterey Formation sandstone (Tmss)** – Also listed as the Puente or Modelo formations, the Monterey Formation is found in the uplifted hills surrounding the reservoir. These hard siltstones were deposited in a marine environment as there is a clear record from both the literature and LACM records of significant fossils. Therefore, the unit is considered **High Potential** for paleontological resources.

Mineral Resources

Minerals are commercially-viable aggregate or mineral deposits, including metals such as gold, silver, iron, and copper; industrial metals such as boron compounds, rare-earth elements, clays, limestone, gypsum, salt and dimension stone; and construction aggregate including sand, gravel, and crushed stone. The Los Angeles metropolitan area produces and consumes more construction aggregate than any other metropolitan area in the country (County of Los Angeles 2015). From 1920 to the present, the demand for sand and gravel has been spurred by construction associated with growth in California and the southwestern United States (City of Los Angeles 2001).

The CGS provides information about California's mineral resources and classifies lands which include regionally significant mineral resources. Mineral Resource Zones (MRZs) have been designated to indicate the significance of mineral deposits. The MRZ categories are as follows:

MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence.

MRZ-2: Areas where adequate information indicates significant mineral deposits are present, or where it is judged that a high likelihood exists for their presence.

MRZ-3: Areas containing mineral deposits the significance of which cannot be evaluated from available data.

MRZ-4: Areas where available information is inadequate for assignment to any other MRZ.

According to CGS mineral resource mapping and the City of Los Angeles Conservation Element, the proposed Project site is not mapped within an MRZ-2 zone (CGS 1979; City of Los Angeles 1996). Thus, the proposed Project facilities would not be located within areas known to contain mineral resources.

Sand and Gravel

Sand and gravel (aggregate) have been determined to be important resources for construction, development, and physical maintenance, from highways and bridges to swimming pools and playgrounds. The availability of sand and gravel affects construction costs, tax rates, and affordability of housing and commodities. The State of California has statutorily required the protection of sand and gravel operations. Because transportation costs are a significant portion of the cost of sand and gravel, the long-term availability of local sources of this resource is an important factor in maintaining the economic attractiveness of a community to residents, business, and industry. The only available deposit site in the City is the Tujunga alluvial fan in the San Fernando Valley, which is rich in accumulations of high quality sand and gravel washed from the adjacent mountains (City of Los Angeles 2001). The alluvial fan deposits are designated in an MRZ-2 zone that begins at the Tujunga Wash and encompasses downstream areas of the Los Angeles River (CGS 1979). The MRZ-2 includes an area that is approximately 0.6 miles northeast of the proposed Project site but does not include the Project site.

Oil and Natural Gas Resources

The MRZs also include areas that are appropriate for the drilling and production of oil and natural gas. Oil production still occurs in many parts of Los Angeles County and is regulated by the California Geologic Energy Management Division (CalGEM). Proposed Project facilities would not be located within areas known to contain oil and natural gas (City of Los Angeles 2001).

3.7.2 Regulatory Framework

Federal

Clean Water Act

The federal Clean Water Act (CWA) and subsequent amendments, under the enforcement authority of the U.S. Environmental Protection Agency (USEPA), was enacted “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” The purpose of the CWA is to protect and maintain the quality and integrity of the nation’s waters by requiring states to develop and implement state water plans and policies. The CWA gave the USEPA the authority to implement pollution control programs such as setting wastewater standards for industry. In California, implementation and enforcement of the National Pollutant Discharge Elimination System (NPDES) program is conducted through the California State Water Resources Control Board (SWRCB) and the nine RWQCBs. The CWA also sets water quality standards for surface waters and established the NPDES program to protect water quality through various sections of the CWA, including Sections 401 through 404 and 303(d) that are implemented and regulated by the SWRCB and the nine RWQCBs. Section 402 of the CWA would apply to the proposed Project because the Project would be required to control discharges of pollutants from point sources, as discussed below.

Section 402

The 1972 amendments to the Federal Water Pollution Control Act established the NPDES permit program to control discharges of pollutants from point sources (Section 402). The 1987 amendments to the CWA created a new section of the CWA devoted to stormwater permitting (Section 402[p]). The USEPA has granted the SWRCB primacy in administering and enforcing the provisions of CWA and NPDES through the local RWQCBs. NPDES is the primary federal program that regulates point-source and non-point-source discharges to waters of the United States.

The SWRCB issues both general and individual permits for discharges to surface waters, including for both point-source and non-point-source discharges. In response to the 1987 amendments, the USEPA developed the Phase I NPDES Storm Water Program for cities with populations larger than 100,000, and Phase II for smaller cities. In California, the SWRCB has drafted the General Permit for Discharges of Storm Water from Municipal Separate Storm Sewer Systems (MS4 General Permit).

National Pollutant Discharge Elimination System Permit

The NPDES permit system was established in the CWA to regulate municipal and industrial point discharges to surface waters of the U.S. Each NPDES permit for point discharges contains limits on allowable concentrations of pollutants contained in discharges. Section 402 of the CWA contain general requirements regarding NPDES permits.

The CWA was amended in 1987 to require NPDES permits for non-point source (i.e., stormwater) pollutants in discharges. Stormwater sources are diffuse and originate over a wide area rather than from a definable point. The goal of NPDES stormwater regulations is to improve the quality of stormwater discharged to receiving waters to the “maximum extent practicable” through the use of structural and non-structural Best Management Practices (BMPs). BMPs can include the

development and implementation of various practices including educational measures (workshops informing public of what impacts results when household chemicals are dumped into storm drains), regulatory measures (local authority of drainage facility design), public policy measures, and structural measures (filter strips, grass swales and detention ponds). The NPDES permits that apply to activities in Los Angeles County are described under State and local regulations below.

State

Alquist-Priolo Earthquake Fault Zoning Act

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

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was passed in 1990 following the Loma Prieta earthquake to reduce threats to public health and safety and to minimize property damage caused by earthquakes. This act requires the State Geologist to delineate various seismic hazard zones, and cities, counties, and other local permitting agencies to regulate certain development projects within these zones. For projects that would locate structures for human occupancy within designated Zones of Required Investigation, the Seismic Hazards Mapping Act requires project applicants to perform a site-specific geotechnical investigation to identify the potential site-specific seismic hazards and corrective measures, as appropriate, prior to receiving building permits. The *CGS Guidelines for Evaluating and Mitigating Seismic Hazards* (Special Publication 117A) provides guidance for evaluating and mitigating seismic hazards (CGS 2008).

Division of Safety of Dams

In the state of California, dam safety is regulated by DSOD under the authority granted by the California Water Code (Parts 1 and 2 of Division 3, *Dam and Reservoirs*). The DSOD provides oversight to the design, construction, and maintenance of over 1,200 jurisdictional sized dams in California, including dams at the SLRC. Jurisdictional dams are dams that are more than 6 feet high and impound 50 acre-feet or more of water, or 25 feet or higher and impound more than 15 acre-feet of water. The jurisdictional height of a dam, as determined by DSOD, is the vertical distance measured from the lowest point at the downstream toe of the dam to its maximum storage elevation, which is typically the spillway crest. The DSOD ensures dam safety by:

- Reviewing and approving dam enlargements, repairs, alterations, and removals to ensure that the dam appurtenant structures are designed to meet minimum requirements.
- Performing independent analyses to understand dam and appurtenant structures performance. These analyses can include structural, hydrologic, hydraulic, and geotechnical evaluations.

- Overseeing construction to ensure work is being done in accordance with the approved plans and specifications.
- Inspecting each dam on an annual basis to ensure it is safe, performing as intended, and is not developing issues. Roughly 1/3 of these inspections include in-depth instrumentation reviews of the dam surveillance network data.
- Periodically reviewing the stability of dams and their major appurtenances in light of improved design approaches and requirements, as well as new findings regarding earthquake hazards and hydrologic estimates in California.

The structural elements of the proposed Project would undergo appropriate and final design-level geotechnical evaluations prior to final design and construction. Implementing the regulatory requirements in the DSOD regulations and ensuring that all structures constructed in compliance with the law is the responsibility of the project engineers and building officials. The design engineer, as a registered professional with the State of California, is required to comply with the DSOD and local codes while applying standard engineering practice and the appropriate standard of care for the particular region in California.³ The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. Any dam enlargements, repairs, alterations and removals will require review and approval by DSOD. Improvements that impact areas within the dams' areas of influence are subject to more restrictions and oversight.

NPDES Construction General Permit

Construction associated with the proposed Project would disturb more than one acre of land surface affecting the quality of stormwater discharges into waters of the U.S. The proposed Project would, therefore, be subject to the *NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the U.S. from construction sites that disturb one acre or more of land surface, or that are part of a common plan of development or sale that disturbs more than one acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a Risk Level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the receiving waters risk during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could potentially be discharged to receiving water bodies and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving waters risk level reflects the risk to the

³ A geotechnical engineer (GE) specializes in structural behavior of soil and rocks. GEs conduct soil investigations, determine soil and rock characteristics, provide input to structural engineers, and provide recommendations to address problematic soils.

receiving waters from the sediment discharge. Depending on the risk level, the construction projects could be subject to the following requirements:

- Effluent standards;
- Good site management “housekeeping;”
- Non-stormwater management;
- Erosion and sediment controls;
- Run-on and runoff controls;
- Inspection, maintenance, and repair; or
- Monitoring and reporting requirements.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent sediment and pollutants from contacting stormwater from moving off site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

The SWPPP must be prepared before the construction begins. The SWPPP must contain a site map(s) that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the Project site. The SWPPP must list BMPs and the placement of those BMPs that the applicant would use to protect stormwater runoff. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing and fueling. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site following construction).

In the Project area, the Construction General Permit is implemented and enforced by the Los Angeles RWQCB, which administers the stormwater permitting program. Dischargers must electronically submit a notice of intent and permit registration documents to obtain coverage under this Construction General Permit. Dischargers are to notify the RWQCB of violations or incidents of non-compliance, and submit annual reports identifying deficiencies in the BMPs and explaining

how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a State Qualified SWPPP Developer, and implementation of the SWPPP must be overseen by a State Qualified SWPPP Practitioner. A legally responsible person, who is legally authorized to sign and certify permit registration documents, is responsible for obtaining coverage under the permit.

California Building Code

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

The 2019 edition of the CBC is based on the 2018 International Building Code (IBC) published by the International Code Council, which replaced the Uniform Building Code (UBC). The code is updated triennially, and the 2019 edition of the CBC was published by the California Building Standards Commission on July 1, 2019, and took effect starting January 1, 2020. The 2019 CBC contains California amendments based on the American Society of Civil Engineers (ASCE) Minimum Design Standard ASCE/SEI 7-16, Minimum Design Loads for Buildings and Other Structures, provides requirements for general structural design and includes means for determining earthquake loads⁴ as well as other loads (such as wind loads) for inclusion into building codes. Seismic design provisions of the building code generally prescribe minimum lateral forces applied statically to the structure, combined with the gravity forces of the dead and live loads of the structure, which the structure then must be designed to withstand. The prescribed lateral forces are generally smaller than the actual peak forces that would be associated with a major earthquake. Consequently, structures should be able to: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage but with some nonstructural damage; and (3) resist major earthquakes without collapse, but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a structure designed in accordance with the seismic requirements of the CBC should not collapse in a major earthquake.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a seismic design category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site; SDC ranges from

⁴ A load is the overall force to which a structure is subjected in supporting a weight or mass, or in resisting externally applied forces. Excess load or overloading may cause structural failure.

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

Requirements for geotechnical investigations are included in Appendix J, CBC Section J104, Engineered Grading Requirements and by LA City code amendments. As outlined in Section J104, applications for a grading permit are required to be accompanied by plans, specifications, and supporting data consisting of a soils engineering report and engineering geology report. Additional requirements for subdivisions requiring tentative and final maps and for other specified types of structures are in California Health and Safety Code Sections 17953 to 17955 and in 2013 CBC Section 1802. Testing of samples from subsurface investigations is required, such as from borings or test pits. Studies must be done as needed to evaluate slope stability, soil strength, position and adequacy of load-bearing soils, the effect of moisture variation on load-bearing capacity, compressibility, liquefaction, differential settlement, and expansiveness.

The design of the proposed Project would be required to comply with CBC requirements, which would make the Project consistent with the CBC, and with any applicable LA City code amendments.

The State CEQA Guidelines (Title 14, Chapter 3 of the California Code of Regulations, Section 15000 *et seq.*), define the procedures, types of activities, individuals, and public agencies required to comply with CEQA. As part of CEQA's Initial Study process, one of the questions that must be answered by the lead agency relates to paleontological resources: "Will the proposed project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?" (State CEQA Guidelines, Appendix G, Section VII, Part f).

The loss of a significant paleontological resources which includes any identifiable fossil that is unique, unusual, rare, uncommon, diagnostically or stratigraphically important, and/or those that add to an existing body of knowledge in specific areas – stratigraphically, taxonomically, and/or regionally, would be a significant environmental impact. Direct impacts to paleontological resources primarily concern the potential destruction of nonrenewable paleontological resources and the loss of information associated with these resources. This includes the unauthorized collection of fossil remains. If potentially fossiliferous bedrock or surficial sediments are

disturbed, the disturbance could result in the destruction of paleontological resources and subsequent loss of information.

The CEQA threshold of significance for a significant impact to paleontological resources is reached when a project is determined to “directly or indirectly destroy a significant paleontological resource or unique geologic feature” (State CEQA Guidelines Appendix G, Section VII, Part f). In general, for project sites that are underlain by paleontologically sensitive geologic units, the greater the amount of ground disturbance, the higher the potential for significant impacts to paleontological resources.

Public Resources Code Section 5097.5 and Section 30244

Other state requirements for paleontological resource management are included in Public Resources Code Section 5097.5 and Public Resources Code Section 30244. Section 5097.5 states that “a person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.” Section 5097.5 also states that “a violation of this section is a misdemeanor, punishable by a fine not exceeding ten thousand dollars (\$10,000), or by imprisonment in a county jail not to exceed one year, or by both that fine and imprisonment.” This section defines public lands as “lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.”

Section 30244 states that “where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.”

Local

The proposed Project is located within the planning area governed by the Los Angeles County General Plan (County General Plan) and the City of Los Angeles General Plan (Los Angeles County 2015; City of Los Angeles 1999). Goals and policies relevant to geologic hazards, safety, conservation of identified mineral deposits, and protection of lands classified as MRZ-2 which would be applicable to the proposed Project are listed below.

Los Angeles County General Plan

Safety Element

Goal S 1: An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.

Policy S 1.3: Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards.

Conservation and Natural Resources Element

Goal C/NR 10: Locally available mineral resources to meet the needs of construction, transportation, and industry.

Policy C/NR 10.1: Protect MRZ-2s and access to MRZ-2s from development and discourage incompatible adjacent land uses.

Policy C/NR 10.5: Manage mineral resources in a manner that effectively plans for access to, development and conservation of, mineral resources for existing and future generations.

City of Los Angeles General Plan

Safety Element

Goal 1: A city where potential injury, loss of life, property damage and disruption of the social and economic life of the City due to fire, water related hazard, seismic event, geologic conditions or release of hazardous materials disasters is minimized.

Objective 1.1: Implement comprehensive hazard mitigation plans and programs that are integrated with each other and with the City's comprehensive emergency response and recovery plans and programs.

Policy 1.1.6: State and federal regulations. Assure compliance with applicable state and federal planning and development regulations, e.g., Alquist-Priolo Earthquake Fault Zoning Act, State Mapping Act and Cobey-Alquist Flood Plain Management Act.

3.7.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to geology, soil and mineral resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (Refer to Impact 3.7-1)
 - Strong seismic ground shaking. (Refer to Impact 3.7-1)
 - Seismic-related ground failure, including liquefaction. (Refer to Impact 3.7-1)
 - Landslides. (Refer to Impact 3.7-1)
- Result in substantial soil erosion or the loss of topsoil. (Refer to Impact 3.7-2)
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (Refer to Impact 3.7-3)

- Be located on expansive soil creating substantial direct or indirect risks to life or property.⁵ (Refer to Impact 3.7-4)
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water. (Refer to Impact 3.7-5)
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (Refer to Impact 3.7-6)
- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. (Refer to Impact 3.7-7)
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. (Refer to Impact 3.7-8)

In addition to the thresholds identified in Appendix G of the State and CEQA Guidelines, the L.A. CEQA Thresholds Guide holds that the determination of significance shall be made on a case-by-case basis after considering the following factors:

Paleontological Resources

- Whether, or the degree to which, the project might result in the permanent loss of, or loss of access to, a paleontological resource. (Refer to Impact 3.7-6)
- Whether the paleontological resource is of regional or statewide significance. (Refer to Impact 3.7-6)

Methodology

This environmental analysis of the potential impacts related to geology and soils, mineral resources, and paleontological resources is based on a review of literature and database research (geologic, seismic, and soils, and paleontological resources reports and maps), as well as the City of Los Angeles General Plan and ordinances.

3.7.4 Project Design Features

No specific project design features are proposed with regard to geology, soils, and minerals.

⁵ The CBC, based on the International Building Code and the now-defunct Uniform Building Code, no longer includes a Table 18-1-B. Instead, CBC Section 1803.5.3 describes the criteria for analyzing expansive soils.

3.7.5 Impacts and Mitigation Measures

Seismic Hazards

Impact 3.7-1: Would the proposed Project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides?

Construction

There are no earthquake faults that bisect that proposed Project site. The proposed construction activities would therefore have no impact with regard to causing fault rupture. Construction would include mass grading and excavation activities, but would not exceed depths greater than 10 feet bgs throughout the majority of the proposed Project site. Thus, the proposed project would not excavate to depths where liquefiable soils are present, and no effects to liquefaction would occur. There would be the potential for ground disturbing activities to result in substantial displacement of soils and other materials in areas where substantial slopes are present. However, implementation of standard construction BMPs would ensure that migration of sediments and construction materials would not occur or increase the potential for landslide hazards. Soil units underlying the proposed construction areas consist of an uncertain mix of fill and disturbed local soil. Thus, most of the previously disturbed areas where construction would occur would not be susceptible to, or increase risk of seismic collapse and settlement.

Other construction activities associated with the proposed Project and offsite improvements would not include methods that could exacerbate the risk of loss, injury, or death involving seismic hazards. Compliance with the applicable federal, state, and local regulations and engineering standards discussed in Section 3.7.2, *Regulatory Framework*, is required during construction activities. Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As discussed above in Section 3.7.1, *Environmental Settings*, there are no active or historically active faults known to pass through the proposed Project site. The nearest active fault that would be susceptible to surface rupture during an earthquake is located approximately 0.8-mile north of the proposed Project site. As such, the potential risks for surface fault rupture at the proposed Project site is considered very low, and would not be exacerbated by implementation of proposed facilities at shallow depths. The topography in the surrounding vicinity of the proposed Project site includes steep slopes and hillsides, some of which are identified as potential landslide areas. However, the proposed Project site is generally flat and no areas within the proposed Project site are identified as having landslide potential (CGS 2021). The proposed Project would not include

on-site or off-site facilities in proximity to potential landslide areas. Therefore, impacts to fault rupture and seismically-induced landslide risks would be less than significant.

The southern California region includes numerous active and historical faults which are capable of producing strong ground shaking and damage in the Project area. As such, the potential exists for a large regional earthquake to occur during operation of the proposed Project. In the event of a large regional earthquake, intense ground shaking and high ground accelerations would have the potential to affect the proposed Project site, including proposed park facilities, buildings, and other structures. Occurrence of a large seismic event would have the potential to result in some degree of damage to the proposed Project facilities and the safety of workers and visitors. However, the proposed Project would not include uses that could potentially increase risks for seismic ground shaking. As discussed in Section 3.10, *Hydrology and Water Quality*, groundwater pumping would be required during operations to maintain reservoir water levels and sustain the proposed wetland habitats. However, the groundwater would be extracted from the San Fernando Basin in amounts similar to existing refill operations and therefore would not exacerbate the potential for causing earthquakes during operation. Impacts would be less than significant.

As discussed in Section 3.7.1, *Environmental Settings, Seismic Hazards*, much of the proposed Project site has been previously developed with compacted fill materials or soils. However, there is a potential for loose, non-compacted, and variable sandy sediments to occur within underlying geologic units, which may be susceptible to seismically-induced collapse and settlement hazards. For example, younger alluvial deposits underlying areas surrounding the reservoir basin have the potential to be saturated by shallow groundwater beneath the proposed Project site, and may be susceptible to liquefaction as a result of seismic loading. Based on review of geologic mapping, groundwater has the potential to reach shallow depths below the site of the proposed Education Center. However, all proposed structures including the Education Center would be built in areas of the SLRC that have been previously excavated or developed. Thus, it is anticipated that soils underlying the proposed structures would be compact, without loose or sandy soils susceptible to saturation and liquefaction.

The structural elements of the proposed Project would undergo appropriate design-level geotechnical evaluations prior to final design and construction. Implementing the regulatory requirements in the CBC and County and City ordinances and ensuring that all buildings and structures are constructed in compliance with the law is the responsibility of the project engineers and building officials. The geotechnical engineer, as a registered professional with the State of California, is required to comply with the CBC and local codes while applying standard engineering practice and the appropriate standard of care for the particular region in California, which, in the case of the proposed Project, is the City of Los Angeles.⁶ For example, the City requires special foundation designs that are different than standard foundations for structures that would be constructed within or adjacent to liquefaction zones. The California Professional Engineers Act (Building and Professions Code Sections 6700-6799), and the Codes of

⁶ A geotechnical engineer (GE) specializes in structural behavior of soil and rocks. GEs conduct soil investigations, determine soil and rock characteristics, provide input to structural engineers, and provide recommendations to address problematic soils.

Professional Conduct, as administered by the California Board of Professional Engineers and Land Surveyors, provides the basis for regulating and enforcing engineering practice in California. The local Building Officials are typically with the local jurisdiction (i.e., City of Los Angeles) and are responsible for inspections and ensuring CBC and City of Los Angeles code compliance prior to approval of the building permit. The proposed Project would be required meet or exceed the current safety and design requirements established by the DSOD. The proposed Project would comply with appropriate regulatory requirements and would include the implementation of geotechnical design recommendations. Impacts to risks related to seismic shaking and seismically-induced ground failures, including liquefaction, during operations would be less than significant.

The proposed Project would not impact the existing dams. Please refer to Section 3.10, *Hydrology and Water Quality*, for an analysis of the impacts relative to downstream flooding and inundation due to dam failure (see Impact 3.9-4).

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Soil Erosion

Impact 3.7-2: Would the proposed Project result in substantial soil erosion or the loss of topsoil?

Construction

The proposed Project would include clearing, mass grading, trenching, and excavation material in portions of the proposed Project site that may have substantial slopes including, but not limited to, the open lawn area of the South Valley park zone and reservoir embankments. Ground disturbance and stockpiling of soils and construction materials could result in stormwater-driven or wind-driven soil erosion, resulting in potentially significant impacts. The extent of erosion that would occur would vary depending on slope steepness/stability, vegetation/cover, concentration of runoff, and weather conditions.

Construction activities would be required to comply with South Coast Air Quality Management District (SCAQMD) Rule 403 for dust control that would ensure the prevention and/or management of wind erosion and subsequent topsoil loss. Compliance with SCAQMD Rule 403 would ensure that construction activities generating wind-induced soil erosion are below SCAQMD significance thresholds as stated and discussed in more detail in Chapter 3.3, *Air Quality*. For a discussion of potential impacts associated with waterborne erosion, refer to Chapter 3.10, *Hydrology and Water Quality*.

Because the overall footprint of construction activities would exceed one acre, construction of the proposed Project and offsite improvements would require compliance with the NPDES Construction General Permit and its required preparation and implementation of a SWPPP to

comply with Section 402 of the federal CWA (refer to Section 3.7.2, *Regulatory Framework, NPDES Construction General Permit*). The SWPPP would include specific BMPs to control erosion, sedimentation, and hazardous materials potentially released from construction sites into surface waters. For example, as part of the proposed Project, temporary netting would be installed near the reservoirs to prevent soils and other materials from dumping or spreading into the reservoirs during construction. Compliance with the Construction General Permit, the required SWPPP, and BMPs would reduce erosion impacts during construction of the proposed Project to less than significant levels.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As discussed above in Section 3.6.1, *Environmental Setting*, the proposed Project site is generally flat and the proposed Project would not include areas susceptible to landslides (CGS 2021). Impacts associated with erosion and landslides would be considered less than significant.

The Project site would be improved with structures, hardscape, wetland habitats, and landscaping. Operation of the Project could result in a limited degree of soil erosion from vegetated areas. Nonerosive drainage features such as infiltration gardens, swales, and biofiltration planting would be implemented, and maintenance of these structures would be conducted over the operational life of the Project in accordance with the City’s Low Impact Development (LID) Ordinance (See Section 3.10, *Hydrology and Water Quality*). The proposed drainage facilities would prevent substantial sediments and soils carried by stormwater from entering the reservoirs. However, areas adjacent to the reservoir, such as the great lawn and seating terraces, would be designed for surface runoff to move through the proposed habitat island areas before entering the reservoirs. During heavy storm events, this could result in some erosion in the reservoir embankments. As described in Chapter 2, *Project Description*, a Wetlands Habitat Management Plan would be developed as part of the proposed Project, and would require periodic maintenance of vegetated embankments and slopes to repair undercut areas and erosion.

Due to the isolated nature of the reservoirs at the proposed Project site, any sediment that does collect inside the reservoir would not be able to escape the Project site and could be removed during maintenance periods when the reservoir has low water levels. Therefore, with compliance with existing regulations, geotechnical design recommendations, and DSOD regulations, impacts associated with soil erosion during construction would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Unstable Geologic Units or Soil

Impact 3.7-3: Would the proposed Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Construction

The geologic units encountered during previous subsurface investigations include artificial fill (Af) materials associated with previous site improvements, as well as native Quaternary alluvium (Qa) and Miocene-age marine sedimentary bedrock (Tmss) underlying the artificial fill materials (LADWP 2013). Soil units outside of the reservoir basin are listed as Urban Land complex soils, which consist of an uncertain mix of fill and disturbed local soil (NRCS 2022). Thus, most of the previously disturbed areas where facilities are proposed would generally be well-suited for development and would not be susceptible to, or increase risk of collapse and settlement. There would be the potential for ground disturbing activities to result in substantial displacement of soils and other materials in areas where substantial slopes are present. However, implementation of standard construction BMPs would ensure that migration of sediments and construction materials would not occur or increase the potential for landslide hazards. Further, construction activities generally would not include grading or excavation at depths greater than 10 feet bgs throughout most of the proposed Project site, and thus would not occur at depths where liquefiable soils may be present. Therefore, the proposed Project relative to unstable geologic or soil units during construction would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

The proposed Project site is generally flat and is not located in an area mapped by CGS as having potential for landslides (CGS 2021). Geologic units at the proposed Project site contain alluvial deposits which have the potential to be saturated by shallow groundwater table, which could result in significant liquefaction and lateral spreading impacts. Liquefaction and lateral spreading, commonly triggered by seismic events, are analyzed in greater detail in Impact 3.6-1. The proposed Project is not included in USGS-mapped subsidence areas (USGS 2022). Further, groundwater supplies would be extracted from the San Fernando Basin in amounts similar to existing reservoir refill operations, and would not exacerbate the potential for subsidence or collapse at the proposed Project site.

The proposed Project would be designed in accordance with the recommendations of a site-specific geotechnical investigation as required by the CBC and the City of Los Angeles code amendments. In addition, implementation of proposed facilities within DSOD jurisdictional areas would require review and approval by DSOD prior to construction to reduce potential impacts to the safety of the dams and reservoirs at the Project site. Therefore, through compliance with

applicable regulatory requirements and geotechnical design recommendations, impacts associated with unstable geologic or soil units during operations would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Expansive Soil

Impact 3.7-4: Would the proposed Project be located on expansive soil creating substantial direct or indirect risks to life or property?

Construction

As discussed above in Section 3.6.1, *Environmental Setting*, previous geotechnical investigations indicate that soil units in the proposed Project site consist mostly of disturbed fill, sandy loams, and silty clays that would be less susceptible to expansion since their clay content would not be anticipated to be very high. In addition, expansive soils such as clays would not be used as materials for construction of the proposed Project. Therefore, impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Soils in the proposed Project site consist mostly of disturbed fill and sandy loams that would be less susceptible to expansion since their clay content would not be anticipated to be very high. The proposed Project would not use expansive soils for construction, and would not create a substantial direct or indirect risk to life or property. Therefore, with the implementation of the geotechnical recommendations, and adherence to the CBC, City of Los Angeles Code Amendments, and DSOD regulatory requirements, the impact relative to expansive soils would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Septic Tanks

Impact 3.7-5: Would the proposed Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The proposed Project would not involve the use of septic tanks or alternative wastewater disposal. Therefore, no impact related to soils incapable of supporting these uses would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Paleontological Resources or Unique Geologic Feature

Impact 3.7-6: Would the proposed Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Construction

The proposed Project does not include unique geologic features that would be adversely modified during construction. The Knoll within the Project impact area is a hill feature that would be re-vegetated, but would not be adversely altered during grading. The open water of Silver Lake would be modified with wetland vegetation designed to enhance the habitat and scenic values. No other construction activity would affect unique geologic features including hilltops, ridges, wetlands, or water bodies.

As discussed above in Section 3.7.1, *Environmental Setting, Paleontological Resources*, the Quaternary alluvium underlying the proposed Project site is of low paleontological sensitivity, increasing to high sensitivity with depth. While the exact depth is not known, similar geological settings suggest greater than 10 feet bgs is a reasonable expectation. Excavations below this depth have the potential to expose and destroy paleontological resources unless properly mitigated.

Based on the limited geotechnical report (LADWP 2013), the proposed Project likely would not excavate within Pleistocene alluvium. Therefore, for the majority of the Project site, significant fossils are not likely to be impacted. However, excavations are expected to exceed 10-feet in depth, or are within the Monterey (Puente) Formation in the Knoll or other locations such as the bottom of the reservoir. Therefore, it is possible that Pleistocene alluvium of higher potential could be impacted. Furthermore, excavations in the northwest and northeast portion of the Project site could impact the Miocene Monterey Formation that is known to contain significant vertebrate fossils. The proposed Project would implement **Mitigation Measures PALEO-1 through PALEO-4**, which include retention of a qualified paleontologist, paleontological monitoring of excavations exceeding 10 feet in previously undisturbed Quaternary alluvium (though see exclusions in the details below) or at any depth within the Monterey (Puente) Formation, and procedures to follow in the event of the discovery of paleontological resources, salvage and

curation of significant fossil discoveries, and final reporting. With implementation of these mitigation measures, impacts to unique paleontological resources would be less than significant.

Mitigation Measures:

PALEO-1 Construction Personnel Paleontological Resources Sensitivity Training:

The City shall retain a paleontologist who meets the Society of Vertebrate Paleontology's (SVP 2010) definition for Qualified Professional Paleontologist (Qualified Paleontologist) to carry out all mitigation related to paleontological resources. Prior to the start of ground-disturbing activities, the Qualified Paleontologist or their designee shall conduct construction worker paleontological resources sensitivity training for all construction personnel. Construction personnel shall be informed on how to identify the types of paleontological resources that may be encountered, specific Project activities that would require paleontological monitoring, the proper procedures to be enacted in the event of an inadvertent discovery of paleontological resources, and safety precautions to be taken when working with paleontological monitors. The City shall ensure that construction personnel are made available for and attend the training and retain documentation demonstrating attendance.

PALEO-2 Paleontological Monitoring: Paleontological monitoring shall be conducted during ground-disturbing activities that produce visible spoils or cuts for project construction below 10-feet in previously undisturbed Quaternary alluvium or at any depth in the Miocene Monterey Formation. Monitoring shall be conducted by a qualified paleontological monitor (SVP, 2010) working under the direct supervision of the Qualified Paleontologist. Monitoring shall consist of visually inspecting fresh exposures of rock for larger fossil remains and, where appropriate, collecting sediment samples to wet or dry screen to test promising horizons for smaller fossil remains. If the Qualified Paleontologist determines that full-time monitoring is no longer warranted, based on the specific geologic conditions at the surface or at depth, the Qualified Paleontologist may recommend that monitoring be reduced to periodic spot-checking or cease entirely.

PALEO-3 Paleontological Resource Discovery: If a potential fossil is found, the paleontological monitor shall be allowed to temporarily divert or redirect grading and excavation activities in the area of the exposed fossil to facilitate evaluation of the discovery. An appropriate buffer area shall be established around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. At the monitor's discretion, and to reduce any construction delay, the grading and excavation contractor shall assist in removing rock/sediment samples for initial processing and evaluation. If a fossil is determined to be significant, the Qualified Paleontologist shall implement a paleontological salvage program to remove the resources from their location, following the guidelines of the SVP (2010). If the discovery is considered scientifically significant, the monitor will collect the fossil specimen(s) and associated data. For this Project, the SVP (2010) criteria of scientific significance will be used to make this determination in the field. In general, small unidentifiable vertebrate fossils will not be collected and only well-preserved or representative invertebrates or plants will be salvaged if avoidance is not feasible. Any fossils encountered and recovered shall be prepared to the point of identification, catalogued, and curated at an accredited repository.

If construction personnel discover any potential fossils during construction while the paleontological monitor is not present, regardless of the depth of work or location, work

at the discovery location shall cease in a 25-foot radius of the discovery until the Qualified Paleontologist has assessed the discovery and recommended and implemented appropriate treatment as described in this measure.

PALEO-4 Reporting: At the conclusion of paleontological monitoring, the Qualified Paleontologist shall prepare a report summarizing the results of the monitoring and any salvage efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance. The report shall be submitted by the Applicant to the City, the Natural History Museum of Los Angeles County, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the proposed project and required mitigation measures.

Significance Determination:

Less than Significant with Mitigation Incorporated

Operation

Once construction of the proposed Project is complete, the operations phase of the proposed Project would have no potential to encounter paleontological resources or to unique geologic features.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Known Mineral Resources

Impact 3.7-7: Would the proposed Project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

As described in Section 3.7.1, *Environmental Setting, Mineral Resources*, the nearest MRZ-2 is located along the Los Angeles River segment approximately 0.6-mile northeast of the proposed Project site. The Los Angeles River is designated as having the potential to contain sand and gravel deposits originating from the Tujunga Wash alluvial fan in the San Fernando Valley. However, the MRZ-2 does not include the proposed Project site. In addition, no oil or gas wellfields are located in the vicinity of the proposed Project. Therefore, the proposed Project would have no impact related to mineral resources or regional or statewide importance.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Locally-Important Mineral Resources

Impact 3.7-8: Would the proposed Project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

As described above in Impact 3.7-7, the proposed Project site would not be located in an area designated as MRZ-2, and would not be located in the vicinity of active oil or gas wellfields. No impact to local important mineral resource recovery sites, including mineral resources identified in the City Conservation Element as being of local importance, would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Cumulative Impact

Impact 3.7-9: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to geology, soils, and minerals?

Table 3-2 identifies thirteen related projects that are planned or are under construction within the Project area. The geographic area affected by the Project and its potential to contribute to cumulative impacts varies based on the environmental resource under consideration. The geographic scope of analysis for cumulative geologic impacts encompasses and is limited to the Project site and its immediately adjacent area. This is because impacts relative to geologic hazards are generally site-specific. For example, the effect of erosion would tend to be limited to the localized area of a project and could only be cumulative if erosion occurred as the result of two or more adjacent related projects that spatially overlapped. Additionally, geologic hazards could only be cumulative if two or more geologic hazards occurred at the same time. Significant cumulative impacts related to geologic hazards could occur if the incremental impacts of the Project combined with the incremental impacts of one or more of the related projects to substantially increase risk that people or the environment would be exposed to geologic hazards.

Two of the thirteen related projects listed in Table-3-2 are adjacent to the proposed Project. Related Project 13 includes water infrastructure improvements within Silver Lake and Ivanhoe Reservoirs at the Project site and Related Project 14 would involve sidewalk repairs along roadways located adjacent to the Project site. The projects would require ground disturbing activities with the potential to impact geology, soils, and minerals. Once constructed, Related Projects 13 and 14 would not involve ground disturbing activities with the potential to substantially impact geology, soils, and minerals (LADWP 2020b; City of Los Angeles 2019).

The Project would have no impact with respect to septic tanks and alternate wastewater disposal systems, or mineral resources impacts. Accordingly, the Project could not contribute to cumulative impacts related to these topics. If the projects are constructed at the same time, the erosion effects could be cumulatively significant if stormwater runoff from the sites were not

controlled. However, the state Construction General Permit would require each project to prepare and implement a SWPPP. The SWPPPs would describe BMPs to control runoff and prevent erosion for each project. Through compliance with this requirement, the potential for erosion impacts would be reduced. The Construction General Permit has been developed to address cumulative conditions arising from construction throughout the state, and is intended to maintain cumulative effects of projects subject to this requirement below levels that would be considered significant. For example, two adjacent construction sites would be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites. The runoff water from both sites would be required to achieve the same action levels, measured as a maximum amount of sediment or pollutants allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations (amount of sediment or pollutants per volume of runoff water) below action levels and would not be cumulatively considerable.

Seismic groundshaking, seismic-induced ground failures (e.g., liquefaction and lateral spreading, and landslides), unstable geologic and soils units (e.g., landslides, liquefaction and lateral spreading, subsidence, or collapse), and expansive soils could cause structural damage or pipeline leaks or ruptures. State and local building regulations and standards, described in the Section 3.7.3, *Regulatory Framework*, have been established to address and reduce the potential for such impacts to occur. The Project and related projects would be required to comply with applicable provisions of these laws and regulations. Through compliance with these requirements, the potential for impacts would be reduced. As explained in the Regulatory Framework, the purpose of the CBC and local ordinances is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. By design, it is intended to reduce the cumulative risks from buildings and structures. Therefore, based on compliance with these requirements, the incremental impacts of the Project combined with impacts of related projects in the area would not cause a significant cumulative impact related to seismic groundshaking, seismic-induced ground failures, unstable geologic and soils units, and expansive soils and the Project's contribution to cumulative effects would not be cumulatively considerable and this impact would be less than significant.

Mitigation Measures PALEO-1 through PALEO-4 would ensure that the proposed Project did not result in a significant impact to paleontological resources. Although related projects may also encounter paleontological resources, impacts to paleontological resources are generally site specific. Since the proposed Project would not result in a significant impact, its contribution to the cumulative impact would not be considerable.

Mitigation Measures:

Implementation of Mitigation Measures PALEO-1 through PALEO-4.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

3.7.6 Summary of Impacts

Table 3.7-2 summarizes the impact significance determinations and lists mitigation measures related to geology, soils and mineral resources.

**TABLE 3.7-2
 SUMMARY OF PROJECT IMPACTS TO GEOLOGY, SOILS, AND MINERAL RESOURCES**

Impact	Mitigation Measure	Significance
3.7-1: Seismic Hazards	None Required.	LTS
3.7-2: Soil Erosion	None Required.	LTS
3.7-3: Unstable Geologic Units or Soil	None Required.	LTS
3.7-4: Expansive Soil	None Required.	LTS
3.7-5: Septic Tanks	None Required.	NI
3.7-6: Paleontological Resources or Unique Geologic Features	Mitigation Measures PALEO-1 through PALEO-4.	LTSM
3.7-7: Known Mineral Resources	None Required.	NI
3.7-8: Locally-Important Mineral Resources	None Required.	NI
3.7-9: Cumulative	Mitigation Measures PALEO-1 through PALEO-4	LTSM

NOTES:

NI = No Impact, no mitigation proposed
 LTS = Less than Significant, no mitigation proposed
 LTSM = Less than Significant Impact with Mitigation Incorporated
 SU = Significant and Unavoidable

3.7.7 References

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3.8 Greenhouse Gas Emissions

This section compares the Project's characteristics with applicable regulations, plans, and policies set forth by the State of California, South Coast Air Quality Management District (SCAQMD) the Southern California Association of Governments (SCAG) and the City to reduce greenhouse gas (GHG) emissions to determine whether the Project would conflict with the provisions of these plans. To assist in analyzing the Project's potential to conflict with applicable regulations, plans and policies, this section also estimates the Project's GHG emissions generated by Project construction and operations, taking into account mandatory and voluntary energy and resource conservation measures that have been incorporated into the Project to reduce GHG emissions. Details of the GHG analysis are provided in the *Air Quality and Greenhouse Gas Technical Appendix*, which is attached as Appendix C to this Draft EIR. Project design features include **PDF-UTIL-1: Drought-Tolerant Landscaping** and **PDF-UTIL-2: Water-Efficient Irrigation**. Impacts to greenhouse gas emissions are less than significant, and no mitigation is required.

3.8.1 Environmental Setting

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and severe weather events. Global warming, a related concept, is the observed increase in average temperature of Earth's surface and atmosphere. One identified cause of global warming is an increase of GHGs in the atmosphere. GHGs are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature.

Earth's natural warming process is known as the "greenhouse effect." It is called the greenhouse effect because Earth and the atmosphere surrounding it are similar to a greenhouse with glass panes in that the glass allows solar radiation (sunlight) into Earth's atmosphere but prevents radiative heat from escaping, thus warming Earth's atmosphere. Some levels of GHGs keep the average surface temperature of Earth close to a hospitable 60 degrees Fahrenheit (°F). However, as GHG from human activities increase, they build up in the atmosphere and warm the climate, leading to many other changes around the world - in the atmosphere, on land, and in the oceans, with associated adverse climatic and ecological consequences (USEPA 2022a).

Scientists studying the particularly rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motor vehicle travel, electricity generation, consumption of natural gas, industrial activity, manufacturing, etc.), deforestation, agricultural activity, and the decomposition of solid waste. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect (Pew Center 2006).

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 43 percent between 1990 and 2015. In addition, in the Global Carbon Budget 2019 report, published in December 2019, atmospheric carbon dioxide (CO₂) concentrations in 2018 were found to be 47 percent above the concentration at the start of the Industrial Revolution, and the present

concentration is the highest during at least the last 800,000 years (Friedlingstein 2019). Global increases in CO₂ concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. Regarding emissions of non-CO₂ GHGs, these have also increased significantly since 1990 (USEPA 2021). In particular, studies have concluded that it is very likely that the observed increase in methane (CH₄) concentration is predominantly due to agriculture and fossil fuel use (USEPA 2021).

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the “Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol,” avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels. Because of the Kyoto Protocol’s Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well (UN 2007).

In December 2015, the US entered into the Paris Agreement which has a goal of keeping a global temperature rise this century below 2 degrees Celsius (°C) above pre-industrial levels and limit the temperature increase further to 1.5°C. This agreement requires that all parties report regularly on emissions and implementation efforts to achieve these goals.

Regarding the adverse effects of global warming, as reported by SCAG (SCAG 2006):

Global warming poses a serious threat to the economic well-being, public health and natural environment in southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in CO₂ emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO₂ emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state’s population and economic activities, is also a major contributor to the global warming problem.

GHG Fundamentals

GHGs are those compounds in the Earth’s atmosphere which play a critical role in determining temperature near the Earth’s surface. GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).¹ More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth’s atmosphere but retain some of

¹ As defined by California Assembly Bill (AB) 32 and Senate Bill (SB) 104.

the low frequency infrared energy, which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Compounds that are regulated as GHGs are discussed in **Table 3.8-1**. (IPCC 1995; IPCC 2007)

**TABLE 3.8-1
 DESCRIPTION OF IDENTIFIED GHGS**

Greenhouse Gas	GHG Emissions (MMTCO ₂ e)
Carbon Dioxide (CO₂)	An odorless, colorless GHG, which has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human-caused) sources of CO ₂ are burning coal, oil, natural gas, and wood.
Methane (CH₄)	A flammable gas and the main component of natural gas. When one molecule of CH ₄ is burned in the presence of oxygen, one molecule of CO ₂ and two molecules of water are released. A natural source of CH ₄ is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH ₄ , which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle.
Nitrous Oxide (N₂O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N ₂ O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, race cars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH ₄ or ethane (C ₂ H ₆) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing.
Sulfur Hexafluoride (SF₆)	An inorganic, odorless, colorless, non-toxic, and non-flammable gas. SF ₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF₃)	An inorganic, non-toxic, odorless, non-flammable gas. NF ₃ is used in the manufacture of semi-conductors, as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

^a GHGs identified in this table are ones identified in the Kyoto Protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.

SOURCES: Association of Environmental Professionals, Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final, June 29, 2007; Environmental Protection Agency, Acute Exposure Guideline Levels (AEGs) for Nitrogen Trifluoride; January 2009.

Not all GHGs possess the same ability to induce climate change. Carbon dioxide is the most abundant GHG in Earth's atmosphere. Other GHGs are less abundant but have higher global warming potential (GWP) than CO₂. Thus, emissions of other GHGs are commonly quantified in the units of equivalent mass of carbon dioxide (CO₂e). GWP is based on several factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO₂, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years otherwise referred to as atmospheric lifetime) relative to that of CO₂.

The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that time.² These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC’s Second Assessment Report (SAR). The IPCC updated the GWP values in its Fourth Assessment Report (AR4). The GWPs in the IPCC AR4 are used by CARB for reporting statewide GHG emissions inventories, consistent with international reporting standards. By applying the GWP ratios, Project-related CO₂e emissions can be tabulated in metric tons per year. Typically, the GWP ratio corresponding to the warming potential of CO₂ over a 100-year period is used as a baseline.

The IPCC has issued an updated Fifth Assessment Report (AR5), which has revised down the majority of the GWP for key regulated pollutants. As CARB still uses AR4 values and the modeling software, the California Emissions Estimator Model (CalEEMod) is built on these assumptions, AR4 GWP values are used for the Project. Generally, the changes from AR4 to AR5 are reductions in warming potential for the GHG most associated with construction and operation of typical development projects. The GWP from AR4 and AR5 and atmospheric lifetimes for key regulated GHGs are provided in **Table 3.8-2**.

**TABLE 3.8-2
 ATMOSPHERIC LIFETIMES AND GLOBAL WARMING POTENTIALS**

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-Year Time Horizon) (AR4 Assessment)	Global Warming Potential (100-Year Time Horizon) (AR5 Assessment)
Carbon Dioxide (CO ₂)	50-200	1	1
Methane (CH ₄)	12 (+/-3)	25	28
Nitrous Oxide (N ₂ O)	114	298	265
HFC-23: Fluoroform (CHF ₃)	270	14,800	12,400
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH ₂ FCF ₃)	14	1,430	1,300
HFC-152a: 1,1-Difluoroethane (C ₂ H ₄ F ₂)	1.4	124	138
PFC-14: Tetrafluoromethane (CF ₄)	50,000	7,390	6,630
PFC-116: Hexafluoroethane (C ₂ F ₆)	10,000	12,200	11,100
Sulfur Hexafluoride (SF ₆)	3,200	22,800	23,500
Nitrogen Trifluoride (NF ₃)	740	17,200	16,100

SOURCES: IPCC, *Climate Change 2007: Working Group I: The Physical Science Basis, Direct Global Warming Potentials*.

² GWPs and associated CO₂e values were developed by the Intergovernmental Panel on Climate Change (IPCC), and published in its Second Assessment Report (SAR) in 1996. Historically, GHG emission inventories have been calculated using the GWPs from the IPCC’s SAR. The IPCC updated the GWP values based on the latest science in its Fourth Assessment Report (AR4). CARB has begun reporting GHG emission inventories for California using the GWP values from the IPCC AR4.

Projected Impacts of Global Warming in California

In 2009, California adopted a Statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry, and Transportation and Energy. The California Natural Resources Agency will be updating the CAS and is responsible for preparing reports to the Governor on the status of the CAS. The Natural Resources Agency has produced climate change assessments which detail impacts of global warming in California (SCDOJ 2021). These include:

- Sea level rise, coastal flooding and erosion of California's coastlines would increase, as well as sea water intrusion.
- The Sierra snowpack would decline between 70 and 90 percent, threatening California's water supply.
- Higher risk of forest fires resulting from increasing temperatures and making forests and brush drier. Climate change will affect tree survival and growth.
- Attainment of air quality standards would be impeded by increasing emissions, accelerating chemical processes, and raising inversion temperatures during stagnation episodes resulting in public health impacts.
- Habitat destruction and loss of ecosystems due to climate change affecting plant and wildlife habitats.
- Global warming can cause drought, warmer temperatures and saltwater contamination resulting in impacts to California's agricultural industry.

With regard to public health, as reported by the Center for Health and the Global Environment at the Harvard Medical School, the following are examples of how climate change can affect cardio-respiratory disease: (1) pollen is increased by higher levels of atmospheric CO₂; (2) heat waves can result in temperature inversions, leading to trapped masses or unhealthy air contaminants by smog, particulates, and other pollutants; and (3) the incidence of forest fires is increased by drought secondary to climate change and to the lack of spring runoff from reduced winter snows. These fires can create smoke and haze, which can settle over urban populations causing acute and exacerbating chronic respiratory illness (Epstein 2003).

Existing Conditions

Existing Statewide Greenhouse Gas Emissions

CARB compiles GHG inventories for the State of California. Based on the year 2019 GHG inventory data (the latest year for which data are available), California emitted 418.2 MMTCO₂e which includes emissions resulting from imported electrical power (CARB 2021b). Between 1990 and 2019, the population of California grew by approximately 9.8 million (from 29.8 to 39.6 million). (USCB 1995; CDOF 2021a) This represents an increase of approximately 33 percent from 1990 population levels. In addition, the California economy, measured as gross state product, grew from \$773 billion in 1990 to \$3.1 trillion in 2019, representing an increase of approximately four times the 1990 gross state product (CDOF 2021b). Despite the population and economic growth, California's net GHG emissions were reduced to below 1990 levels in 2016

and has continued to decline. According to CARB, the declining trend coupled with the state’s GHG reduction programs (such as the RPS, LCFS, vehicle efficiency standards, and declining caps under the Cap and Trade Program) demonstrate that California is on track to meet the 2020 GHG reduction target codified in HSC, Division 25.5, also known as AB 32 and amended by SB 32 (CARB 2016). **Table 3.8-3**, identifies and quantifies statewide human-caused GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2019 (i.e., the most recent year in which data are available from CARB). As shown in Table 3.8-3, the transportation sector is the largest contributor to statewide GHG emissions at approximately 40 percent in 2019.

**TABLE 3.8-3
 STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS**

Category	Total 1990 Emissions using IPCC SAR (MMTCO₂e)	Percent of Total 1990 Emissions	Total 2019 Emissions using IPCC AR4 (MMTCO₂e)*	Percent of Total 2019 Emissions*
Transportation	150.7	35%	166.1	39.7%
Electric Power	110.6	26%	58.8	14.1%
Commercial	14.4	3%	15.9	3.8%
Residential	29.7	7%	28.0	6.7%
Industrial	103.0	24%	88.2	21.1%
Recycling and Waste ^a	–	–	8.9	2.1%
High GWP/Non-Specified ^b	1.3	<1%	20.6	4.9%
Agriculture/Forestry	23.6	6%	31.8	7.6%
Forestry Sinks	-6.7	--	-- ^c	--
Net Total (IPCC SAR)	426.6	100%	--	--
Net Total (IPCC AR4) ^d	431	100%	418.2	100%

* Totals may not add up exactly due to rounding.

^a Included in other categories for the 1990 emissions inventory.

^b High GWP gases are not specifically called out in the 1990 emissions inventory.

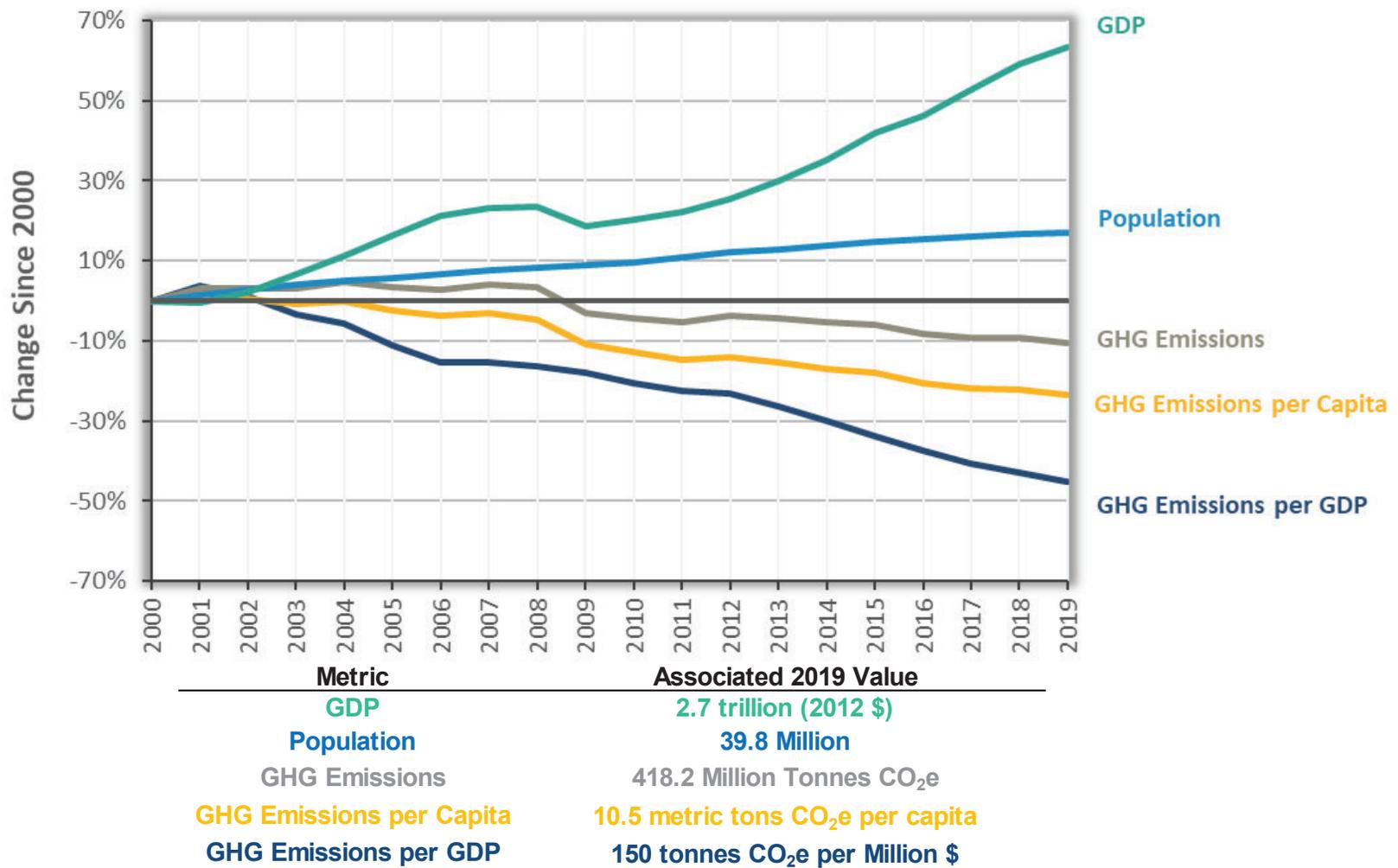
^c Revised methodology under development (not reported for 2015).

^d CARB revised the state’s 1990 level GHG emissions using GWPs from the IPCC AR4.

SOURCES: California Air Resources Board, Staff Report – California 1990 Greenhouse Gas Emissions Level and 2020 Emissions Limit, 2007; CARB, Current California GHG Emission Inventory Data – 2000–2019 GHG Inventory (2021 Edition).

California’s decreasing GHG emissions trend (total and per capita) and increasing population and gross state product trends are shown graphically in **Figure 3.8-1**. The figure shows that the state has decreased its GHG emissions on a total and per capita basis while also increasing population and economic output.

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SOURCE: CARB, California Greenhouse Gas Emissions for 2000 to 2019 Trends of Emissions and Other Indicators

Silver Lake Reservoir Complex Master Plan Project

Figure 3.8-1
Change in California GDP, Population, and GHG Emissions Since 2000



Existing Project Site Greenhouse Gas Emissions

As described in Chapter 2.0, *Project Description*, the Silver Lake Reservoir Complex (SLRC) includes reservoirs, dams, buildings and structures, water and stormwater infrastructure, interior roads, and public recreational facilities. Approximately 3 acres of SLRC land is currently operated and maintained by the City of Los Angeles Recreation and Parks Department (RAP) as a publicly accessible park space (refer to Chapter 2.0, *Project Description*, of this Draft EIR for additional details). In addition, RAP operates the existing Silver Lake Recreation Center, located along the southern side of the SLRC. The Silver Lake Recreation Center includes a recreation center, playground, and basketball courts. A dog park operated and maintained by RAP is currently located along the southern side of the SLRC. Currently, there are two public pathways on the west side of Ivanhoe Reservoir and along the top of Silver Lake Dam. Approximately 4 acres of existing paved surfaces around the reservoirs' perimeters are available for shared public use with LADWP. The entire SLRC is enclosed by a perimeter chain-link fence varying in height from 6 to 12 feet. The Neighborhood Nursery School and the Tesla Pocket Park are both located along the northeastern side of the SLRC in an area that would not be impacted by the Project. The proposed Project would re-develop portions of the SLRC with a contemporary design that would create park zones blending vegetated areas with public spaces.

None of the existing public facilities within the SLRC would be removed, rather public spaces and facilities would be expanded, renovated, and redesigned to improve visitor experience and the existing area would be organized into a series of new spaces (zones) surrounding the reservoirs (refer to Chapter 2.0, *Project Description*, of this Draft EIR for additional details). Therefore, since the existing public facilities within the SLRC would not be removed and would either continue to operate as under existing conditions or would be expanded, renovated, and redesigned to improve visitor experience, existing greenhouse gas emissions are not required to be calculated and the Project's greenhouse gas emissions are conservatively considered new.

3.8.2 Regulatory Framework

There are a number of plans, regulations, programs, and agencies that provide policies, requirements, and guidelines regarding GHG emissions at the federal, state, regional, and local levels. As described below, these plans, guidelines, and laws include the following.

- Federal Clean Air Act
- Corporate Average Fuel Economy (CAFE) Standards
- Energy Independence and Security Act
- California Air Resources Board
- California Greenhouse Gas Reduction Targets
- California Global Warming Solutions Act (AB 32)
- Climate Change Scoping Plan
- Cap-and-Trade Program
- Emission Performance Standards

- Renewables Portfolio Standard Program
- Clean Energy and Pollution Reduction Act
- Pavley Standards
- California Low Carbon Fuel Standard
- Advanced Clean Cars Regulations
- Sustainable Communities and Climate Protection Act (SB 375)
- Senate Bill 743
- Executive Order N-79-20
- California Appliance Efficiency Regulations
- Title 24, Building Standards Code and CALGreen Code
- CEQA Guidelines
- South Coast Air Quality Management District
- Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy
- City of Los Angeles Green New Deal
- City of Los Angeles Green Building Code
- City of Los Angeles Solid Waste Programs and Ordinances
- City of Los Angeles General Plan
- Traffic Study Policies and Procedures

Federal

Federal Clean Air Act

The USEPA is responsible for implementing federal policy to address GHGs. The United States Supreme Court (Supreme Court) ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that CO₂ and other GHGs are pollutants under the federal Clean Air Act (CAA), which the USEPA must regulate if it determines they pose an endangerment to public health or welfare. In December 2009, USEPA issued an endangerment finding for GHGs under the Clean Air Act, setting the stage for future regulation.

The Federal Government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO₂ gases, agricultural practices, and implementation of technologies to achieve GHG reductions. USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the ENERGY STAR labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

Corporate Average Fuel Economy (CAFE) Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling, President George W. Bush issued Executive Order 13432 in 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. The National Highway Traffic Safety Administration (NHTSA) subsequently issued multiple final rules regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011 and later for model years 2012–2016 and 2017–2021. In March 2020, the USDOT and the USEPA issued the final Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule, which amends existing CAFE standards and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establishes new standards covering model years 2021 through 2026 (USEPA 2020). These standards set a combined fleet wide average of 36.9 to 37 miles per gallon (mpg) for the model years affected (NHTSA 2010). In February 2022, the USEPA issued the Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards (USEPA 2021b). This final rule revises current GHG standards beginning for vehicles in model year 2023 and through model year 2026 and establish the most stringent GHG standards ever set for the light-duty vehicle sector that are expected to result in average fuel economy label values of 40 mpg, while the standards they replace (the SAFE rule standards) would achieve only 32 mpg in model year 2026 vehicles (USEPA 2021d).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines. Building on the first phase of standards, in August 2016, the USEPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons (USEPA 2016).

Energy Independence and Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and

- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of “green jobs.”³

State

California Air Resources Board

The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California’s State Implementation Plan (SIP), for which it works closely with the Federal Government and the local air districts. The SIP is required for the state to take over implementation of the Federal Clean Air Act. CARB also has primary responsibility for adopting regulations to meet the state’s goal of reducing GHG emissions. The state has met its goals to reduce GHG emissions to 1990 levels by 2020. Subsequent state goals include reducing GHG emissions to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.

California Greenhouse Gas Reduction Targets

Executive Order S-3-05

Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies, which comprise the California Climate Action Team (CAT), in order to collectively and efficiently reduce GHGs. The CAT provides periodic reports to the Governor and Legislature on the state of GHG reductions in the state as well as strategies for mitigating and adapting to climate change.

³ A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.

The CAT stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population.

Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim state wide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

Executive Order B-55-18

Executive Order B-55-18, issued by Governor Brown in September 2018, establishes a new statewide goal to achieve carbon neutrality as soon as possible, but no later than 2045, and achieve and maintain net negative emissions thereafter. Based on this executive order, CARB would work with relevant state agencies to develop a framework for implementation and accounting that tracks progress towards this goal as well as ensuring future scoping plans identify and recommend measures to achieve the carbon neutrality goal.

California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code (HSC), Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines regulated GHGs as CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries, with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions.

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction

targets, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.⁴

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amend HSC Division 25.5, establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure that the benefits of state climate policies reach disadvantaged communities. The new goals outlined in SB 32 update the Climate Change Scoping Plan requirement of AB 32 and involve increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

AB 197, signed September 8, 2016, is a bill linked to SB 32 and signed on September 8, 2016, prioritizes efforts to cut GHG emissions in low-income or minority communities. AB 197 requires CARB to make available, and update at least annually, on its website the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and air districts. In addition, AB 197 adds two Members of the Legislature to the CARB board as ex officio, non-voting members and creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature and the houses of the Legislature concerning the state's programs, policies, and investments related to climate change.

Climate Change Scoping Plan

AB 32 required CARB to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (HSC section 38561 [h]). The 2008 Climate Change Scoping Plan proposed a “comprehensive set of actions designed to reduce overall carbon GHG emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health” (CARB 2008). The 2008 Climate Change Scoping Plan had a range of GHG reduction actions which included direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, market-based mechanisms, such as a cap-and-trade system, and an AB 32 implementation fee to fund the program.

The 2008 Climate Change Scoping Plan called for a “coordinated set of solutions” to address all major categories of GHG emissions. Transportation emissions were addressed through a combination of higher standards for vehicle fuel economy, implementation of the Low Carbon Fuel Standard (LCFS), and greater consideration to reducing trip length and generation through land use planning and transit-oriented development. Buildings, land use, and industrial operations were encouraged and, sometimes, required to use energy more efficiently. Utility energy providers were required to include more renewable energy sources through implementation of the Renewables Portfolio Standard.⁵ Additionally, the 2008 Climate Change Scoping Plan

⁴ California Air Resources Board's list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are: (1) a low-carbon fuel standard, which reduces carbon intensity in fuels statewide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.

⁵ For a discussion of Renewables Portfolio Standard, refer to subsection California Renewables Portfolio Standard.

emphasized opportunities for households and businesses to save energy and money through increasing energy efficiency. It indicates that substantial savings of electricity and natural gas will be accomplished through “improving energy efficiency by 25 percent.”

The 2008 Climate Change Scoping Plan identified several specific issues relevant to the development projects, including:

- The potential of using the green building framework as a mechanism, which could enable GHG emissions reductions in other sectors (i.e., electricity, natural gas), noting that:

A Green Building strategy will produce greenhouse gas savings through buildings that exceed minimum energy efficiency standards, decrease consumption of potable water, reduce solid waste during construction and operation, and incorporate sustainable materials. Combined, these measures can also contribute to healthy indoor air quality, protect human health, and minimize impacts to the environment.

- The importance of supporting the Department of Water Resources’ work to implement the Governor’s objective to reduce per capita water use by 20 percent by 2020. Specific measures to achieve this goal include water use efficiency, water recycling, and reuse of urban runoff. The Climate Change Scoping Plan notes that water use requires significant amounts of energy, including approximately one-fifth of statewide electricity.
- Encouraging local governments to set quantifiable emission reduction targets for their jurisdictions and use their influence and authority to encourage reductions in emissions caused by energy use, waste and recycling, water and wastewater systems, transportation, and community design.

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions reduction target for 2020. The 2020 emissions reduction target was originally set at 427 million metric tons (MMT) of CO₂e using the GWP values from the IPCC SAR. Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the scope of the reductions California must make to return to the 1990 emissions level by 2020 as required by AB 32. CARB originally defined the “business-as-usual”, or BAU, scenario as emissions in the absence of any GHG emission reduction measures discussed in the 2008 Climate Change Scoping Plan, as approximately 596 MMTCO₂e (using GWP values from the IPCC SAR). For example, in further explaining CARB’s BAU methodology, CARB assumed that all new electricity generation would be supplied by natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards. Therefore, under these original projections, the state would have had to reduce its 2020 BAU emissions by 28.4 percent to meet the 1990 target of 427 MMTCO₂e.

2014 Climate Change Scoping Plan Update

The First Update to the Climate Change Scoping Plan (2014 Scoping Plan) was approved by CARB in May 2014 and built upon the initial Climate Change Scoping Plan with new strategies and recommendations (CARB 2014). In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined the 1990 GHG emissions inventory and 2020 GHG emissions limit to be increased to 431 MMTCO₂e. CARB also updated the state’s 2020 BAU

emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that had recently been adopted for motor vehicles and renewable energy. CARB’s projected statewide 2020 emissions estimate using the GWP values from the IPCC AR4 was 509.4 MMTCO_{2e}. Therefore, under the First Update to the Climate Change Scoping Plan, the emission reductions necessary to achieve the 2020 emissions target of 431 MMTCO_{2e} would have been 78.4 MMTCO_{2e}, or a reduction of GHG emissions by approximately 15.4 percent, (down from 28.4 percent).

The stated purpose of the First Update was to “highlight... California’s success to date in reducing its GHG emissions and lay... the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050” (CARB 2014). The First Update found that California was on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals (CARB 2014).

In conjunction with the First Update, CARB identified “six key focus areas comprising major components of the state’s economy to evaluate and describe the larger transformative actions that will be needed to meet the state’s more expansive emission reduction needs by 2050” (CARB 2014). Those six areas are: (1) energy; (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); (3) agriculture; (4) water; (5) waste management; and (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of the 2050 reduction target.

Based on CARB’s research efforts, it has a “strong sense of the mix of technologies needed to reduce emissions through 2050” (CARB 2014). Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies.

The First Update discussed new residential and commercial building energy efficiency improvements, specifically identifying progress towards zero net energy buildings as an element of meeting mid-term and long-term GHG reduction goals. The First Update expressed CARB’s commitment to working with the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) to facilitate further achievements in building energy efficiency.

2017 Climate Change Scoping Plan Update

In response to the passage of SB 32 and the identification of the 2030 GHG reduction target, CARB adopted the 2017 Climate Change Scoping Plan Update (2017 Scoping Plan) in December 2017 (CARB 2017b). The 2017 Scoping Plan builds upon the framework established by the 2008 Climate Change Scoping Plan and the First Update while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health. The 2017 Scoping Plan includes policies to

require direct GHG reductions at some of the state’s largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and-Trade program, which constraints and reduces emissions at covered sources (CARB 2017b).

CARB’s projected statewide 2030 emissions take into account 2020 GHG reduction policies and programs (CARB 2017b). The 2017 Scoping Plan also addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. The majority of the reductions would result from the continuation of the Cap-and-Trade regulation. Additional reductions would be achieved from electricity sector standards (i.e., utility providers to supply 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. Implementation of mobile source strategies (cleaner technology and fuels) include the following:

- At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025
- At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030
- Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Cars regulations
- Medium- and heavy-duty GHG Phase 2 standards for vehicle model years 2018 through 2027 that improves fuel efficiency and reduces carbon pollution.
- Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_x standard.
- Last Mile Delivery: New regulation that would result in the use of low NO_x or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for Class 3–7 last mile delivery trucks in California. This measure assumes zero emissions vehicles (ZEVs) comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.
- Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document “Potential VMT Reduction Strategies for Discussion.”

The 2017 Scoping Plan discusses the role of local governments in meeting the state’s GHG reductions goals because local governments have jurisdiction and land use authority related to: community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations (CARB 2017b). Furthermore, local governments may have the ability to incentivize renewable energy, energy efficiency, and water efficiency measures (CARB 2017b).

For individual projects under CEQA, the 2017 Scoping Plan states that local governments can support climate action when considering discretionary approvals and entitlements. According to the

2017 Scoping Plan, lead agencies have the discretion to develop evidence-based numeric thresholds consistent with the 2017 Scoping Plan, the state’s long-term goals, and climate change science (CARB 2017b).

The City of Los Angeles has not developed per capita targets for 2030 or 2050; however, the City recognizes that GHG emissions reductions are necessary in the public and private sectors. The City has taken the initiative in combating climate change by developing programs such as the Green New Deal and Green Building Code. Each of these programs is discussed further below under the *Local* subheading.

A summary of the GHG emissions reductions required under HSC Division 25.5 is provided in **Table 3.8-4**.

**TABLE 3.8-4
 ESTIMATED STATEWIDE GREENHOUSE GAS EMISSIONS REDUCTIONS REQUIRED BY HSC DIVISION 25.5**

Emissions Scenario	GHG Emissions (MMTCO ₂ e)
2008 Scoping Plan (IPCC SAR)	
2020 BAU Forecast (CARB 2008 Scoping Plan Estimate)	596
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	427
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2020	169 (28.4%) ^a
2014 Scoping Plan (GHG Estimates Updated in 2014 to Reflect IPCC AR4)	
2020 BAU Forecast (CARB 2014 Scoping Plan Estimate)	509.4
2020 Emissions Target Set by AB 32 (i.e., 1990 level)	431
Reduction below NAT necessary to achieve 1990 levels by 2020	78.4 (15.4%) ^b
2017 Scoping Plan	
2030 BAU Forecast (“Reference Scenario” which includes 2020 GHG reduction policies and programs)	389
2030 Emissions Target Set by AB 32 (i.e., 40% below 1990 Level)	260
Reduction below Business-As-Usual Necessary to Achieve 40% below 1990 Level by 2030	129 (33.2%) ^c

MMTCO₂e = million metric tons of carbon dioxide equivalents

^a 596 – 427 = 169 / 596 = 28.4%

^b 509.4 – 431 = 78.4 / 509.4 = 15.4%

^c 389 – 260 = 129 / 389 = 33.2%

SOURCES: CARB, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D, August 19, 2011; CARB, GHG 2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition, 2017, <https://ww2.arb.ca.gov/ghg-bau>, accessed February 27, 2020; CARB, California’s 2017 Climate Change Scoping Plan Update, November 2017.

Under the Scoping Plan Scenario, continuation of the Cap-and-Trade regulation (or carbon tax) is expected to cover approximately 34 to 79 MMTCO₂ of the 2030 reduction obligation (CARB 2017b). The state’s short-lived climate pollutants strategy, which is for GHGs that remain in the atmosphere for shorter periods of time compared to longer-lived GHGs like CO₂, is expected to cover approximately 17 to 35 MMTCO₂e. The Renewables Portfolio Standard with 50 percent renewable electricity by 2030 is expected to cover approximately 3 MMTCO₂. The mobile source strategy and sustainable freight action plan includes maintaining the existing vehicle GHG

emissions standards, increasing the number of zero emission vehicles and improving the freight system efficiency, and is expected to cover approximately 11 to 13 MMTCO₂. CARB expects that the reduction in GHGs from doubling of the energy efficiency savings in natural gas and electricity end uses in the CEC 2015 Integrated Energy Policy Report by 2030 would cover approximately 7 to 9 MMTCO₂ of the 2030 reduction obligation. The other strategies would be expected to cover the remaining 2030 reduction obligations.

Cap-and-Trade Program

The Climate Change Scoping Plan identifies a Cap-and-Trade Program as one of the strategies California would employ to reduce GHG emissions. CARB asserts that this program will help put California on the path to meet its goal of ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under Cap-and-Trade, an overall limit on GHG emissions from capped sectors is established and facilities subject to the cap will be able to trade permits to emit GHGs.

CARB designed and adopted a California Cap-and-Trade Program pursuant to its authority under AB 32 (CCR 2022c). The Cap-and-Trade Program is designed to reduce GHG emissions from public and private major sources (deemed “covered entities”) by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve the state’s emission-reduction mandates. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the Program’s duration (CCR 2022c).

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities that emit more than 25,000 MTCO₂e per year must comply with the Cap-and-Trade Program (CCR 2022c). Triggering of the 25,000 MTCO₂e per year “inclusion threshold” is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (Mandatory Reporting Rule or “MRR”) (CCR 2022b).

Each covered entity with a compliance obligation is required to surrender “compliance instruments”⁶ for each MTCO₂e of GHG they emit. Covered entities are allocated free allowances in whole or part (if eligible), and can buy allowances at auction, purchase allowances from others, or purchase offset credits.

The Cap-and-Trade Regulation provides a firm cap, ensuring that the statewide emission limits will not be exceeded. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG emissions reductions. Also, due to the regulatory framework adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the state’s emissions forecasts and the effectiveness of direct regulatory measures.

⁶ Compliance instruments are permits to emit, the majority of which will be “allowances,” but entities also are allowed to use CARB-approved offset credits to meet up to 8% of their compliance obligations.

The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported (CCR 2022c). Accordingly, for projects that are subject to the CEQA, GHG emissions from electricity consumption are covered by the Cap-and-Trade Program. The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period (CCR 2022c).

The Program applies to emissions that cover approximately 80 percent of the state's GHG emissions. Demonstrating the efficacy of AB 32 policies, California achieved its 2020 GHG Reduction Target four years earlier than mandated. The largest reductions were the result of increased renewable electricity in the electricity sector, which is a covered sector in the Cap-and-Trade Program.

AB 398 was enacted in 2017 to extend and clarify the role of the state's Cap-and-Trade Program through December 31, 2030. As part of AB 398, refinements were made to the Cap-and-Trade program to establish updated protocols and allocation of proceeds to reduce GHG emissions.

Energy-Related (Stationary) Sources

Emission Performance Standards

SB 1368, signed September 29, 2006, is a companion bill to AB 32, which requires the CPUC and the CEC to establish GHG emission performance standards for the generation of electricity. These standards also generally apply to power that is generated outside of California and imported into the state. SB 1368 provides a mechanism for reducing the emissions of electricity providers, thereby assisting CARB to meet its mandate under AB 32.

Renewables Portfolio Standard

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017 as a Renewables Portfolio Standard (RPS). Subsequent amendments provided additional targets throughout the years. Most recently, on October 7, 2015, SB 350 (Chapter 547, Statutes of 2015), also known as the Clean Energy and Pollution Reduction Act, further increased the RPS to 50 percent by 2030. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. SB 350 also requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. The 2017 Scoping Plan incorporated the SB 350 standards and estimated the GHG reductions would account for approximately 21 percent of the 2017 Scoping Plan reductions (CARB 2017b). On September 10, 2018, SB 100, provided additional RPS targets of 44 percent by 2024, 52 percent by 2027, and 60 percent by 2030, and that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by 2045 (CLI 2018).

Mobile Sources

Pavley Standards

AB 1493 (Chapter 200, Statutes of 2002), enacted on July 22, 2002, required CARB to set GHG emission standards for passenger vehicles, light duty trucks, and other vehicles whose primary use

is non-commercial personal transportation manufactured in and after 2009. In 2004, CARB approved the Pavley regulation to require automakers to control greenhouse gas emissions from new passenger vehicles for the 2009 through 2016 model years. Upon adoption of subsequent federal greenhouse gas standards by the USEPA that preserved the benefits of the Pavley regulations, the Pavley regulations were revised to accept compliance with the federal standards as compliance with California’s standards in the 2012 through 2016 model years. This is referred to as the “deemed to comply” option.

In January 2012, CARB approved greenhouse gas emission regulations which require further reductions in passenger greenhouse gas emissions for 2017 and subsequent vehicle model years. As noted above, in August 2012, the USEPA and USDOT adopted GHG emission standards for model year 2017 through 2025 vehicles (USEPA 2012). On November 15, 2012, CARB approved an amendment that allows manufacturers to comply with the 2017–2025 national standards to meet state law. Automobile manufacturers generally comply with these standards through a combination of improved energy efficiency in vehicle equipment (e.g., air conditioning systems) and engines as well as sleeker aerodynamics, use of strong but lightweight materials, and lower-rolling resistance tires (CARB 2022a).

In 2018, the USEPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE) which would roll back fuel economy standards and revoke California’s waiver. The rule amended certain average fuel economy and GHG standards for passenger cars covering model years 2021 through 2026. On March 30, 2020, the SAFE Rule was finalized and published in the Federal Register, commencing a review period. Subsequent legal challenges from a coalition of states, including California, and private industry groups were issued. In February 2022, USEPA finalized the rule strengthen the emissions standards for passenger cars and light trucks for model years 2023–2026.

On September 27, 2019, the USEPA withdrew the waiver it had previously provided to California for the state’s GHG and ZEV programs under Section 209 of the Clean Air Act (Federal Register 2019). The withdrawal of the waiver was effective November 26, 2019. In response, several states including California filed a lawsuit challenging the withdrawal of the EPA waiver (USDCDCC 2019). In March 2022, the USEPA found that the actions taken as a part of the SAFE Vehicles Rule Part One were decided in error and are now entirely rescinded. With this action, California’s authority under the CAA to implement its own GHG emission standards and ZEV sales mandate is restored (USEPA 2022b).

California Low Carbon Fuel Standard

Executive Order S-01-07 was enacted on January 18, 2007. The order mandates the following: (1) that a statewide goal be established to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020; and (2) that a LCFS for transportation fuels be established in California. The final regulation was approved by the Office of Administrative Law and filed with the Secretary of State on January 12, 2010; the LCFS became effective on the same day. In September 2015, CARB approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted (CARB 2022b).

The development of the 2017 Scoping Plan has identified LCFS as a regulatory measure to reduce GHG emission to meet the 2030 emissions target. In September 2018, the standards were amended by CARB to require a 20 percent reduction in carbon intensity by 2030, aligning with California’s 2030 targets set by SB 32 (CARB 2018).

Advanced Clean Cars Regulations

In 2012, CARB approved the Advanced Clean Cars program, an emissions-control program for model years 2015–2025 (CARB 2021a). The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years (CARB 2021a). During the March 2017 Midterm Review, CARB voted unanimously to continue with the vehicle GHG emission standards and the ZEV program for cars and light trucks sold in California through 2025 (CARB 2017a). Effective November 26, 2019, the federal SAFE Vehicles Rule Part One: One National Program withdrew the California waiver for the GHG and ZEV programs under Section 209 of the Clean Air Act, which revokes California's authority to implement the Advanced Clean Cars and ZEV mandates. In response, several states including California filed a lawsuit challenging the withdrawal of the EPA waiver (USDCCDCC 2019). In April 2021, the USEPA announced it will move to reconsider its previous withdrawal of the waiver (Federal Register 2021).

In addition, Governor Gavin Newsom signed an executive order (Executive Order No. N-79-20) on September 23, 2020, which would phase out sales of new gas-powered passenger cars by 2035 in California with an additional 10-year transition period for heavy vehicles. The state would not restrict used car sales, nor forbid residents from owning gas-powered vehicles. In accordance with the Executive Order, CARB is developing a 2020 Mobile Source Strategy, a comprehensive analysis that presents scenarios for possible strategies to reduce the carbon, toxic and unhealthy pollution from cars, trucks, equipment, and ships. The strategies will provide important information for numerous regulations and incentive programs going forward by conveying what is necessary to address the aggressive emission reduction requirements.

The primary mechanism for achieving the ZEV target for passenger cars and light trucks is CARB’s Advanced Clean Cars II (ACC II) Program. The ACC II regulations will focus on post-2025 model year light-duty vehicles, as requirements are already in place for new vehicles through the 2025 model year. A rulemaking package is anticipated to be presented to the Board in June 2022.

Sustainable Communities and Climate Protection Act (SB 375)

The Sustainable Communities and Climate Protection Act of 2008, or SB 375 (Chapter 728, Statutes of 2008), establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions and was adopted by the state on September 30, 2008. SB 375 finds that the “transportation sector is the single largest contributor of greenhouse gases of any sector” (State of California 2008). Under SB 375, CARB is required, in consultation with the

Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. SCAG is the Metropolitan Planning Organization in which the City of Los Angeles is located. CARB set targets for 2020 and 2035 for each of the 18 metropolitan planning organization regions in 2010, and updated them in 2018 (CARB 2021c). In March 2018, the CARB updated the SB 375 targets for the SCAG region to require an eight percent reduction by 2020 and a 19 percent reduction by 2035 in per capita passenger vehicle GHG emissions (CARB 2018). As discussed further below, SCAG has adopted an updated Regional Transportation Plan / Sustainable Community Strategies (RTP/SCS) subsequent to the update of the emission targets. The 2020–2045 RTP/SCS is expected to reduce per capita transportation emissions by 19 percent by 2035, which is consistent with SB 375 compliance with respect to meeting the state’s GHG emission reduction goals (SCAG 2020b).

Under SB 375, the target must be incorporated within that region’s Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plans) are not required to be consistent with either the RTP or SCS.

Senate Bill 743

Governor Brown signed Senate Bill (SB) 743 in 2013, which creates a process to change the way that transportation impacts are analyzed under CEQA. Specifically, SB 743 requires the Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) methodology for evaluating transportation impacts. Particularly within areas served by transit, the required alternative criteria must “promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses.” Measurements of transportation impacts may include “vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated.”

Building Standards and Other Regulations

California Appliance Efficiency Regulations

The Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608), adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost-effective measures, to promote the use of energy- and water-efficient appliances.

Title 24, Building Standards Code and CALGreen Code

The CEC first adopted the Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency, and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically to allow for the consideration and inclusion of new energy efficiency technologies and methods.

Part 11 of the Title 24 Building Standards is referred to as the California Green Building Standards (CALGreen) Code and was developed to help the state achieve its GHG reduction goals under HSC Division 25.5 (e.g., AB 32) by codifying standards for reducing building-related energy, water, and resource demand, which in turn reduces GHG emissions from energy, water, and resource demand. The purpose of the CALGreen Code is to “improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality” (CBSC 2010). The CALGreen Code is not intended to substitute for or be identified as meeting the certification requirements of any green building program that is not established and adopted by the California Building Standards Commission. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design and overall environmental quality (CBSC 2010).

On May 9, 2018, the CEC adopted the 2019 Title 24 Standards, which went into effect on January 1, 2020. The 2019 standards continue to improve upon the previous (2016) Title 24 standards for new construction of, and additions and alterations to, residential and non-residential buildings (CEC 2019). The 2019 Title 24 Standards ensure that builders use the most energy efficient and energy conserving technologies and construction practices. As described in the 2019 Title 24 Standards represent “challenging but achievable design and construction practices” that represent “a major step towards meeting the Zero Net Energy (ZNE) goal.” Single-family homes built with the 2019 Title 24 Standards are projected to use approximately seven percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once the mandated rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. Nonresidential buildings are projected to use approximately 30 percent less energy due mainly to lighting upgrades (CEC 2019). Compliance with Title 24 is enforced through the building permit process.

CEQA Guidelines

In August 2007, the California State Legislature adopted Senate Bill 97 (SB 97) (Chapter 185, Statutes of 2007), requiring the Governor’s Office of Planning and Research (OPR) to prepare and transmit new CEQA guidelines for the mitigation of GHG emissions or the effects of GHG emissions to the Resources Agency by July 1, 2009. In response to SB 97, the OPR adopted CEQA guidelines that became effective on March 18, 2010.

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the guidelines.⁷ The guidelines require a lead agency to make a good-faith effort, based on the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Discretion is given to the lead agency whether to: (1) use a model or methodology to quantify GHG emissions resulting

⁷ See 14 Cal. Code Regs. §§ 15064.7 (generally giving discretion to lead agencies to develop and publish thresholds of significance for use in the determination of the significance of environmental effects), 15064.4 (giving discretion to lead agencies to determine the significance of impacts from GHGs).

from a project, and which model or methodology to use; or (2) rely on a qualitative analysis or performance-based standards. Furthermore, three factors are identified that should be considered in the evaluation of the significance of GHG emissions:

1. The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
3. The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (CCR 2022d).

The administrative record for the Guidelines Amendments also clarifies “that the effects of greenhouse gas emissions are cumulative, and should be analyzed in the context of California Environmental Quality Act’s requirements for cumulative impact analysis (Bryant 2009).”

Regional

South Coast Air Quality Management District CEQA Guidance

The City of Los Angeles is located in the South Coast Air Basin (Air Basin), which consists of Orange County, Los Angeles County (excluding the Antelope Valley portion), and the western, non-desert portions of San Bernardino and Riverside Counties, in addition to the San Geronio Pass area in Riverside County. The South Coast Air Quality Management District (SCAQMD) is responsible for air quality planning in the Air Basin and developing rules and regulations to bring the area into attainment of the ambient air quality standards. This is accomplished through air quality monitoring, evaluation, education, implementation of control measures to reduce emissions from stationary sources, permitting and inspection of pollution sources, enforcement of air quality regulations, and by supporting and implementing measures to reduce emissions from motor vehicles.

In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds (SCAQMD 2008a). A GHG Significance Threshold Working Group was formed to further evaluate potential GHG significance thresholds (SCAQMD 2008c). The SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 MTCO₂e per year. Under this proposal, commercial/residential projects that emit fewer than 3,000 MTCO₂e per year would be assumed to have a less than significant impact on climate change. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 MTCO₂e per year for stationary source/industrial projects where the SCAQMD is the lead agency. However, the SCAQMD has yet to adopt a GHG significance threshold for land use development projects (e.g., residential/commercial projects). The Working Group has been inactive since 2011, and SCAQMD has not formally adopted any GHG significance threshold for other jurisdictions.

SCAG Regional Transportation Plan/Sustainable Communities Strategy

To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2020–2045 RTP/SCS in October 2020. The vision for the region incorporates a range of best practices for increasing transportation choices, reducing dependence on personal automobiles, further improving air quality, and encouraging growth in walkable, mixed-use communities with ready access to transit infrastructure and employment. More and varied housing types and employment opportunities would be located in and near job centers, transit stations and walkable neighborhoods where goods and services are easily accessible via shorter trips. To support shorter trips, people would have the choice of using neighborhood bike networks, car share or micro-mobility services like shared bicycles or scooters. For longer commutes, people would have expanded regional transit services and more employer incentives to carpool or vanpool. Other longer trips would be supported by on-demand services such as microtransit, carshare, and citywide partnerships with ride hailing services. For those that choose to drive, hotspots of congestion would be less difficult to navigate due to cordon pricing and using an electric vehicle will be easier thanks to an expanded regional charging network.

The 2020–2045 RTP/SCS states that the SCAG region was home to about 18.8 million people in 2016 and currently includes approximately 6.0 million homes and 8.4 million jobs (SCAG 2020a). By 2045, the integrated growth forecast projects that these figures will increase by 3.7 million people, with nearly 1.6 million more homes and 1.6 million more jobs. Transit Priority Areas⁸ (TPAs) will account for less than one percent of regional total land but are projected to accommodate 30 percent of future household growth between 2016 and 2045. The 2020–2045 RTP/SCS overall land use pattern reinforces the trend of focusing new housing and employment in the region’s TPAs. TPAs are a cornerstone of land use planning best practice in the SCAG region because they concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.

The 2020–2045 RTP/SCS is expected to reduce per capita transportation emissions by 19 percent by 2035, which is consistent with SB 375 compliance with respect to meeting the state’s GHG emission reduction goals (SCAG 2020b). Due to fuel economy and efficiency improvements, GHG emission rates of model year 2017 vehicles have decreased by 15 to 20 percent when compared to model year 2008 and earlier vehicles. However, for purposes of SB 375 emissions reduction targets, the fuel economy improvements have been largely excluded from the reduction calculation. The SB 375 target focuses on the amount of vehicle travel per capita. As discussed above, OPR recommended that achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the state’s emissions goals (i.e., SB 375 goal). The reductions generated by fuel economy

⁸ Defined by the 2020–2045 RTP/SCS as generally walkable transit villages or corridors that are within 0.5 mile of a major transit stop (rail or bus rapid transit station) with 15-minute or less service frequency during peak commute hours

improvements are already included as part of the state’s GHG emissions reduction program and are not double counted in the SB 375 target calculation.

Local

City of Los Angeles Green New Deal

The City of Los Angeles addressed the issue of global climate change in *Green LA, An Action Plan to Lead the Nation in Fighting Global Warming* (“LA Green Plan/ClimateLA”) in 2007. This document outlines the goals and actions the City has established to reduce the generation and emission of GHGs from both public and private activities.

In April 2019, the *Green New Deal (Sustainable City Plan 2019)*, was released, consisting of a program of actions designed to create sustainability-based performance targets through 2050 designed to advance economic, environmental, and equity objectives (City of Los Angeles 2019). The City’s Green New Deal is the first four-year update to the City’s first Sustainable City pLAN that was released in 2015 (City of Los Angeles 2015). It augments, expands, and elaborates on the City’s vision for a sustainable future and tackles the climate emergency with accelerated targets and new aggressive goals.

While not a plan adopted solely to reduce GHG emissions, within the City’s Green New Deal, “Climate Mitigation,” or reduction of GHG is one of eight explicit benefits that help define its strategies and goals. These include reducing GHG emissions through near-term outcomes:

- Reduce potable water use per capita by 22.5 percent by 2025; 25 percent by 2035; and maintain or reduce 2035 per capita water use through 2050.
- Reduce building energy use per square feet for all building types 22 percent by 2025; 34 percent by 2035; and 44 percent by 2050 (from a baseline of 68 mBTU/sq.ft in 2015).
- All new buildings will be net zero carbon by 2030 and 100 percent of buildings will be net zero carbon by 2050.
- Increase cumulative new housing unit construction to 150,000 by 2025; and 275,000 units by 2035.
- Ensure 57 percent of new housing units are built within 1,500 feet of transit by 2025; and 75 percent by 2035.
- Increase the percentage of all trips made by walking, biking, micro-mobility/matched rides, or transit to at least 35 percent by 2025, 50 percent by 2035, and maintain at least 50 percent by 2050.
- Reduce VMT per capita by at least 13 percent by 2025; 39 percent by 2035; and 45 percent by 2050.
- Increase the percentage of electric and zero emission vehicles in the city to 25 percent by 2025; 80 percent by 2035; and 100 percent by 2050.
- Increase landfill diversion rate to 90 percent by 2025; 95 percent by 2035 and 100 percent by 2050.

- Reduce municipal solid waste generation per capita by at least 15 percent by 2030, including phasing out single-use plastics by 2028 (from a baseline of 17.85 lbs. of waste generated per capita per day in 2011).
- Eliminate organic waste going to landfill by 2028.
- Reduce urban/rural temperature differential by at least 1.7°F by 2025; and 3°F by 2035.
- Ensure the proportion of Angelenos living within 1/2 mile of a park or open space is at least 65 percent by 2025; 75 percent by 2035; and 100 percent by 2050.

With the introduction of the City of Los Angeles' Green New Deal in 2019, the City aims to reduce greenhouse gas emissions, which involves electrification of all new municipally-owned buildings and major building renovations. Building electrification is a key step in achieving the 2030 goal of carbon neutrality. Building electrification requires no use of fossil fuels on-site, including natural gas. The proposed Project would not implement natural gas in areas where it is typically used for buildings and instead would use electric alternatives that are available.

City of Los Angeles Green Building Code

On December 11, 2019, the Los Angeles City Council approved Ordinance No. 186,488, which amended Chapter IX of the Los Angeles Municipal Code (LAMC), referred to as the Los Angeles Green Building Code, by adding a new Article 9 to incorporate various provisions of the 2019 CALGreen Code. Projects filed on or after January 1, 2020, must comply with the provisions of the Los Angeles Green Building Code. Specific mandatory requirements and elective measures are provided for three categories: (1) low-rise residential buildings; (2) nonresidential and high-rise residential buildings; and (3) additions and alterations to nonresidential and high-rise residential buildings. Article 9, Division 5 includes mandatory measures for newly constructed nonresidential and high-rise residential buildings.

City of Los Angeles Solid Waste Programs and Ordinances

The recycling of solid waste materials also contributes to reduced energy consumption. Specifically, when products are manufactured using recycled materials, the amount of energy that would have otherwise been consumed to extract and process virgin source materials is reduced as well as disposal energy averted. In 1989, California enacted AB 939, the California Integrated Waste Management Act, which establishes a hierarchy for waste management practices such as source reduction, recycling, and environmentally safe land disposal.

The City has developed and is in the process of implementing the Solid Waste Integrated Resources Plan, also referred to as the Zero Waste Plan, whose goal is to lead the City towards being a “zero waste” city by 2030. These waste reduction plans, policies, and regulations, along with Mayoral and City Council directives, have increased the level of waste diversion for the City to 76 percent as of 2013 (LASAN 2022). The RENEW LA Plan, aims to achieve a zero waste goal through reducing, reusing, recycling, or converting the resources not going to disposal and achieving a diversion rate of 90 percent or more by 2025 (City of Los Angeles 2011). The City has also approved the Waste Hauler Permit Program (Ordinance No. 181,519, LAMC Chapter VI, Article 6, Section 66.32-66.32.5), which

requires private waste haulers to obtain AB 939 Compliance Permits to transport construction and demolition waste to City-certified construction and demolition waste processors. The City's Exclusive Franchise System Ordinance (Ordinance No. 182,986), among other requirements, sets a maximum annual disposal level and diversion requirements for franchised waste haulers to promote waste diversion from landfills and support the City's zero waste goals. These programs reduce the number of trips to haul solid waste and therefore reduce the amount of petroleum-based fuels and energy used to process solid waste.

City of Los Angeles General Plan

The City does not have a General Plan Element specific to climate change and GHG emissions, and its General Plan does not have any stated goals, objectives, or policies specifically addressing climate change and GHG emissions. However, the following five goals from the City's General Plan Air Quality Element would also lead to GHG emission reductions (City of Los Angeles 1991):

- Less reliance on single-occupancy vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality;
- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implement of conservation measures, including passive measures, such as site orientation and tree planting; and
- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution.

Traffic Study Policies and Procedures

The City of Los Angeles Department of Transportation (LADOT) has developed the City Transportation Assessment Guidelines (TAG) (July 2019, updated July 2020) to provide the public, private consultants, and City staff with standards, guidelines, objectives, and criteria to be used in the preparation of a transportation assessment. The TAG establishes the reduction of vehicle trips and VMT as the threshold for determining transportation impacts and thus is an implementing mechanism of the City's strategy to reduce land use transportation-related GHG emissions consistent with AB 32, SB 32, and SB 375.

3.8.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to greenhouse gas emissions are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (Refer to Impact 3.8-1)
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (Refer to Impact 3.8-2)

CEQA Guidelines Section 15064.4 gives lead agencies the discretion to determine whether to assess those emissions quantitatively or qualitatively. If a qualitative analysis is used, in addition to quantification, this section recommends certain qualitative factors that may be used in the determination of significance (i.e., extent to which the project may increase or reduce GHG emissions compared to the existing environment; whether the project exceeds an applicable significance threshold; and extent to which the project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs). CEQA Guidelines Section 15064.4 does not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including looking to thresholds developed by other public agencies, or suggested by other experts, such as the California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (see CEQA Guidelines Section 15064.7(c)). Although GHG emissions can be quantified as discussed below under the *Methodology* subsection, CARB, SCAQMD, and the City have not adopted quantitative project-level significance thresholds for GHG emissions that would be applicable to the Project.

The California Natural Resources Agency (CNRA) has also clarified that the Guidelines focus on the effects of GHG emissions as cumulative impacts, and that they should be analyzed in the context of CEQA's requirements for cumulative impact analysis (see CEQA Guidelines Section 15064(h)) (CNRA 2009).

OPR released a technical advisory on CEQA and climate change that provided some guidance on assessing the significance of GHG emissions, and states that “lead agencies may undertake a project-by-project analysis, consistent with available guidance and current CEQA practice,” and that while “climate change is ultimately a cumulative impact, not every individual project that emits GHGs must necessarily be found to contribute to a significant cumulative impact on the environment” (CNRA 2009). Furthermore, the technical advisory states that “CEQA authorizes reliance on previously approved plans and mitigation programs that have adequately analyzed and mitigated GHG emissions to a less than significant level as a means to avoid or substantially reduce the cumulative impact of a project (OPR 2008).”

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project would comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project (CCR 2022a). To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency (CCR 2022a). Examples of such programs include a “water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] plans or regulations for the reduction of greenhouse gas emissions” (CCR 2022a).

Thus, CEQA Guidelines Section 15064(h)(3) allows a lead agency to make a finding of non-significance for GHG emissions if a project complies with a program and/or other regulatory schemes to reduce GHG emissions.

CARB's Climate Change Scoping Plan, SCAG's 2020–2045 RTP/SCS, City's Green New Deal, and the Los Angeles Green Building Code all apply to the Project and are all intended to reduce GHG emissions to meet the statewide targets set forth in AB 32 and amended by SB 32. Thus, in the absence of any adopted quantitative threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions, including CARB's 2017 Scoping Plan, SCAG's 2020–2045 RTP/SCS, City's Green New Deal, and the Los Angeles Green Building Code. If the Project is not in conflict with the applicable regulatory plans and policies to reduce GHG emissions, then the Project would result in a less than significant impact with respect to GHG emissions.

The 2006 L.A. CEQA Thresholds Guide does not identify any criteria to evaluate GHG emissions impacts. Thus, the potential for the Project to result in impacts from GHG emissions is based on the CEQA Guidelines Appendix G thresholds.

For the reasons set forth above, to answer both state CEQA Guidelines Appendix G Threshold (a) and Threshold (b) for greenhouse gas emissions, the City will consider whether the Project is not in conflict with the Climate Change Scoping Plan, SB 375 (through demonstration of conformance with the 2020–2045 RTP/SCS), the City's Green New Deal, and the Los Angeles Green Building Code. As discussed above, OPR has noted that lead agencies "should make a good-faith effort to calculate or estimate GHG emissions from a project (OPR 2008)." GHG emissions are quantified below, consistent with OPR guidelines.

Methodology

Quantification of Greenhouse Gas Emissions

In addition to the evaluation of the Project's consistency with plans adopted for the purpose of reducing and/or mitigating GHG emissions, for informational purposes, the analysis also calculates the amount of GHG emissions that would be attributable to the Project using recommended air quality models, as described below. The primary purpose of quantifying the Project's GHG emissions is to satisfy CEQA Guidelines Section 15064.4(a), which requires a good-faith effort by the lead agency to describe and calculate emissions. The estimated emissions inventory is also used to determine if there would be a reduction in the Project's incremental contribution of GHG emissions as a result of compliance with regulations and requirements adopted to implement plans for the reduction or mitigation of GHG emissions. The significance of the Project's GHG emissions impacts is not based on the amount of GHG emissions resulting from the Project, and is evaluated solely on the basis of consistency with GHG reduction plans, policies, and regulations.

The California Climate Action Registry (Climate Registry) has prepared the General Reporting Protocol for calculating and reporting GHG emissions from a number of general and industry-specific activities (TCR 2016). The GHG emissions provided in this report are consistent with the

General Reporting Protocol framework. The General Reporting Protocol recommends separating GHG emissions into three categories that reflect different aspects of ownership or control over emissions. They include the following:

- Scope 1: Direct, on-site combustion of fossil fuels (e.g., natural gas from mobile sources, propane, gasoline, and diesel).
- Scope 2: Indirect, off-site emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy.⁹

CARB recommends consideration of indirect emissions to provide a more complete picture of the GHG footprint of a facility: “As facilities consider changes that would affect their emissions – addition of a cogeneration unit to boost overall efficiency even as it increases direct emissions, for example – the relative impact on total (direct plus indirect) emissions by the facility should be monitored. Annually reported indirect energy usage also aids the conservation awareness of the facility and provides information” to CARB to be considered for future strategies by the industrial sector (CARB 2010). For these reasons, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of the AB 32 reporting requirements. Additionally, OPR directs lead agencies to “make a good-faith effort, based on available information, to calculate, model, or estimate...GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities.”¹⁰ Therefore, direct and indirect emissions have been calculated for the Project.

A fundamental challenge in the analysis of GHG emissions is the global nature of the existing and cumulative future conditions. Changes in GHG emissions can be difficult to attribute to a particular project because the project may cause a shift in the locale for some type of GHG emissions, rather than simply causing “new” GHG emissions. As a result, there is a lack of clarity as to whether a project’s GHG emissions represent a net global increase, reduction, or no change in GHGs that would exist if the project were not implemented. Therefore, the analysis of the Project’s GHG emissions is conservative in that it assumes all of the GHG emissions are new additions to the atmosphere.

It is considered reasonable and consistent with criteria pollutant calculations to consider those GHG emissions resulting from Project-related incremental (net) increases from emissions sources mentioned in the scope categories above, such as emissions from the use of on-road mobile vehicles, electricity, and natural gas, compared to existing conditions. This includes Project construction activities such as demolition, hauling, and construction worker trips. This analysis also considers indirect GHG emissions from water conveyance, wastewater generation, and solid

⁹ Embodied energy includes energy required for water pumping and treatment for end-uses. Third-party vehicles include vehicles used by spectators, visitors, students and employees traveling to and from the Project Site.

¹⁰ Governor’s Office of Planning and Research, Technical Advisory – CEQA and Climate Change: Addressing Climate Change through California Environmental Quality Act (CEQA) Review, 2008, page 5.

waste handling. Since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions are calculated on an annual basis.

GHG emissions are estimated using the California Emissions Estimator Model (CalEEMod, version 2020.4.0), which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.¹¹

Construction Emissions

The emissions of GHGs associated with construction of the Project were calculated for each year of construction activity using CalEEMod and EMFAC. Construction emissions are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date). Project construction is estimated to start in 2025, but may commence at a later date. If the onset of construction is delayed to a later date than assumed in the modeling analysis, construction impacts would be similar to or less than those analyzed, because a more energy-efficient and cleaner burning construction equipment and vehicle fleet mix would be expected in the future. This is because state regulations require construction equipment fleet operators to phase-in less polluting heavy-duty equipment and trucks over time. As a result, should the Project commence construction on a later date than modeled in this GHG impact analysis, GHG impacts would be less than the impacts disclosed herein.

The output values used in this analysis were adjusted to be Project-specific based on equipment types and the construction schedule. These values were then applied to the same construction phasing assumptions used in the criteria pollutant analysis, which include those associated with the Project's off-site improvements (see Section 3.3, *Air Quality*, of this Draft EIR) to generate GHG emissions values for each construction year. The emissions have been estimated using the CalEEMod software, an emissions inventory software program recommended by SCAQMD, and the CARB EMFAC model. The SCAQMD guidance, Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold, recognizes that construction-related GHG emissions from projects “occur over a relatively short-term period of time” and that “they contribute a relatively small portion of the overall lifetime project GHG emissions” (SCAQMD 2008b).

In accordance with SCAQMD guidance, GHG emissions from construction have been amortized (i.e., averaged annually) over the lifetime of the Project. The SCAQMD defines the lifetime of a project as 30 years (SCAQMD 2008c). Therefore, the Project's total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate comparable to operational emissions. A more detailed discussion of the methodology for projecting the Project's

¹¹ See: <http://www.aqmd.gov/caleemod/>.

construction emissions and descriptions of the Project's construction subphasing and equipment list are available in the *Air Quality and Greenhouse Gas Technical Appendix* for the Project, which is provided in Appendix C of this Draft EIR.

Operational Emissions

Similar to construction, operational GHG emissions are also estimated using CalEEMod, along with CARB's EMFAC model. CalEEMod was used to estimate GHG emissions from electricity, natural gas, solid waste, water and wastewater, and landscaping equipment. Mobile emissions were estimated based on emission factors from EMFAC along with trip rates that were provided for the Project uses in the Project's Transportation Impact Assessment (TIA) and default commercial trip type trip lengths from CalEEMod to estimate annual VMT (see Appendix K). The SLRC Project team generated vehicle occupancy rates assumptions in order to estimate total vehicle trips associated with each peak park everyday use and special events/life performances, community events and polling station events (see the Project's TIA, included as Appendix K of this Draft EIR, for additional details regarding the vehicle occupancy rate assumptions and trip generation methodology) (see Appendix K). Thus, the Project's GHG analysis also accounted for annual VMT from special events/life performances that could occur during the year, which would include 12 weekend special events/life performances with approximately 600 attendees per event, and 12 weekday special events, community events and polling station events with approximately 50 attendees per event, that would occur at the Silver Lake Lawn in the Meadow (see Appendix K). The Project would generate an estimated net increase of 2,486,228 annual VMT (of which, approximately 98 percent is attributable to everyday uses of the Project Site) (see Appendix K). The Project's emissions were calculated for Project buildout in 2030.

The GHG emissions calculations for the Project include credits or reductions for implementation of relevant project design features set forth in this Draft EIR. The analysis of Project GHG emissions at buildout also takes into account actions and mandates already approved and expected to be in force by Project buildout (e.g., Pavley I and II Standards and implementation of California's statewide RPS beyond current levels of renewable energy). Emissions reductions regarding Cap-and-Trade were not included in this analysis.

Operational GHG emissions were calculated for the GHG conditions where the Project With GHG Reduction Characteristics, Features, and Measures represents emission factors from the Project in the year 2030 consistent with SB 100, which was adopted after the 2017 Scoping Plan and represents the state's most current RPS law and growth in electricity demand with an emission factor of 469.86 lbs/megawatt hour (MWh) for year 2030 scaled proportionately based on the future year renewable energy targets of 60 percent by 2030.

As previously noted, operational mobile source GHG emissions are estimated based on CARB's EMFAC model. Mobile source emissions are based on annual VMT from the TIA prepared for the Project (see Appendix K). The daily VMT for the everyday use component of the Project were based on CalEEMod commercial-customer trip length (8.4 miles) and conservatively the

longest trip length for commercial trip types in CalEEMod was used to estimate VMT from special events/life performances, community events and polling station events (16.6 miles).¹²

In addition, the operational mobile source GHG emissions estimates are based on GHG emission factors for the mobile sources and the GWP values for the GHGs emitted. Emissions of GHGs from motor vehicles are dependent on specific vehicle types and models that would travel to and from the Project Site. The national policy for fuel efficiency and emissions standards for the United States auto industry requires that new passenger cars and light-duty trucks achieve an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO₂ per mile by model year 2016 (Phase I standards), based on USEPA calculation methods. In August 2012, more stringent phased-in standards were adopted for new model year 2017 through 2025 passenger cars and light-duty trucks. New model year 2020 vehicles are projected to achieve 41.7 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 213 grams of CO₂ per mile (Phase II standards). By 2025, new vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile (Phase II standards) (USEPA 2012). However, as mentioned under the *Federal* subsection in Section 3.8.2, *Regulatory Framework*, in April 2020, the final USEPA and NHTSA SAFE Vehicles Rule was published in the Federal Register. However, as directed in President Biden's executive order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis Executive Order, the USEPA and NHTSA are now evaluating whether and how to replace the SAFE Rule. Additionally, as mentioned above, in February 2022, the USEPA issued the Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards (USEPA 2021b). This final rule revises current GHG standards beginning for vehicles in model year 2023 and through model year 2026 and establish the most stringent GHG standards ever set for the light-duty vehicle sector that are expected to result in average fuel economy label values of 40 mpg, while the standards they replace (the SAFE rule standards) would achieve only 32 mpg in model year 2026 vehicles (USEPA 2021d).

The most current version of the CARB and USEPA-approved EMFAC model does incorporate the effect of the SAFE Vehicles Rules and is incorporated to their emission factors. CARB has provided off-model adjustment factors for criteria pollutant emissions and for GHG emissions. These adjustment factors were accounted for in the Project's construction and operational mobile emissions calculations. Therefore, as the SAFE Vehicles Rules have been rescinded and replaced the USEPA, mobile source GHG emissions beyond 2021 would be slightly less than disclosed in this Draft EIR.

All vehicle types could visit the Project Site. Therefore, this assessment uses Air Basin's motor vehicle fleet mix and the fleet average calendar year emissions factors from EMFAC to estimate mobile source GHG emissions.

With regard to energy demand, the consumption of fossil fuels to generate electricity and to provide space heating and cooling and hot water generates GHG emissions. Emissions of GHGs associated with energy usage under the Project's proposed land uses are calculated using the CalEEMod tool. Future fuel consumption rates are estimated based on specific square footage of

¹² See: <http://www.aqmd.gov/calceemod/>.

the Project's athletic, recreational, and vehicular parking land uses, as well as predicted water supply needs of the Project. Emission factors for GHGs due to electrical generation to serve the demands of the existing Project Site were obtained from the LADWP *2017 Power Strategic Long-Term Resource Plan*, which accounts for the generation mix using renewable and non-renewable sources (LADWP 2016b). Approximately 36.7 percent of LADWP's 2020 electricity purchases were from renewable sources, which is similar to the 32 percent statewide percentage of electricity purchases from renewable sources (LADWP 2020). LADWP would provide an increasing percentage from renewable sources in compliance with the RPS with 50 percent by 2025, 55 percent by 2030, and 65 percent by 2036. Based on data from LADWP, the CO₂ intensity for electricity sales as of year 2016 was 834 lbs CO₂/MWh. With the passage of SB 100, LADWP would be required to update plans to provide an increasing percentage of renewable electricity pursuant to the regulation (i.e., 60 percent by December 31, 2030 and 100 percent by December 31, 2045).

Based on LADWP future projections for the Project opening year of 2030, an estimated emission factor of 469.86 lbs CO₂/MWh for electricity was calculated using LADWP projections from existing plans for compliance with the RPS (i.e., SB 100) and future projected energy supply resources (CLI 2018; LADWP 2017; CEC 2017).

Emissions of GHGs associated with solid waste disposal under the Project's proposed land uses are calculated using the CalEEMod tool. The emissions are based on the size of the Project's recreational land uses, the waste disposal rate for the land uses was estimated based on the assumed average number of visitors and employees on the Project Site per day, and the GWP values for the GHGs emitted (CAPCOA 2020). The City has developed and is in the process of implementing, the Solid Waste Integrated Resources Plan, also referred to as the City's Zero Waste Plan, whose goal is to lead the City towards being a "zero waste" City by 2030. These waste reduction plans, policies, and regulations, along with Mayoral and City Council directives, have increased the level of waste diversion (e.g., recycling) for the City to 76 percent as of 2013 (LASAN 2013).

The emissions of GHGs associated with water demand and wastewater generation from the Project are calculated using CalEEMod. The emissions are based on the size of the Project land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution and for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHGs emitted (CAPCOA 2020).

The emissions of GHGs associated with operational area sources under the Project are calculated using the CalEEMod tool. The emissions for landscaping equipment are based on the size of the open space based on the Project's athletic, recreational, and parking land uses, the GHG emission factors for fuel combustion, and the GWP values for the GHGs emitted.

Operational GHG emissions are assessed based on the Project-related incremental increase in GHG emissions compared to baseline conditions. As stated above, since the existing public facilities within the SLRC would not be removed under the Project and would either continue to operate as under existing conditions or would be expanded, renovated, and redesigned to improve

visitor experience, existing greenhouse gas emissions are not required to be calculated and the Project's greenhouse gas emissions are conservatively considered new.

In order to evaluate the efficacy of the GHG reduction characteristics, features, and measures that would be implemented as part of the Project, this analysis compares the Project's GHG emissions to the emissions that would be generated by the Project Without GHG Reduction Characteristics, Features, and Measures. This approach mirrors the concepts used in CARB's Climate Change Scoping Plan, which demonstrates GHG reductions compared to a Project Without GHG Reduction Characteristics, Features, and Measures. For informational purposes and to evaluate the efficacy of the GHG reduction characteristics, features, and measures that would be implemented as part of the Project, operational GHG emissions were calculated based on a scenario without Project Design Features and consistent with CARB's Climate Change Scoping Plan statewide BAU forecast for the AB 32 target year of 2020 and continued reductions through SB 32 through 2030, with a CO₂ intensity factor of 693.04 lbs/MWh for year 2030, which represents the RPS law and growth in electricity demand, but does not include SB 100 that was signed into law after CARB's Climate Change Scoping Plan. In addition, the Project Without GHG Reduction Characteristics, Features, and Measures scenario does not account for land use characteristics of the Project that reduce VMT given its location within an established residential community with nearby access to public transportation. For the Project Without GHG Reduction Characteristics, Features, and Measures scenario, the VMT was adjusted to account for the average percentage of visitors that currently do not use vehicles but alternative modes of transportation to visit the park (58 percent) based on the National Recreation and Park Association's, *2018 American's Engagement with Parks Report*, to determine the Project Without GHG Reduction Characteristics, Features, and Measures scenario's annual VMT of 5,560,880 (emissions results and summary are presented in Section 3.8.4 and Table 3.8-6, and detailed emissions calculations are provided in Appendix C of this Draft EIR) (NRPA 2018).

There are challenges in determining consumption-based GHG emissions for embodied GHG emissions, such as the production of construction materials and consumer goods and services, as many require elongated supply chains. Therefore, the data necessary to accurately quantify embodied emissions may not be readily available due to the fact that other jurisdictions (particularly outside California or outside the United States) may not track GHG emissions in sufficient detail. Furthermore, as discussed in the Draft Association of Environmental Professionals (AEP) White Paper: Production, Consumption and Lifecycle Greenhouse Gas Inventories: Implications for CEQA and Climate Action Plans, "CEQA admonishes lead agencies to avoid speculation in completing their analyses and making conclusions. Moreover, CEQA does not require a lead agency to complete every study possible, but rather to fully disclose impacts based on reasonably available data. Developing project-specific estimates of embedded GHG emissions for all construction materials, or future consumed goods and services that are related to complex supply chains, would require extensive research and may not be able to accurately identify GHG emissions for many consumed items without substantial uncertainty" (AEP 2017).

In addition, the state addressed embodied (lifecycle) GHG emissions in the Final Statement of Reasons for Regulatory Action, prepared for the amendment to Appendix F of the CEQA Guidelines pursuant to SB 97 (CNRA 2009):

The amendments to Appendix F remove the term —lifecycle. No existing regulatory definition of —lifecycle exists. In fact, comments received during OPR’s public workshop process indicate a wide variety of interpretations of that term. (Letter from Terry Rivasplata et al. to OPR, February 2, 2009, at pp. 5, 12 and Attachment; Letter from Center for Biological Diversity et al. to OPR, February 2, 2009, at pp. 17.) Thus, retention of the term —lifecycle in Appendix F could create confusion among lead agencies regarding what Appendix F requires. Moreover, even if a standard definition of the term —lifecycle existed, requiring such an analysis may not be consistent with CEQA. As a general matter, the term could refer to emissions beyond those that could be considered —indirect effects of a project as that term is defined in Section 15358 of the State CEQA Guidelines. Depending on the circumstances of a particular project, an example of such emissions could be those resulting from the manufacture of building materials. (CAPCOA White Paper, pp. 50-51.) CEQA only requires analysis of impacts that are directly or indirectly attributable to the project under consideration. (State CEQA Guidelines, § 15064(d).) In some instances, materials may be manufactured for many different projects as a result of general market demand, regardless of whether one particular project proceeds. Thus, such emissions may not be caused by the project under consideration. Similarly, in this scenario, a lead agency may not be able to require mitigation for emissions that result from the manufacturing process. Mitigation can only be required for emissions that are actually caused by the project. (CEQA Guidelines Section 15126.4(a)(4).)

Therefore, embodied GHG emissions were not considered in this analysis as they are not consistent with generally recommended GHG emissions analysis methodology under CEQA.

Project Consistency with Applicable Plans and Policies

The Project’s GHG emission impacts are evaluated by assessing whether the Project conflicts with applicable GHG reduction strategies and local actions approved or adopted by CARB, SCAG, and the City. As there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the Project’s impacts related to GHG emissions focuses on whether the Project is not in conflict with, and therefore is consistent with, statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the sole basis for determining the significance of the Project’s GHG-related impacts on the environment consistent with CEQA Guidelines Section 15064.4 and CEQA Guidelines Appendix G.

A consistency analysis is provided and describes the Project’s compliance with performance-based standards included in the regulations outlined in the applicable portions of CARB’s Climate Change Scoping Plan, the 2020–2045 RTP/SCS, City’s Green New Deal, and the Los Angeles Green Building Code.

3.8.4 Project Design Features

The following Project Design Features are applicable to the Project.

PDF-UTIL-1: Drought-Tolerant Landscaping. See Section 3.18, *Utilities and Service Systems*, of this Draft EIR for a description of this Project Design Feature.

PDF-UTIL-2: Water-Efficient Irrigation. See Section 3.18, *Utilities and Service Systems*, of this Draft EIR for a description of this Project Design Feature.

3.8.5 Impacts and Mitigation Measures

Greenhouse Gas Emissions

Impact 3.8-1: Would the proposed Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

As described above, compliance with a GHG emissions reduction plan renders a project's impact less than significant. In support of the consistency analysis which describes the Project's compliance with or exceedance of performance-based standards included in the regulations and policies outlined in the applicable portions of the Climate Change Scoping Plan, the 2020–2045 RTP/SCS, the City's Green New Deal, and the Los Angeles Green Building Code, quantitative calculations are provided below. The Project would generate an incremental contribution to and a cumulative increase in GHG emissions. A specific discussion regarding potential GHG emissions associated with the construction and operational phases of the Project is provided below.

Construction Emissions

The emissions of GHGs associated with construction of the Project, were calculated for each year of construction activity using CalEEMod and EMFAC. Construction would be completed in approximately 56 months (construction of the Project is anticipated to begin in the first quarter of 2025 pending Project consideration and approval and is estimated to be completed in the third quarter of 2029 with construction occurring for approximately four years and eight months). Results of the GHG emissions calculations are presented in **Table 3.8-5**.

Across all the park zones, the Project would import approximately 86,765 cubic yards and export approximately 89,003 cubic yards of soil during grading/excavation and export approximately 30,332 cubic yards of soil drainage/utilities/trenching, approximately 21,450 cubic yards of demolition debris (asphalt, earthwork, and general construction debris) and approximately 13,264 cubic yards of site preparation debris (vegetation and minor earthwork). Emissions from haul trucks and continuous pour concrete trucks were estimated outside of CalEEMod using EMFAC emission factors for heavy-duty trucks. It should be noted that the GHG emissions shown in Table 3.8-5 are based on construction equipment operating continuously throughout the workday. In reality, construction equipment tends to operate periodically or cyclically throughout the workday. Therefore, the GHG emissions shown reflect a conservative estimate.

**TABLE 3.8-5
 ESTIMATED CONSTRUCTION GHG EMISSIONS**

Emission Source	CO₂e (Metric Tons)^{a,b}
Construction Year 1	2,722
Construction Year 2	1,913
Construction Year 3	2,186
Construction Year 4	2,723
Construction Year 5	856
Total	10,400
Amortized Over 30 Years	347

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix C of this Draft EIR.

^b CO₂e emissions are calculated using the global warming potential values from the IPCC AR4.

SOURCE: Appendix C

Although GHGs are generated during construction and are accordingly considered one-time emissions, it is important to include them when assessing all of the long-term GHG emissions associated with a project. As recommended by the SCAQMD, construction-related GHG emissions were amortized over a 30-year project lifetime in order to include these emissions as part of a project’s annualized lifetime total emissions. In accordance with this methodology, the estimated Project’s construction GHG emissions have been amortized over a 30-year period and are added to the annualized operational GHG emissions.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operational Emissions

The Project’s annual GHG emissions included emissions from operations and construction calculated by CalEEMod and EMFAC for mobile source emissions. As previously described, construction GHG emissions for the entire construction period were amortized over 30 years. The Project must comply with the portions of the Los Angeles Green Building Code and state’s CALGreen Code / California Title 24 Building Energy Efficiency requirements applicable to the Project, and meeting these requirements are assumed in the quantitative analysis below. As explained above, the Project’s mobile source emission calculations associated with the Project are calculated using the estimated annual VMT using the trip rates that were provided for the Project uses in the Project’s TIA and default commercial trip type trip lengths from CalEEMod (see Appendix K).

With compliance with the City of Los Angeles’ Green New Deal, all new municipally-owned buildings and major building renovation projects will utilize electricity instead of natural gas. Accordingly, natural gas would not be supplied to support proposed Project operation activities related to building energy. Further, the Project would optimize natural ventilation and daylighting

at the new Education Center and Multi-Purpose Facility which would reduce the amount of electricity needed for lighting and heating/cooling. The Education Center would also include shade trees and overhangs to minimize the heat gain and regulate indoor temperatures without the need for additional electrical capacity. The Project would also improve the energy efficiency of the existing Multi-Purpose Facility and would be updated to meet current building energy and safety codes. The Education Center, updated Recreation Center, and Multi-Purpose Facility would be designed to be all-electric and would eliminate the use of natural gas. While this does result in higher electricity usage, it results in more sustainable development by eliminating fossil fuel and the associated criteria pollutant emissions (i.e. natural gas) use for building energy. The proposed Project would not result in installation of any new natural gas infrastructure.

Maximum unmitigated, annual net GHG emissions resulting from on road mobile sources, area sources (landscape maintenance equipment and electric heaters), energy (i.e., electricity), water conveyance and wastewater treatment, and solid waste were calculated for the Project buildout year (2030). The Project’s total and net GHG emissions from operation of the Project are shown in **Table 3.8-6**, below.

**TABLE 3.8-6
 ESTIMATED OPERATIONAL GREENHOUSE GAS EMISSIONS – PROJECT**

Emissions Sources	CO ₂ e at Buildout Year (2025) (Metric Tons per Year) ^a	
	Project with GHG reduction characteristics, features, and measures	Project without GHG reduction characteristics, features, and measures
Project Operational		
Mobile Sources ^b (Includes VMT associated from both the Everyday Use and special events/life performances, community events and polling station events)	876	1,959
Area	<1	<1
Electricity	167	245
Solid Waste	5	5
Water and Wastewater Treatment	92	135
Construction (Amortized)	347	347
Project Total	1,486	2,691
Percent reduction of Project with GHG reduction characteristics, features, and measures compared to Project without GHG reduction characteristics, features, and measures	-44.8%	—

^a Totals may not add up exactly due to rounding in the modeling calculations.

^b As discussed in Section 3.8.3, under the *Methodology* subsection, the Project’s GHG analysis also accounted for annual VMT from special events/life performances that could occur during the year, including 12 weekend special events/life performances with approximately 600 attendees per event, and 12 weekday special events, community events and polling station events performances with approximately 50 attendees per event, that would occur at the Silver Lake Lawn in the Meadow. The Project would generate an estimated net increase of 2,486,228 annual VMT (of which, approximately 98 percent is attributable to everyday uses of the Project Site. Refer to VMT data in Appendix C and Appendix K of this Draft EIR.

SOURCE: Appendix C

As discussed previously, state, regional, and local GHG reduction plans and policies, such as CARB’s Climate Change Scoping Plan, SCAG’s 2020–2045 RTP/SCS, and City’s Green New Deal, would be applicable to the Project. These plans and policies are intended to reduce GHG emissions in accordance with the goals of AB 32. In order to evaluate the efficacy of the GHG reduction characteristics, features, and measures that would be implemented as part of the Project as required by these GHG reduction plans and policies and while other methodologies for calculating Project GHG reduction efficiencies exist, this analysis compares the Project’s GHG emissions to the emissions that would be generated by the Project without implementation of GHG reduction characteristics, features, and measures and is presented here for informational purposes only. This comparison is provided to evaluate the Project’s efficiency with respect to GHG emissions but is not the threshold of significance used for impact analysis. The analysis assumes the Project without implementation of GHG reduction characteristics, features, and measures would incorporate the same land uses and building square footage as the Project. Furthermore, this analysis is consistent with the most current regulatory policies and GHG quantification methods; however, the scientific, regulatory environment regarding GHG reduction and CEQA approaches for GHG analysis are constantly evolving and would continue to do so into the future.

The quantification of GHG emissions for the Project without implementation of GHG reduction characteristics, features, and measures scenario is evaluated based on the specific and defined circumstances that CARB relied on when it projected the state’s GHG emissions in the absence of GHG reduction measures in the Climate Change Scoping Plan (for complete list of assumptions refer to Appendix C of this Draft EIR).

Comparison of Project GHG emissions to Project \ Without Implementation of GHG Reduction Characteristics, Features, and Measures

When considering only the Project’s emissions, Table 3.8-6 shows that the Project’s operational emissions of 1,486 MTCO₂e would be generated primarily by mobile sources and secondarily by energy (electricity and natural gas from mobile sources) and in 2030 would be approximately 45 percent less than the emissions that would be generated by the Project without implementation of GHG reduction characteristics, features, and measures (i.e., based on the quantitative reduction, including those associated with mobile emissions). The Project without implementation of GHG reduction characteristics, features, and measures does not account for land use characteristics of the Project that reduce VMT given its location within an established residential community with nearby access to public transportation. Thus, this analysis quantitatively demonstrates the efficiency of the Project GHG reduction measures as set forth in the applicable GHG reduction plans and policies and that the Project would result in a GHG-efficient development. The reduction in emissions (i.e., Project scenario and Project without implementation of GHG reduction characteristics, features, and measures) is due to the following primary factors:

- **Optimize Building Energy Performance and Lower the CI of electricity.** Under the RPS, LADWP is required to reduce the CI of their electricity. The CI of LADWP electricity would be anticipated to be 693.04 lbs/MWh, which is consistent with CARB’s Climate Change Scoping Plan statewide BAU forecast for the AB 32 target year of 2020 and continued reductions through SB 32 through 2030, but does not account for newer RPS requirements

such as SB 100 that was signed into law after the 2017 Scoping Plan. As discussed above, the future year CO₂ emission factor of 469.86 lbs/MWh for year 2030 was scaled proportionately based on the future year renewable energy targets of 60 percent by 2030 consistent with SB 100 (refer to Appendix C for additional details) (LADWP 2016a; CEC 2017). For the Project, these features account for approximately a 32 percent reduction in electricity emissions and a 3 percent reduction in total GHG emissions in the first operational year of 2025. For the Project, the lower CI of electricity also accounts for approximately a 32 percent reduction in emissions associated with Project water supply, treatment, and distribution and for wastewater treatment and a 2 percent reduction in total GHG emissions in the first operational year of 2030. Thus, the reduction in GHG emissions from optimizing building energy performance and lowering the CI of electricity would be 4.5 percent of the total GHG emissions (detailed emissions calculations are provided in Appendix C of this Draft EIR).

- **Reduction in vehicle trips and VMT associated with the Project's land use characteristics.** As discussed above, based on the Project's land use characteristics, VMT reductions are expected due to the Project's location, and design. These characteristics account for approximately a 55 percent reduction in VMT and a 40 percent reduction in total GHG emissions in the first operational year of 2030.

It is important to note that the total net Project emissions in Table 3.8-6 do not reflect the fact that Project operational-related GHG emissions would likely be lower as the Project would provide additional sustainability features that would help to reduce the Project's outdoor water demand and reduce associated GHG emissions from water supply, conveyance, distribution and treatment. As described in Section 3.18, *Utilities and Service Systems*, the Project would include strategies to reduce irrigation water demand through PDF-UTIL-1 and PDF-UTIL-2. Through PDF-UTIL-1, and would use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses. Through PDF-UTIL-2, irrigation water would be pumped from the reservoirs to the proposed Meadow park zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette proposed under the proposed Project. This irrigation strategy would be validated by reservoir water quality testing and soil analysis under proposed operations. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. If recycled water is available in the future, it could be used to irrigate ornamental planting (see Section 3.18, *Utilities and Service Systems*, for additional details). In addition, as described in Section 2.5.7, *Sustainability Design Features*, the proposed Project would include recycling and compost receptacles throughout the park, which would reduce the amount of waste generated by the Project and reduce the number of trips to haul solid waste and therefore reduce the amount of petroleum-based fuels and energy used to process solid waste.

It is also important to note that the total net Project emissions in Table 3.8-6 do not account for declining GHG emissions in future years as emissions reduction plans, policies, and regulations at the state, local, and regional level (including the RTP/SCS and Climate Change Scoping Plan, discussed above) are achieved and as the state's Cap-and-Trade program continues to be implemented. Emissions related to electricity would decline as utility providers, including LADWP,

met their RPS obligations to provide renewable electricity sources to meet the future RPS obligations of 60 percent by December 31, 2030, and 100 percent by December 31, 2045. Emissions from mobile sources would also decline in future years as older vehicles are replaced with newer vehicles, resulting in a greater percentage of the vehicle fleet meeting more stringent combustion emissions standards, such as the model year 2017–2025 Pavley Phase II standards and Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards. In addition, as described in Section 2.5.7, *Sustainability Design Features*, although the Project is not required to provide any bicycle parking spaces per the LAMC, the Project would also provide on-site bicycle parking spaces and improve existing bike lanes along Silver Lake Boulevard, and the proposed Project would provide drop-off space for micro-mobility initiatives such as Metro Micro (see Chapter 2.0, *Project Description*, for additional details). These Project characteristics are related to key SCAG’s 2020–2045 RTP/SCS GHG reduction strategies including reducing vehicle trips and associated emissions, which include locating uses in areas accessible to transit and providing biking infrastructure to improve active transportation options and transit access.

As stated above, because there is no applicable adopted or accepted numerical threshold of significance for GHG emissions, the methodology for evaluating the Project’s impacts related to GHG emissions focuses on whether it conflicts with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions. This evaluation of consistency with such plans is the primary basis for determining the significance of the Project’s GHG-related impacts on the environment. Accordingly, as shown below in Threshold (b), since the Project would not conflict with applicable plans, regulations or goals, the Project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Post Buildout Emissions

Executive Orders S-3-05 and B-30-25 establish a goal to reduce GHG emissions to 80 percent below 1990 levels by 2050. This goal has not been codified by the Legislature and CARB has not adopted a strategy or regulations to meet the 2050 goal. However, studies have shown that, in order to meet the 2050 goal, aggressive technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, would be required. In its original 2008 Scoping Plan, CARB acknowledged that the “measures needed to meet the 2050 goal are too far in the future to define in detail” (CARB 2008). In the 2014 Scoping Plan, CARB generally described the type of activities required to achieve the 2050 target: “energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately” (CARB 2014). The 2017 Scoping Plan recognizes that additional work is needed to achieve the more stringent 2050 target: “While the Scoping Plan charts the path to achieving the 2030 GHG emissions reduction target, we also need momentum to propel us to the 2050 statewide GHG target (80 percent below 1990 levels). In developing this Scoping Plan, we considered what policies are needed to meet our mid-term and long-term goals” (CARB 2017b) For example, the 2017 Scoping Plan acknowledges that “though Zero Net Carbon Buildings are not feasible at this time and more work needs to be done in this area, they would be necessary to achieve the 2050 target. To that end, work must begin now to

review and evaluate research in this area, establish a planning horizon for targets, and identify implementation mechanisms” (CARB 2017b).

- **Energy Sector:** Technological improvements and additions to California’s renewable resource portfolio would favorably influence the Project’s emissions level (CARB 2014).
- **Transportation Sector:** Anticipated deployment of improved vehicle efficiency, zero emission technologies, lower carbon fuels, and improvement of existing transportation systems all would serve to reduce the Project’s emissions level (CARB 2014).
- **Water Sector:** The Project’s emissions level would be reduced as a result of further enhancements to water conservation technologies (CARB 2014).
- **Waste Management Sector:** Plans to further improve recycling, reuse, and reduction of solid waste would beneficially reduce the Project’s emissions level (CARB 2014).

The *Air Quality and Greenhouse Gas Technical Appendix* for the Project, which is provided in Appendix C of this Draft EIR, was prepared after thorough investigation of feasible methodologies to determine the potential GHG impacts associated with the Project. Due to the technological shifts required and the unknown parameters of the regulatory framework in 2050, quantitatively analyzing the Project’s impacts relative to the 2050 goal is speculative for purposes of CEQA. Despite the thorough investigation performed, due to the uncertainty regarding specific state and local actions that would be implemented to achieve the 2050 GHG emission reduction targets, calculating Project emissions levels for 2050 would be highly speculative. Nonetheless, statewide efforts are underway to facilitate the state’s achievement of those goals, and it is reasonable to expect the Project’s emissions level to decline as the regulatory initiatives identified by CARB in the 2017 Scoping Plan are implemented, and other technological innovations occur.

In addition, the Project is the type of land use development that is encouraged by the 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the state’s long-term climate policies. The Project Site is located near multiple transportation options, including Los Angeles County Metropolitan Transit Authority (Metro)’s Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the that runs on West Silver Lake Drive with multiple stops adjacent to the Complex and Metro Line 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Complex and Metro Line 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Project. In addition, as described in Section 2.5.7, *Sustainability Design Features*, although the Project is not required to provide any bicycle parking spaces per the LAMC, the Project would also provide on-site bicycle parking spaces and improve existing bike lanes along Silver Lake Boulevard, and the proposed Project would provide drop-off space for micro-mobility initiatives such as Metro Micro (see Chapter 2.0, *Project Description*, for additional details). These Project characteristics are related to key GHG reduction strategies in SCAG’s 2020–2045 RTP/SCS, which include locating uses in areas accessible to transit and providing biking infrastructure to improve active transportation options and transit access. Additional details regarding the Project’s furtherance of key GHG reduction strategies in the SCAG 2020–2045 RTP/SCS are discussed in Threshold (b) as well as in Appendix C of this Draft EIR. By furthering implementation of SB 375, the Project supports regional land use and

transportation GHG reductions, and would not conflict with state climate targets for 2030 and beyond.

Stated differently, the Project's emissions total at buildout represents the maximum emissions inventory for the Project as California's emissions sources are being regulated (and foreseeably expected to continue to be regulated in the future) in furtherance of the state's environmental policy objectives. As such, given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project would not conflict with the 2030 and 2050 targets and Executive Orders S-3-05 and B-30-15.

As set forth above, the Project would generate increased GHG emissions over existing conditions. However, even a very large individual project would not generate enough GHG emissions on its own to significantly influence global climate change. Moreover, as discussed under Impact 3.8-2 below, the Project would not conflict with the Climate Change Scoping Plan, the 2020–2045 RTP/SCS, the City's Green New Deal, and the Los Angeles Green Building Code. The Project's consistency with these applicable regulatory plans and policies to reduce GHG emissions, would reduce the Project's GHG emissions by about 45 percent compared to the Project without implementation of GHG reduction characteristics, features, and measures. In summary, the plan consistency analysis provided below under Threshold (b) demonstrates that the Project's design features would not conflict with regulations and policies and would comply with or exceed the regulations and reduction actions/strategies outlined in the Climate Change Scoping Plan, the 2020–2045 RTP/SCS, City's Green New Deal, and the Los Angeles Green Building Code. The Project's evaluation of consistency with the above plans is the primary basis for determining the significance of the Project's GHG-related impacts on the environment. Accordingly, as shown below under Impact 3.8-2, since the Project would not conflict with applicable plans, regulations or goals, the Project would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Applicable Plan, Policy, or Regulation

Impact 3.8-2: Would the proposed Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As mentioned above, in the absence of any adopted quantitative threshold, the significance of the Project's GHG emissions is evaluated consistent with CEQA Guidelines Section 15064.4(b)(2) by considering whether the Project complies with applicable plans, policies, regulations and requirements adopted for the purpose of reducing the emissions of GHGs.

As described above, compliance with a GHG emissions reduction plan renders a less-than-significant impact. The analyses below demonstrate that the Project would not conflict with the applicable GHG emission reduction plans and policies included within CARB's Climate Change

Scoping Plan, the 2020–2045 RTP/SCS, City’s Green New Deal, and the Los Angeles Green Building Code (refer to the *Air Quality and Greenhouse Gas Technical Appendix*, which is attached as Appendix C of this Draft EIR, for additional details).

CARB’s Climate Change Scoping Plan

The Climate Change Scoping Plan outlines a framework that relies on a broad array of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, incentives, voluntary actions, and market-based mechanisms, such as the Cap-and-Trade program. The Climate Change Scoping Plan builds off of a wide array of regulatory requirements that have been promulgated to reduce statewide GHG emissions, particularly from energy demand and mobile sources. While these regulatory requirements are not targeted at specific land use development projects, they would indirectly reduce a development project’s GHG emissions. A discussion of these regulatory requirements that would reduce the Project’s GHG emissions are provided below. As detailed below and in Appendix C of this Draft EIR, the Project would not conflict with the Climate Change Scoping Plan and the implementing GHG reduction strategies.

Energy and Water

- **California Renewables Portfolio Standard (RPS) program (SB 100) and SB 350:** While this action does not directly apply to individual projects, the Project complies with the RPS program inasmuch as its electricity is provided by LADWP, which, in compliance with the RPS program, is required to obtain 33 percent renewable power by 2020 and has committed to achieving 50 percent renewables by 2025 (LADWP 2017). Furthermore, per the updated requirements of SB 100, signed by Governor Brown on September 10, 2018, LADWP would be required to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030 and should plan to achieve 100 percent eligible renewable energy resources and zero-carbon resources by December 31, 2045. Thus, the Project would be supplied with electricity via renewable sources at increasing rates over time reducing the Project’s electricity-related GHG emissions. As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 and utility-sponsored programs such as rebates for high-efficiency appliances, heating, ventilation, and air conditioning (HVAC) systems, and insulation. The Project would comply with Title 24 Standards.
- **SB 1368/AB 398, CCR Title 20, Cap-and-Trade Program:** The state’s Cap-and-Trade Program reduces GHG emissions from major sources (deemed “covered entities”) by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve emission reduction targets. While the Cap-and-Trade Program does not directly apply to individual projects, the Project would benefit from the Program inasmuch as the Project’s electricity usage and mobile source emissions would be covered by the Cap-and-Trade Program as LADWP and California fuel suppliers are covered entities, resulting in an indirect reduction of GHG emissions from the Project’s energy consumption and mobile source emissions.
- **Title 24 Building Energy Efficiency Standards, and the CALGreen Code:** The Project would meet or exceed the energy standards in the Title 24 Building Energy Efficiency Standards, and the CALGreen Code. As stated above and as described in Section 3.18, *Utilities and Service Systems*, the Project would include strategies to reduce irrigation water

demand through PDF-UTIL-1 and PDF-UTIL-2. Through PDF-UTIL-1, the Project would use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses. Through PDF-UTIL-2, Irrigation water would be pumped from the reservoirs to the proposed Meadow park zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette proposed under the proposed Project. This irrigation strategy would be validated by reservoir water quality testing and soil analysis under proposed operations. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. If recycled water is available in the future, it could be used to irrigate ornamental planting (see Section 3.18, *Utilities and Service Systems*, for additional details). As stated previously, the 2008 Climate Change Scoping Plan notes that water use requires significant amounts of energy, including approximately one-fifth of statewide electricity.

Mobile

- **AB 1493 (Pavley Regulations):** The state's Pavley Regulations apply to new passenger vehicles from model year 2012 through 2016 (Phase I) and model years 2017–2025 (Phase II). While this action does not apply to individual projects, future employees and visitors to the Project Site would purchase new vehicles in compliance with this regulation. Mobile source emissions generated by future spectators, visitors, students and employees to the Project Site would be reduced with implementation of AB 1493.
- **Advanced Clean Cars Program:** The Advanced Clean Cars (ACC) program includes Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. While this action does not directly apply to individual projects, the standards would apply to all vehicles purchased or used by visitors and employees to the Project Site. Currently, there are 10 parallel parking spaces along this segment of West Silver Lake Drive. By converting to 90-degree parking, a total of approximately 25 parking spaces would be added, resulting in a net increase in parking of 15 spaces at this location. Two of the new parking spaces would be dedicated to electric vehicle (EV) parking. As such, the Project would support compliance with this regulation.
- **Advance Clean Truck Regulation:** The Advanced Clean Truck Regulation has two components, a manufacturer sales requirement and a reporting requirement. The manufacturer component of the regulation requires manufacturers that certify Class 2b-8 chassis or complete vehicles with combustion engines would be required to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales. The reporting component of the regulation requires large employers, including retailers, manufacturers, brokers and others, would be required to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations. This information would help identify future strategies to ensure that fleets purchase available zero-emission trucks and place them in service where suitable to meet their needs. This would be applicable to occasional delivery trucks to the Project Site.

- **Low Carbon Fuel Standard (Executive Order S-01-07):** This regulation establishes a statewide goal to reduce the carbon intensity of California’s transportation fuels by at least 7.5 percent in the CI of California’s transportation fuels by 2020 and a 20 percent reduction in CI from a 2010 baseline by 2030. While this action does not directly apply to individual projects, future employees and visitors to the Project Site would utilize transportation fuels in compliance with this regulation. GHG emissions related to vehicular travel by Project would benefit from this regulation and mobile source emissions generated by future spectators, visitors, students and to the Project Site would be reduced with implementation of the LCFS.
- **SB 375:** SB 375 establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state’s Metropolitan Planning Organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. While this action does not directly apply to individual projects, the Project would not conflict with the SCAG 2020–2045 RTP/SCS goals and objectives under SB 375 to implement “smart growth.” As discussed in Section 3.8.4 the Project would not conflict with the SCAG 2020–2045 RTP/SCS. The Project would incorporate physical and operational Project characteristics that would reduce vehicle trips and VMT and encourage alternative modes of transportation for visitors and employees. The Project would support reducing VMT given its location within an established residential community with nearby access to public transportation within 0.25 mile of the Project Site. The Project Site is located near Metro’s Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the that runs on West Silver Lake Drive with multiple stops adjacent to the Complex and 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Complex and Metro Line 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Project. To further reduce reliance on fossil fuels and transportation-related GHG emissions, the Project Site currently has 10 parallel parking spaces along this segment of West Silver Lake Drive. By converting to 90-degree parking, a total of approximately 25 parking spaces would be added, resulting in a net increase in parking of 15 spaces at this location. Two of the new parking spaces would be dedicated to electric vehicle (EV) parking.

Solid Waste

- **California Integrated Waste Management Act (IWMA) of 1989 and AB 341:** The IWMA mandated that state agencies develop and implement an integrated waste management plan which outlines the steps to be taken to divert at least 50 percent of their solid waste from disposal facilities. AB 341 directs CalRecycle to develop and adopt regulations for mandatory commercial recycling and sets a statewide goal for 75 percent disposal reduction by the year 2020. In addition, the City has developed and is in the process of implementing the Solid Waste Integrated Resources Plan, also referred to as the Zero Waste Plan, whose goal is to lead the City towards being a “zero waste” city by 2030. While this action does not directly apply to individual projects, the Project would benefit from the IWMA and the SWIRP inasmuch as it would be served by a solid waste collection and recycling service that include mixed waste processing, and that yields waste diversion results comparable to source separation and consistent with Citywide recycling targets. According to the City of Los Angeles Zero Waste Progress Report (March 2013), the City achieved a landfill diversion rate of approximately 76 percent by year 2012 (LASAN 2013). In addition, as described in Section 2.5.7, *Sustainability Design Features*, the proposed Project would include recycling and compost receptacles throughout the park, which would reduce the amount of waste generated by the Project and reduce the number of trips to haul solid waste and therefore reduce the amount of petroleum-based fuels and energy used to process solid waste.

As demonstrated above, the Project would not conflict with the future anticipated statewide GHG reductions goals. CARB has outlined a number of potential strategies for achieving the 2030 statewide reduction target of 40 percent below 1990 levels, as mandated by SB 32. These potential strategies include using renewable resources for half of the state's electricity by 2030, increasing the fuel economy of vehicles and the number of zero-emission or hybrid vehicles, reducing the rate of growth in VMT, supporting other alternative transportation options, and use of high-efficiency appliances, water heaters, and HVAC systems (E3 2015). The Project would benefit from statewide and utility-provider efforts towards increasing the portion of electricity provided from renewable resources. The utility provider for the Project, LADWP, provided 34 percent of 2019 electricity purchases from renewable sources and would be required to provide 50 percent by 2025, 60 percent by 2030, and 100 percent by 2045 (LADWP 2020). The Project would also benefit from statewide efforts towards increasing the fuel economy standards of vehicles. The Project would support reducing VMT given its location within an established residential community to existing transit options, as described above.

As a result, the Project would not conflict with applicable Climate Change Scoping Plan strategies and regulations to reduce GHG emissions.

Post-2030 Analysis

The 2017 Scoping Plan also outlines strategies to reduce GHG emissions to achieve the 2030 target from sectors that are not directly controlled or influenced by the Project, but nonetheless contribute to Project-related GHG emissions. For instance, the Project itself is not subject to the Cap-and-Trade regulation; however, Project-related emissions would decline pursuant to the regulation as utility providers and transportation fuel producers are subject to renewable energy standards, Cap-and-Trade, and the LCFS. While CARB is in the process of expanding the regulatory framework to meet the 2030 reduction target based on the existing laws and strategies in the 2017 Scoping Plan, the Project would support or not impede implementation of these potential GHG reduction strategies identified by CARB for all the reasons summarized above.

In June 2018, an updated report was published on the California PATHWAYS model, which was used in the preparation of the 2017 Scoping Plan. This updated report determined that “meeting the state's 2030 climate goals requires scaling up and using technologies already in the market such as energy efficiency and renewables, while pursuing aggressive market transformation of new technologies that have not yet been utilized at scale in California (for example, zero-emission vehicles and electric heat pumps)” (CEC 2018). Priority GHG reduction strategies include energy efficiency in buildings, renewable energy, and smart growth through increased use of public transit, walking, biking, telepresence, and denser, mixed-use community design. Further, as stated above, Project emissions in Table 3.8-6 do not reflect the fact that Project operational-related GHG emissions would likely be lower as the Project would provide additional sustainability features that would help to reduce the Project's outdoor water demand and reduce associated GHG emissions from water supply, conveyance, distribution and treatment. As described in Section 3.18, *Utilities and Service Systems*, the Project would include strategies to reduce irrigation water demand through PDF-UTIL-1 and PDF-UTIL-2. Through PDF-UTIL-1, the Project would use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and

strategically distributed where needed to support multifunctional cultural and recreational uses. Through PDF-UTIL-2, Irrigation water would be pumped from the reservoirs to the proposed Meadow park zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette proposed under the proposed Project. This irrigation strategy would be validated by reservoir water quality testing and soil analysis under proposed operations. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. If recycled water is available in the future, it could be used to irrigate ornamental planting (see Section 3.18, *Utilities and Service Systems*, for additional details). In addition, as described in Section 2.5.7, *Sustainability Design Features*, the proposed Project would include recycling and compost receptacles throughout the park, which would reduce the amount of waste generated by the Project and reduce the number of trips to haul solid waste and therefore reduce the amount of petroleum-based fuels and energy used to process solid waste. As such, the Project would not conflict with the findings relevant to the Project from the updated California PATHWAYS model report.

With statewide efforts underway to facilitate the state's achievement of those goals, it is reasonable to expect the Project's GHG emissions to decline from their opening year levels as reported in Table 3.8-6, above, as the regulatory initiatives identified by CARB in the 2017 Scoping Plan are implemented, and other technological innovations occur. Stated differently, the Project's emissions at buildout likely represents the maximum emissions for the Project as anticipated regulatory developments and technology advances are expected to reduce emissions associated with the Project, such as emissions related to electricity use and vehicle use.

Even though the 2017 Scoping Plan and supporting documentation do not provide an exact regulatory and technological roadmap to achieve 2050 goals, they demonstrate that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the study or not currently feasible at the time the 2017 Scoping Plan was adopted could enable the state to meet the 2050 targets.¹³ For example, the 2017 Scoping Plan states some policies are not feasible at this time, such as Net Zero Carbon Buildings, but that this type of policy would be necessary to meet the 2050 target.

Based on the above, the Project would not conflict with CARB's Climate Change Scoping Plan, and there would be an anticipated decline in Project emissions once fully constructed and operational; the Project would not conflict with the state's GHG reduction targets for 2030 and 2050. Therefore, impacts would be less than significant. As stated above, a detailed consistency

¹³ E3, Summary of the California State Agencies' PATHWAYS Project: Long-Term Greenhouse Gas Reduction Scenarios, April 6, 2015; Greenblatt, Jeffrey, "Modeling California Impacts on Greenhouse Gas Emissions," Energy Policy, Vol. 78, 2015, pages 158-172. The CARB, CEC, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80% below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation, and electricity sectors.

table that contains a list of the state’s Climate Change Scoping Plan GHG-reducing strategies applicable to the Project and describes that the Project would not conflict with the Climate Change Scoping Plan is available in the *Air Quality and Greenhouse Gas Technical Appendix* for the Project, which is provided in Appendix C of this Draft EIR.

SCAG’s 2020–2045 RTP/SCS

Transportation-related GHG emissions would be the largest source of emissions from the Project. This finding is consistent with the findings in regional plans, including the 2020–2045 RTP/SCS, which recognizes that the transportation sector is the largest contributor to the state’s GHG emissions. At the regional level, the 2020–2045 RTP/SCS is an applicable plan adopted for the purpose of reducing GHGs.

The purpose of the 2020–2045 RTP/SCS is to achieve the regional per capita GHG reduction targets for the passenger vehicle and light-duty truck sector established by CARB pursuant to SB 375. To accomplish this goal, the 2020–2045 RTP/SCS identifies various strategies to reduce per capita VMT. The 2020–2045 RTP/SCS is expected to help SCAG reach its GHG reduction goals, as identified by CARB, with reductions in per capita passenger vehicle GHG emissions for specified target years.

In addition to demonstrating the region’s ability to attain and exceed the GHG emission-reduction targets set forth by CARB, the 2020–2045 RTP/SCS outlines a series of actions and strategies for integrating the transportation network with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. Thus, successful implementation of the 2020–2045 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use. With regard to individual developments, such as the Project, strategies and policies set forth in the 2020–2045 RTP/SCS can be grouped into the following three categories: (1) reduction of vehicle trips and VMT, (2) increased use of alternative fuel vehicles, and (3) improved energy efficiency. These strategies and policies are addressed below.

In order to assess the Project’s potential to conflict with the 2020–2045 RTP/SCS, this section analyzes the Project’s land use characteristics for consistency with the strategies and policies set forth in the 2020–2045 RTP/SCS to meet GHG emission-reduction targets set by CARB.¹⁴ Generally, projects are considered to not conflict with applicable land use plans and regulations, such as SCAG’s 2020–2045 RTP/SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The Project would not conflict with the 2020–2045 RTP/SCS goals and benefits intended to improve mobility and access to diverse destinations, provide better “placemaking,” provide more transportation choices, and reduce vehicular demand and associated emissions. Thus, successful implementation of the 2020–2045 RTP/SCS would result in more complete communities with a variety of transportation and housing choices, while reducing automobile use.

¹⁴ As discussed in the 2020–2045 RTP/SCS, the actions and strategies included in the 2020–2045 RTP/SCS remain unchanged from those adopted in the 2012–2035 and 2016–2040 RTP/SCS.

Integrated Growth Forecast

The 2020–2045 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG’s Regional Council, are based on the local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. While the Project does not propose residential uses or new businesses, new employees would be introduced by the Project. On a typical day in which special events/life performances on the Silver Lake Lawn in the Meadow (i.e., fewer than 600 spectators and participants) would take place. Approximately 5 employees would be net new and would include operations and maintenance positions. According to the 2020–2045 RTP/SCS, the employment forecast for the City of Los Angeles Subregion in 2022 is approximately 1,907,801 employees (SCAG 2020a). In 2030, the projected occupancy year of the Project, the City of Los Angeles Subregion is anticipated to have 1,987,139 employees (SCAG 2020a). Thus, the Project’s estimated 5 employees would constitute 0.01 percent of the employment growth forecasted in the City between 2022 and 2030. Accordingly, the Project’s generation of employees would not conflict with employment generation projections contained in the 2020–2045 RTP/SCS. Refer to Section 3.11, *Land Use and Planning*, of this Draft EIR, for additional information regarding consistency with the 2020–2045 RTP/SCS.

VMT Reduction Strategies and Policies

The Project is a development within an established residential community at a location served by several local and regional bus lines. Existing transit options serving the Project include Metro’s Line 201 that runs West Silver Lake Drive with multiple stops adjacent to the SLRC and 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Complex and Metro Line 92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the Project. In addition, as described in Section 2.5.7, *Sustainability Design Features*, although the Project is not required to provide any bicycle parking spaces per the LAMC, the Project would also provide on-site bicycle parking spaces and improve existing bike lanes along Silver Lake Boulevard, and the proposed Project would provide drop-off space for micro-mobility initiatives such as Metro Micro (see Chapter 2.0, *Project Description*, for additional details). The Project would provide visitors and employees with the ability to access nearby public transit and opportunities for walking and biking, which would facilitate a reduction in VMT and related vehicular GHG emissions, and would not conflict with the VMT Reduction Strategies and Policies of the 2020–2045 RTP/SCS.

The Project would also not be in conflict with the following key GHG reduction strategies in SCAG’s 2020–2045 RTP/SCS as substantiated below, which are based on changing the region’s land use and travel patterns in the following key areas (SCAG 2020b):

- Compact growth in areas accessible to transit
- Locate jobs in proximity to transit
- Locate job growth focused in Priority Growth Areas
- Biking and walking infrastructure to improve active transportation options and transit access

As discussed previously, the Project is located within an established residential community well served by public transportation. As described under the *CARB'S Climate Change Scoping Plan* subsection, in Section 3.8.4 above, several transit providers operate service within the immediate vicinity of the Project Site. The 2020–2045 RTP/SCS focuses on orienting job growth in Priority Growth Areas served by high quality transit and into other infill areas where urban infrastructure already exists. The Project supports this by locating recreational uses within an established residential community with an existing street grid and in proximity to existing public transit options and in proximity to off-site uses (i.e., commercial, shopping and entertainment businesses and neighborhood housing uses) would allow people in the neighborhood and community to utilize the nearby Project Site services. In addition, as described in Section 2.5.7, *Sustainability Design Features*, although the Project is not required to provide any bicycle parking spaces per the LAMC, the Project would also provide on-site bicycle parking spaces and improve existing bike lanes along Silver Lake Boulevard, and the proposed Project would provide drop-off space for micro-mobility initiatives such as Metro Micro (see Chapter 2.0, *Project Description*, for additional details). The Project would provide visitors, students, and employees with the ability to access nearby public transit and opportunities for walking and biking, which would facilitate a reduction in VMT and related vehicular GHG emissions, which would not conflict with the goals of the 2020–2045 RTP/SCS.

By locating the Project's proposed recreational land uses within an area that has existing high quality public transit (with access to existing regional bus and rail service) and employment opportunities within walking distance, and by including features that support and encourage pedestrian activity and other non-vehicular transportation and increased transit use in the Silver Lake neighborhood of the Los Angeles area, the Project would reduce vehicle trips and VMT and resulting air pollution and GHG emissions. Therefore, by facilitating a land use pattern that promotes sustainability, the proposed Project would not conflict with VMT objectives of the 2020–2045 RTP/SCS.

A detailed consistency table that contains a list of the 2020–2045 RTP/SCS actions and strategies GHG-reducing strategies applicable is available in Appendix C, *Air Quality and Greenhouse Gas Technical Appendix*. The consistency table shows that the Project would not conflict with the 2020–2045 RTP/SCS

Increased Use of Alternative Fueled Vehicles Policy Initiative

A goal of the 2020–2045 RTP/SCS, with regard to individual development projects, such as the Project, is to increase alternative fueled vehicles to reduce per capita GHG emissions. The 2020–2045 RTP/SCS policy initiative focuses on providing charge port infrastructure and accelerating fleet conversion to electric or other near zero-emission technologies. Currently, there are 10 parallel parking spaces along this segment of West Silver Lake Drive. By converting to 90-degree parking, a total of approximately 25 parking spaces would be added, resulting in a net increase in parking of 15 spaces at this location. Two of the new parking spaces would be dedicated to electric vehicle (EV) parking. As such, the Project would not conflict with this goal of the 2020–2045 RTP/SCS.

Energy Efficiency Strategies and Policies

The 2020–2045 RTP/SCS includes strategies for individual developments, such as the Project, to improve energy efficiency (e.g., reducing energy consumption) to reduce GHG emissions. As discussed in Chapter 2.0, *Project Description*, the Project has been designed and would be constructed to incorporate environmentally sustainable building features and construction protocols required by the Los Angeles Green Building Code and CALGreen Code. These standards would reduce energy and water usage and waste and, thereby, reduce associated greenhouse gas emissions and help minimize the impact on natural resources and infrastructure. The Project would include energy-saving measures. These measures include natural light to be harvested for the main spaces in the gymnasium building using large expanses of glass and skylights; daylighting systems to coordinate the levels of artificial lighting; HVAC systems that would be sized and designed in compliance with the CALGreen Code to maximize energy efficiency caused by heat loss and heat gain; high efficiency, low-e insulated glass units to be used for the gymnasium building envelope; glazing to be protected from direct sunlight with deep overhangs and window screening to mitigate glare, and reduce solar radiation and heat gain; and new and existing tree canopies to be utilized to protect building walls from sun exposure and provide shade for the ground area. These measures were generally accounted for based on compliance with 2019 Title 24 standards.

The Project would include water sustainability features, which would include, but not limited to, the installation of low-flow toilets, low-flow faucets, low-flow showers, and other energy and resource conservation measures. In addition, as described in Section 3.18, *Utilities and Service Systems*, the Project would include strategies to reduce irrigation water demand through PDF-UTIL-1 and PDF-UTIL-2. Through PDF-UTIL-1, the Project would use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses. Through PDF-UTIL-2, Irrigation water would be pumped from the reservoirs to the proposed Meadow park zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette proposed under the proposed Project. This irrigation strategy would be validated by reservoir water quality testing and soil analysis under proposed operations. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. If recycled water is available in the future, it could be used to irrigate ornamental planting (see Section 3.18, *Utilities and Service Systems*, for additional details). Therefore, based on the above, the Project would not conflict with energy strategies in the 2020–2045 RTP/SCS.

Land Use Characteristics

In order to assess the Project’s consistency with the 2020–2045 RTP/SCS, this Draft EIR also analyzes the Project’s land use characteristics, such as density and proximity to job centers, for consistency with those utilized by SCAG in its SCS. The Project’s consistency with the applicable land use goals and principles set forth in the 2020–2045 RTP/SCS are discussed in Section 3.11, *Land Use and Planning*, Table 3.11-1, of this Draft EIR. As concluded on Table

3.11-1, the Project would not conflict with applicable land use strategies of the 2020–2045 RTP/SCS.

Conclusion

As discussed in the above analysis, the Project would not conflict with and would support the goals and benefits of the 2020–2045 RTP/SCS to reduce GHG emissions that are potentially applicable to the Project. As stated above, a detailed consistency table that contains a list of the 2020–2045 RTP/SCS actions and strategies GHG-reducing strategies applicable to the Project and describes that the Project would not conflict with the 2020–2045 RTP/SCS is available in the *Air Quality and Greenhouse Gas Technical Appendix* for the Project, which is provided in Appendix C of this Draft EIR. Accordingly, the Project is the type of land use development that is encouraged by the 2020–2045 RTP/SCS to reduce VMT and expand multi-modal transportation options in order for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the state’s long-term climate policies. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with state regulatory requirements. Impacts are less than significant.

City’s Green New Deal

The City’s Green New Deal includes both short-term and long-term aspirations through the year 2050 in various topic areas, including water, solar power, energy-efficient buildings, carbon and climate leadership, waste and landfills, housing and development, mobility and transit, and air quality, among others.

While not a plan adopted solely to reduce GHG emissions, within the City’s Green New Deal, climate mitigation is one of eight explicit benefits that help define its strategies and goals. Although the Green New Deal mainly targets GHG emissions related to City-owned buildings and operations, certain reductions associated with the Project would promote the Green New Deal’s goals. Such measures include increasing renewable energy usage; reduction of per capita water usage; promotion of walking and biking, promotion of educational and recreational uses close to transit; and various recycling and trash diversion goals. In addition, a detailed consistency table that contains a list of the Green New Deal actions and strategies GHG-reducing strategies applicable to the Project and describes that the Project would not conflict with the Climate Change Scoping Plan is available in the *Air Quality and Greenhouse Gas Technical Appendix* for the Project, which is provided in Appendix C of this Draft EIR.

Although the City’s Green New Deal is not an adopted plan or directly applicable to private development projects, the Project would not conflict with these aspirations as it is a development consisting of educational and recreational uses on a Project Site in proximity to transit. In addition, the Project would comply with Title 24 Standards and would implement measures to reduce overall energy usage compared to baseline conditions. The Project would comply with the City of Los Angeles Solid Waste Management Policy Plan, and the Exclusive Franchise System Ordinance (Ordinance No. 182,986) in furtherance of the aspirations included in the Green New Deal with regard to energy-efficient buildings and waste and landfills. The Project would also

provide bicycle parking and connections to walking and biking paths in furtherance of reducing VMT and decreasing GHG.

With compliance with the City of Los Angeles' Green New Deal, all new municipally-owned buildings and major building renovation projects will utilize electricity instead of natural gas. Accordingly, natural gas would not be supplied to support proposed Project operation activities related to building energy.

Additionally, as described in Section 3.18, *Utilities and Service Systems*, the Project would include strategies to reduce irrigation water demand through PDF-UTIL-1 and PDF-UTIL-2. Through PDF-UTIL-1, the Project would use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses. Through PDF-UTIL-2, Irrigation water would be pumped from the reservoirs to the proposed Meadow park zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette proposed under the proposed Project. This irrigation strategy would be validated by reservoir water quality testing and soil analysis under proposed operations. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. If recycled water is available in the future, it could be used to irrigate ornamental planting (see Section 3.18, *Utilities and Service Systems*, for additional details). Therefore, as the Project's GHG emissions would be generated in connection with a development located and designed to be consistent with the applicable City plan goals and actions for reducing GHG emissions, the Project would not conflict with these City plans adopted for the purpose of reducing GHG emissions, and the Project's GHG emissions would result in less-than-significant impacts.

Los Angeles Green Building Code

The Project would comply with the California 2019 Title 24 Building Energy Efficiency Standards, as amended by the City. The Project would also meet the mandatory measures of the CALGreen Code as amended by the City by incorporating strategies, such as natural light to be harvested for the main spaces in the gymnasium building using large expanses of glass and skylights; daylighting systems to coordinate the levels of artificial lighting; HVAC systems that would be sized and designed in compliance with the CALGreen Code to maximize energy efficiency caused by heat loss and heat gain; high efficiency, low-e insulated glass units to be used for the gymnasium building envelope; glazing to be protected from direct sunlight with deep overhangs and window screening to mitigate glare, and reduce solar radiation and heat gain; and new and existing tree canopies to be utilized to protect building walls from sun exposure and provide shade for the ground area. The Project would also include the installation of low-flow toilets, low-flow faucets, low-flow showers, and other energy and resource conservation measures.

As described in Section 3.18, *Utilities and Service Systems*, the Project would include strategies to reduce irrigation water demand through PDF-UTIL-1 and PDF-UTIL-2. Through PDF-UTIL-1, the Project would use a mix of native and drought-tolerant plants appropriate to the Los

Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses. Through PDF-UTIL-2, Irrigation water would be pumped from the reservoirs to the proposed Meadow park zones which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette proposed under the proposed Project. This irrigation strategy would be validated by reservoir water quality testing and soil analysis under proposed operations. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply available from the LADWP distribution system which would require a dedicated meter. If recycled water is available in the future, it could be used to irrigate ornamental planting (see Section 3.18, *Utilities and Service Systems*, for additional details). Therefore, the Project would not conflict with the Los Angeles Green Building Code.

Conclusion

In conclusion, the Project's consistency with applicable GHG reduction plans and policies demonstrate that the Project does not conflict with regulations and policies and complies with or exceeds the regulations and reduction actions/strategies outlined in the Climate Change Scoping Plan, 2025–2045 RTP/SCS, the City's Green New Deal, and the Los Angeles Green Building Code. Therefore, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHGs, and Project-specific impacts with regard to GHG emissions would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Cumulative Impact

Impact 3.8-3: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to greenhouse gas emissions?

Analysis of GHG emissions is cumulative in nature because impacts are caused by cumulative global emissions and additionally, climate change impacts related to GHG emissions do not necessarily occur in the same area as the project is located. Given that the Project would generate GHG emissions that would not conflict with applicable reduction plans and policies, and given that GHG emission impacts are cumulative in nature, the Project's incremental contribution to cumulatively significant GHG emissions would be less than significant.

Although the Project is expected to emit GHGs, the emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG from more than one project and many sources in the atmosphere that may result in global climate change. The resultant consequences of that climate change can cause adverse environmental effects. A project's GHG emissions typically would be very small in

comparison to state or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change. The state has mandated a goal of reducing statewide emissions to 40 percent below 1990 levels by 2030, even though statewide population and commerce are predicted to continue to expand. In order to achieve this goal, CARB is in the process of establishing and implementing regulations to reduce statewide GHG emissions. Currently, there are no applicable CARB, SCAQMD, or City of Los Angeles significance thresholds or specific reduction targets, and no approved policy or guidance to assist in determining significance at the project or cumulative levels. Additionally, there is currently no generally accepted methodology to determine whether GHG emissions associated with a specific project represent new emissions or existing, displaced emissions. Therefore, consistent with CEQA Guidelines Section 15064h(3),¹⁵ the City, as lead agency, has determined that the Project's contribution to cumulative GHG emissions and global climate change would be less than significant if the Project would not conflict with the applicable regulatory plans and policies to reduce GHG emissions: Climate Change Scoping Plan, SCAG's 2020–2045 RTP/SCS, City's Green New Deal, and the Los Angeles Green Building Code.

Subsection 3.8.2, CARB's Climate Change Scoping Plan, illustrates that implementation of the Project's regulatory requirements and Project Design Features, including state mandates, would contribute to GHG reductions. These reductions represent a reduction from the Project without implementation of GHG reduction characteristics, features, and measures scenario and support state goals for GHG emissions reduction. The methods used to establish this relative reduction are consistent with the approach used in CARB's Climate Change Scoping Plan for the implementation of AB 32.

The Project is consistent with the approach outlined in CARB's Climate Change Scoping Plan, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. In addition, as recommended by CARB's Climate Change Scoping Plan, the Project would use "green building" features as a framework for achieving GHG emissions reductions as new buildings would be designed to comply with the City's requirements and the CALGreen Code.

As part of SCAG's 2020–2045 RTP/SCS, a reduction in VMT within the region is a key component to achieving the 2035 GHG emission reduction targets established by CARB. As discussed previously, the Project Site's land use characteristics demonstrate that the Project's VMT would be reduced compared to a standard non-infill project and based on its location efficiency.

¹⁵ As indicated above, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction program renders a cumulative impact insignificant. Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project will comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] plans or regulations for the reduction of greenhouse gas emissions."

As discussed in Section 3.3, *Air Quality*, and in Section 3.11, *Land Use and Planning*, of this Draft EIR, the Project would not conflict with applicable land use policies of the City of Los Angeles and SCAG pertaining to air quality, including reducing GHG emissions.

The Project also would comply with the City's Green New Deal, as discussed under Threshold (b) in Subsection 3.8.5, City's Green New Deal, which emphasizes improving energy conservation and energy efficiency, increasing renewable energy generation, and changing transportation and land use patterns to reduce auto dependence. The Project would also comply with the Los Angeles Green Building Code, which emphasizes improving energy conservation and energy efficiency, and increasing renewable energy generation. The Project's regulatory requirements and project design features provided above and throughout this Draft EIR would advance these objectives. Furthermore, the related projects would also be anticipated to comply with many of these same emissions reduction goals and objectives (e.g., Los Angeles Green Building Code).

As discussed above, the Project would not conflict with the applicable GHG reduction plans and policies. The comparison of the Project's emissions to a scenario without GHG reduction features demonstrates the efficacy of the measures contained in these policies. Moreover, while the Project is not directly subject to the Cap-and-Trade Program, that Program would indirectly reduce the Project's GHG emissions by regulating "covered entities" that affect the Project's GHG emissions, including energy, mobile, and construction emissions. More importantly, the Cap-and-Trade Program would backstop the GHG reduction plans and policies applicable to the Project in that the Cap-and-Trade Program would be responsible for relatively more emissions reductions if California's direct regulatory measures reduce GHG emissions less than expected. The Cap-and-Trade Program would ensure that the GHG reduction targets of AB 32 and SB 32 are met.

The 2017 Scoping Plan demonstrates that the state's existing and proposed regulatory framework would allow the state to reduce its GHG emissions level to 40 percent below 1990 levels by 2030. Even though the 2017 Scoping Plan and supporting documentation do not provide an exact regulatory and technological roadmap to achieve the 2050 goal, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the state to meet the 2050 target. Subsequent to the findings of these studies, SB 32 was passed on September 8, 2016, which would require CARB to ensure that statewide GHG are reduced to 40 percent below the 1990 emissions level by 2030. As discussed above, the new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

Thus, based on the above, the Project would not generate GHG emissions, either directly or indirectly, that would have a significant impact on the environment and would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. In the absence of adopted standards and established significance thresholds, and given this consistency, the Project's impacts would not be cumulatively considerable, and, therefore, the Project's cumulative GHG emissions impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.8.6 Summary of Impacts

Table 3.8-7 summarizes the impact significance determinations and lists mitigation measures related to greenhouse gas emissions.

**TABLE 3.8-7
SUMMARY OF PROPOSED PROJECT IMPACTS TO GREENHOUSE GAS EMISSIONS**

Impact	Mitigation Measure	Significance
3.8-1: Greenhouse Gas Emissions	None Required	LTS
3.8-2: Applicable Plan, Policy, or Regulation	None Required	LTS
3.8-3: Cumulative	None Required	LTS

NOTES:
NI = No Impact, no mitigation proposed
LTS = Less than Significant, no mitigation proposed
LTSM = Less than Significant Impact with Mitigation Incorporated
SU = Significant and Unavoidable

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3.9 Hazards and Hazardous Materials

This section addresses the potential impacts to hazards and hazardous materials impacts associated with implementation of the proposed Project. This section includes a description of the existing hazardous materials conditions in the proposed Project area, a summary of applicable regulations related to hazards and hazardous materials, and an evaluation of the potential impacts of the proposed Project related to hazards and hazardous materials. Project Design Features include **PDF-TRA-1: Construction Traffic Management Plan**, **PDF-TRA-2: Construction Staging Plan**, **PDF-TRA-3: Construction Traffic**, **PDF-TRA-4: Access to Parcels**, **PDF-TRA-5: Site-Specific Traffic Control and Transit Plan for Large Events**, and **PDF-WF-5. Brush Clearing Activities**. Impacts to hazards and hazardous materials were found to be less than significant, and no mitigation is required.

3.9.1 Environmental Setting

The discussion of the potential presence of hazardous materials in the proposed Project area is based on the results of the Phase I Environmental Site Assessment (Phase I) prepared for the proposed Project and included as **Appendix I** to this Draft EIR. The section below summarizes the results of the Phase I related to onsite hazardous materials and is followed by other hazards and hazardous materials topics, including schools and airports, emergency response, and wildland fires.

Onsite Hazardous Materials

Hazardous Materials Database Review

Federal, State, and local regulatory agencies publish databases of businesses and properties that handle hazardous materials or hazardous waste, including those properties with a known release of hazardous substances to soil and/or groundwater. A government database search was conducted for listings within the appropriate American Society for Testing and Materials (ASTM) standard minimum search distance (EnviroSite 2021). In general, reported or potential releases likely to affect a property include those located on or within a 1/8-mile (660-foot) radius of the subject property.

For the Phase I, listings in the proposed Project vicinity were evaluated with regard to the nature of potential chemicals of concern and the extent of known releases. Additional factors were also considered as part of the hazardous conditions evaluation, such as chemical properties, regional knowledge of the site vicinity, groundwater flow direction, and available past regulatory documentation, to determine if any of the three types of hazardous conditions, defined by ASTM Standard of Practice E1527-21, occur in the proposed Project area:

- **Recognized Environmental Conditions (RECs):** A REC is considered to be (1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; (2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or (3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

- **Historical Recognized Environmental Conditions (HRECs):** A HREC is considered to be a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).
- **Controlled Recognized Environmental Conditions (CRECs):** A CREC is a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

According to the government database search, the proposed Project area includes an active Hazardous Waste Generator and Hazardous Material permit with the City of Los Angeles Fire Department (LAFD) (which is the local Certified Unified Program Agency [CUPA]) for the Silver Lake Chlorination Station that is used to store approximately 200 gallons of bleach and 100 gallons of sodium thiosulfate. In addition, the Silver Lake and Ivanhoe Reservoirs Aeration and Recirculation Systems Projects are listed as active sites, but are permitted uses under Clean Water Act Section 401. Based on the lack of reported spills, leaks, or violations from listings in the proposed Project area, these listings are not considered to represent a REC. No other listings were located within the proposed Project area.

Three former leaking underground storage tanks (LUSTs) are listed approximately 500 to 650 feet east of the proposed Project area; however, the sites were determined to not be RECs relative to the proposed Project area due to past remediation, monitoring, and subsequent case closures by the Los Angeles Regional Water Quality Control Board (RWQCB). Further, the former contamination sites have since been developed with residential uses, a library, and a bank, and no longer have the potential to contaminate the proposed Project area. Several other sites in the surrounding Silver Lake neighborhood are listed for the use, storage, and/or disposal of hazardous materials, but with no recorded violations or spills. For example, residential properties in the vicinity of the subject property are listed for the past removals of asbestos-containing materials.

Site Reconnaissance and Agency Consultation

The proposed Project area was inspected on October 18, 2021. Facilities at the proposed Project area including the Los Angeles Department of Water and Power's (LADWP) modular office building, Silver Lake Chlorination Station, storage containers, the Silver Lake Recreation Facility, and an auxiliary storage building were observed for chemical spills, underground or aboveground storage tanks, waste pits or ponds, stained soil or floors, unusual odors, or stressed vegetation. No RECs, HRECs, or CRECs were noted in the proposed Project area relative to hazardous materials, hazardous waste, or chemical use, storage, or disposal.

Representatives from the LADWP Hazardous Substances Group provided responses to a questionnaire regarding hazardous materials use and storage at the subject property following the

site visit, which included the following information: A second chlorination station was previously maintained by LADWP in the proposed Project area and has since been taken out of service and deregistered from California Accidental Release (CalARP) and Risk Management Plan (RMP) requirements on June 17, 2014. There is no history of reported spills at the chlorination stations. Separately, on April 9, 2008, there was a contained automotive oil spill on the walking path around Silver Lake Reservoir, on the southwest side near an outlet tower, which did not enter any water way or storm drain. The spill was cleaned up by LADWP Hazardous Substances Group. LADWP's Wastewater Quality and Compliance Group checked most recent spill records and no accidental spill reports were identified for the subject property. Other potentially hazardous conditions at the subject property were addressed in the interview documentation, including but not limited to: the use of pesticides and herbicides at the subject property via spray and bait boxes; pre-1980 buildings which may contain asbestos-containing materials (ACM) and lead-based paint (LBP); and, when reservoir fills beyond its capacity, the discharge of reservoir waters into a spillway that deposits into a storm drain system that connects to Ballona Creek. To LADWP's knowledge, the subject property has never had above or below ground storage tanks and has no known history of hazardous materials spills.

Schools

Within a 2-mile radius of the proposed Project area, there are: 28 private and charter schools; 18 public elementary schools; 14 early childhood education and Head Start Schools; 3 public high schools; 3 public middle schools; and 3 special curriculum schools and programs; totaling 69 school facilities (ESRI 2022; County of Los Angeles 2022; ESA 2021). The Neighborhood Nursery School is located at 2700 Tesla Avenue, within the northeast boundary of the SLRC.

Airports

There are no airports or airstrips located within two miles of the proposed Project area, nor is the proposed Project area located within an airport planning boundary/airport influence area (AIA), as depicted in the Los Angeles County Airport Land Use Plan (ALUP) (Los Angeles County Airport Land Use Commission [ALUC] 2004). The nearest airport is the Bob Hope Airport, located approximately 8.5 miles northwest of the proposed Project.

Emergency Preparedness

City evacuation routes consist of major interstates, highways, and primary arterials in the proposed Project area. The City has developed a dynamic approach to evacuation response and potential evacuation routes will vary based on the type and location of hazard or disaster. Some potential evacuation routes have been pre-selected by the City based on a number of considerations (e.g., tsunami evacuation routes in coastal areas), while other routes are shared in real time depending on which disaster and suitable evacuation routes are identified. No evacuation routes are located in the vicinity of the Project area that have been pre-selected by the City for use during hazards or disasters. However, Silver Lake Boulevard trends in north-south direction along the southeast boundary of the proposed Project area and would be the most likely evacuation route that could be used during a natural hazard or disaster, as it is the only arterial roadway adjacent to the proposed Project area (City of Los Angeles 1996).

Due to existing hazardous materials handling and hazardous waste generation at the Silver Lake Chlorination Station, LADWP implements emergency response planning and training procedures for immediate response to a reportable or threatened release of hazardous materials at the Project site using a California Environmental Reporting System (CERS) Consolidated Emergency Response/Contingency Plan (CERC), which is regulated by the LAFD CUPA. The CERC includes procedures for preventing and mitigating hazardous materials releases, emergency evacuation, and worker training. In addition, the CERC lists on-site emergency equipment and includes existing arrangements for emergency services (LADWP 2020a).

Wildfire

The California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards throughout the State. The maps classify lands into fire hazard severity zones, based on a hazards scoring system that takes into account localized factors such as fuel, slope, fire weather, and winds to identify the degree of fire hazard throughout California (e.g. moderate, high, or very high). At the local level, the LAFD has designated most of the hilly and mountainous regions of the City as a Very High Fire Hazard Severity Zone (VHFHSZ). Lands within the LAFD VHFHSZ are generally designated for open space or low density residential development (City of Los Angeles 1996). While fire hazard severity zones do not predict when or where a wildfire will occur, they do identify areas where wildfire hazards could be more severe and therefore are of greater concern.

The proposed Project area lies entirely within a CAL FIRE Local Responsibility Area (LRA) VHFHSZ and within the City's VHFHSZ (CAL FIRE 2012; LAFD 2022). However, review of CAL FIRE's California Statewide Fire Map and Fire Resource Assessment Program (FRAP) database indicates that there is not a significant potential for wildfire near the proposed Project area (CAL FIRE 2021a, b). The proposed Project could be subject to the occasional wildfire encroachment, most likely originating from open space and forested areas like Griffith Park in the proposed Project vicinity. Please refer to Section 3.14, *Wildfire*, for additional details on fire conditions in the proposed Project area.

3.9.2 Regulatory Framework

Hazards and hazardous materials are subject to numerous federal, state, and local laws and regulations intended to protect health, safety, and the environment. The U.S. Environmental Protection Agency (USEPA), California Department of Toxic Substances Control (DTSC), Los Angeles Regional Water Quality Control Board (RWQCB), and the City of Los Angeles are the primary agencies enforcing these regulations.

State and local agencies often have either parallel or more stringent rules than federal agencies. In some cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of certain federal laws and their enforcement are discussed under either the state or local agency section. For example, local regulatory agencies enforce many federal and state regulations through the CUPA program. The LAFD is the designated CUPA responsible for implementing statewide standards to each facility that treats on-site waste,

generates hazardous waste, operates underground storage tanks, or stores hazardous materials within the City, as discussed below in the State and Local regulations sections.

Federal

Federal agencies with responsibility for hazardous materials management include the USEPA, Department of Labor (Federal Occupational Health and Safety Administration [OSHA]), and Department of Transportation (US DOT). Major federal laws and issue areas include the following statutes and regulations:

Resources Conservation and Recovery Act (42 USC 6901 et seq.)

Resources Conservation and Recovery Act (RCRA) is the principal law governing the management and disposal of hazardous materials. RCRA is considered a “cradle to grave” statute for hazardous wastes in that it addresses all aspects of hazardous materials from creation to disposal. RCRA applies to this proposed Project because RCRA is used to define hazardous materials. Offsite disposal facilities and the wastes each may accept are regulated under RCRA.

Toxic Substances Control Act (15 USC 2601 et seq.)

The Toxic Substances Control Act (TSCA) of 1976 was enacted by Congress to give the USEPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. The USEPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. The USEPA can ban the manufacture and import of those chemicals that pose an unreasonable risk.

Comprehensive Environmental Response, Compensation, and Liability Act (42 USC 9601 et seq.)

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “Superfund,” was enacted by Congress on December 11, 1980. This law provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Emergency Planning and Community Right-to-Know Act (EPCRA from SARA Title III)

EPCRA improved community access to information regarding chemical hazards and facilitated the development of business chemical inventories and emergency response plans. EPCRA also established reporting obligations for facilities that store or manage specified chemicals. EPCRA applies to this proposed Project because contractors using hazardous materials (e.g., fuels, paints and thinners, solvents, etc.) would be required to prepare and implement written emergency response plans to properly manage hazardous materials and respond to accidental spills.

US DOT Hazardous Materials Transportation Act of 1975 (49 USC 5101)

The US DOT, in conjunction with the USEPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 directs the U.S. DOT to establish criteria and regulations regarding the safe storage and transportation of hazardous materials. Code of Federal Regulations (CFR) 49, 171–180, regulates the transportation of hazardous materials, types of material defined as hazardous, and the marking of vehicles transporting hazardous materials.

The Federal Motor Carrier Safety Administration (49 CFR Part 383-397)

The Federal Motor Carrier Safety Administration, a part of the US DOT, issues regulations concerning highway transportation of hazardous materials, the hazardous materials endorsement for a commercial driver’s license, highway hazardous material safety permits, and financial responsibility requirements for motor carriers of hazardous materials.

Occupational Safety and Health Administration (OSHA; 29 USC 15)

OSHA is the federal agency responsible for ensuring worker safety. These regulations provide standards for safe workplaces and work practices, including those relating to hazardous materials handling.

State

The primary state agencies with jurisdiction over hazardous chemical materials management are DTSC, State Water Quality Control Board (SWQCB), and Los Angeles RWQCB. Other state agencies involved in hazardous materials management are the Department of Industrial Relations (State OSHA implementation), State Office of Emergency Services (CalOES)—CalARP implementation, California Air Resources Board (CARB), California Department of Transportation (Caltrans), California Highway Patrol (CHP), State Office of Environmental Health Hazard Assessment (OEHHA—Proposition 65 implementation) and California Integrated Waste Management Board (CIWMB). Hazardous materials management laws in California include the following statutes and regulations.

Senate Bill 1082 - Unified Hazardous Materials/Waste Program: Local Implementation

In 1993, the State Legislature passed Senate Bill (SB) 1082 to streamline the permitting process for those businesses that use, store, or manufacture hazardous materials. The passage of SB 1082 provided for the designation of a local CUPA that would be responsible for the permitting process and collection of fees. A CUPA is a local agency that has been certified by CalEPA to implement the Unified Program at the local level, which serves to consolidate, coordinate, and make consistent the administrative requirements, permits, inspections, and enforcement activities for the following six environmental and emergency management programs:

- Hazardous Materials Release Response Plans and Inventory (Business Plan) Program
- California Fire Code Hazardous Material Management Plans and Hazardous Material Inventory Statements

- CalARP Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act Requirements for Spill Prevention, Control and Countermeasure (SPCC) Plans
- Hazardous Waste Generator and On-Site Hazardous Waste Treatment (tiered permitting) Programs

LAFD is the designated CUPA responsible for implementing the above-listed program elements in the proposed Project area and the greater City of Los Angeles. Specific responsibilities of the LAFD in its capacity as the City CUPA are summarized below in the Local regulations section.

California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act)

The Business Plan Act requires preparation of hazardous materials business plans and disclosure of hazardous materials inventories, including an inventory of hazardous materials handled, plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies are responsible for administering these regulations.

Several state agencies regulate the transportation and use of hazardous materials to minimize potential risks to public health and safety, including the California Environmental Protection Agency (CalEPA) and the California Emergency Management Agency. The California Highway Patrol and Caltrans enforce regulations specifically related to the transport of hazardous materials. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roadways.

The Business Plan Act applies to this proposed Project because contractors would be required to comply with its handling, storage, and transportation requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Hazardous Waste Control Act (HWCA; California Health and Safety Code, Section 25100 et seq.)

The HWCA is the state equivalent of RCRA and regulates the generation, treatment, storage, and disposal of hazardous waste. This act implements the RCRA “cradle-to-grave” waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small-quantity generators, transportation and permitting requirements, as well as in its penalties for violations. HWCA applies to this proposed Project because contractors would be required to comply with its hazardous waste requirements that would reduce the possibility of spills.

California Accidental Release Prevention (CalARP) Program

The purpose of the CalARP is to prevent accidental releases of substances that can cause serious harm to the public and the environment, to minimize the damage if releases do occur, and to satisfy community right-to-know laws. This is accomplished by requiring businesses that handle more than a threshold quantity of a regulated substance listed in the regulations to develop a Risk Management Plan (RMP). An RMP is a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential. The RMP contains safety information, hazards review, operating procedures, training requirements, maintenance requirements, compliance audits, and incident investigation procedures (CalOES 2019).

California Division of Occupational Safety and Health (Cal/OSHA)

California OSHA (Cal/OSHA) is responsible for developing and enforcing workplace safety standards and assuring worker safety in the handling and use of hazardous materials. Among other requirements, Cal/OSHA requires many entities to prepare injury and illness prevention plans and chemical hygiene plans and provides specific regulations to limit exposure of construction workers to lead. OSHA applies to this proposed Project because contractors would be required to comply with its handling and use requirements that would reduce the possibility of spills, and to prepare an emergency response plan to respond to accidental spills.

Hazardous Waste and Substances Sites (Cortese List)

Government Code Section 65962.5, amended in 1992, requires the CalEPA to develop and update annually the Hazardous Waste and Substances Sites (Cortese List), which is a list of hazardous waste sites and other contaminated sites. The Cortese List is a planning document used by the State, local agencies, and developers to comply with California Environmental Quality Act (CEQA) requirements pertaining to providing information about the location of hazardous materials release sites. While the Cortese List is no longer maintained as a single list, the following databases provide information that meet the Cortese List requirements:

1. List of Hazardous Waste and Substances sites from the DTSC Envirostor database (HSC Sections 25220, 25242, 25356, and 116395);
2. List of open and active leaking underground storage tank (LUST) Sites by County and Fiscal Year from the SWRCB GeoTracker database (HSC Section 25295);
3. List of solid waste disposal sites identified by the SWRCB with waste constituents above hazardous waste levels outside the waste management unit (Water Code Section 13273[e] and 14 CCR Section 18051);
4. List of “active” Cease and Desist Orders and Cleanup and Abatement Orders from the SWRCB (California Water Code [CWC] Sections 13301 and 13304); and
5. List of hazardous waste facilities subject to corrective action pursuant to HSC Section 25187.5, identified by the DTSC.

NPDES Construction General Permit

Dischargers whose project disturbs one or more acres of soil, or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more

acres, are required to obtain coverage under the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities, or Construction General Permit (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). Construction activities subject to this permit include clearing, grading, grubbing, and other disturbances to the ground such as excavation and stockpiling, but do not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific Best Management Practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving off site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management, and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area.

Summary of Hazardous Building Materials Regulations

From the above-listed regulations, the use of hazardous building materials is subject to the following regulations specific to the demolition and renovation of structures:

- **Asbestos-containing materials:** CFR Title 40, Part 61, Subpart M (Asbestos National Emission Standards for Hazardous Air Pollutants [NESHAP]); California Code of Regulations (CCR) Title 8, Sections 1529 and 5208; and South Coast Air Quality Management District (SCAQMD) Regulation 14, Rule 1403.
- **Lead-based paint:** Title IV, Toxic Substances Control Act, Sections 402, 403, and 404; 8 CCR Section 1532.1; and SCAQMD Regulation 14, Rule 1402.
- **PCBs:** Resource Conservation and Recovery Act: 4 CFR 761; Toxic Substances Control Act: U.S. Code Title 15, and Section 2695; 22 CCR Section 66261.24.
- **Mercury and/or PCBs in light tubes and switches:** 22 CCR Sections 66262.11, 66273 et seq., and 67426.1 through 67428.1
- **Freon (chlorofluorocarbon and hydrochlorofluorocarbon refrigerants):** HSC, Sections 25143.2 and 25143.9

California Fire Code

The California Fire Code, Article 80, includes specific requirements for the safe storage and handling of hazardous materials. These requirements reduce the potential for a release of hazardous materials and for mixing of incompatible chemicals, and specify the following design features to reduce the potential for a release of hazardous materials that could affect public health or the environment:

- Separation of incompatible materials with a noncombustible partition.
- Spill control in all storage, handling, and dispensing areas.
- Separate secondary containment for each chemical storage system. The secondary containment must hold the entire contents of the tank, plus the volume of water needed to supply the fire-suppression system for a period of 20 minutes in the event of a catastrophic spill.

The California Fire Code, Article 79, includes specific requirements for the safe storage and handling of flammable and combustible liquids. Specific requirements address fire protection; prevention and assessment of unauthorized discharges; labeling and signage; protection from sources of ignition; specifications for piping, valving, and fittings; maintenance of aboveground tanks; requirements for storage vessels, vaults, and overfill protection; and requirements for dispensing, using, mixing, and handling of flammable and combustible liquids.

California Vehicle Code Section 38366

The California Vehicle Code, Section 38366, requires spark-arresting equipment on vehicles that travel off-road. This code applies to the proposed Project because the vehicles that construct proposed facilities in off-road areas would be required to have spark-arresting equipment to reduce the risk of wildfires.

Local

Certified Unified Program Agency

As the CUPA for the City, LAFD maintains the records regarding location and status of hazardous materials sites in the City and administers programs that regulate and enforce the transport, use, storage, manufacturing, and remediation of hazardous materials. By designating a CUPA, the City has accurate and adequate information to plan for emergencies and/or disasters and to plan for public and firefighter safety.

At the local level, LAFD in their role as the CUPA monitors the storage of hazardous materials for compliance with local requirements. Specifically, businesses and facilities that store more than threshold quantities of hazardous materials as defined in California HSC Code Chapter 6.95 are required to file an Accidental Risk Prevention Program with LAFD. This program includes information such as emergency contacts, phone numbers, facility information, chemical inventory, and hazardous materials handling and storage locations. LAFD also has the authority to administer and enforce federal and state laws and local ordinances for USTs. Plans for the installation, modification, upgrade, and removal of USTs are reviewed by LAFD inspectors.

In addition, the LAFD CUPA oversees and addresses issues relating to the presence and handling of contaminated soils that may be present at the proposed Project area. Any such hazardous materials that may be encountered would be managed (using tools, such as a Soil Management Plan [SMP]) in accordance with all relevant and applicable federal, state, and local laws and regulations that pertain to the use, storage, transportation and disposal of hazardous materials and waste. The SMP, if required, would describe the methodology to identify and manage (reuse or off-site disposal) contaminated soil during soil excavation and/or construction; provide protocols for confirmation sampling, segregation and stockpiling, profiling, backfilling, disposal, guidelines for imported soil, and backfill approval from the City's Department of Building and Safety (DBS); and describe the methodology to manage underground features that may be encountered during construction. The LAFD may consult with other agencies (e.g., DTSC and the Los Angeles RWQCB) if the nature of the contamination warrants the involvement of these agencies.

The LAFD also administers the applicable sections of the Los Angeles City Fire Code, including Division 8, Hazardous Materials Disclosures. Those businesses that store hazardous waste or hazardous materials must submit a Certificate of Disclosure to the LAFD.

City of Los Angeles Emergency Management Department (EMD) and Emergency Operations Organization (EOO)

The City of Los Angeles EMD leads the City's effort in the development of citywide emergency plans, revises and distributes the Emergency Operations Plan and Master Procedures and Annexes and updates and disseminates guidelines for the emergency response and recovery plans. The City EMD has five divisions comprised of administrative staff and specialists that work with City departments, municipalities, and community-based organizations to ensure that the City and its residents have the resources and information needed to prepare, respond, and recover from emergencies, disasters and significant events.

The EOO is the operational department of the City responsible for the City's emergency preparations (planning, training and mitigation), response, and recovery operations. The EOO comprises all agencies of the City's government, and centralizes command and information coordination. Each City agency, in turn, has operational protocols, as well as plans and programs, to implement EOO protocols and programs (EMD 2022).

Emergency Operations Plan

The Emergency Operations Plan (EOP) for the City of Los Angeles, including Appendices and Annexes, addresses the City's response from small- to large-scale emergency situations associated with natural disasters or human caused emergencies. The EOP describes the methods for carrying out emergency operations, the process for rendering mutual aid, the emergency services of governmental departments and agencies, how resources are mobilized, how the public will be informed and the process to ensure continuity of government during an emergency or disaster (EMD 2018).

2018 City of Los Angeles Local Hazard Mitigation Plan

The City EMD prepares and updates the City's Local Hazard Mitigation Plan (LHMP), which assesses risks posed by natural hazards and develops a mitigation action plan for reducing the risks to people, property, economy, and the environment in the City. The current LHMP was adopted in 2018 and is due to be updated in 2024. The LHMP complies with federal and state hazard mitigation planning requirements to establish eligibility for funding under the Federal Emergency Management (FEMA) grant programs. Section 4.9 of the LHMP outlines legal and regulatory resources for hazard mitigation (City of Los Angeles 2018).

General Plans

The available General Plans for jurisdictions in the proposed Project area have been reviewed for objectives and policies relevant to the proposed Project. Select goals and policies are highlighted below. General Plan documents typically also include programs/implementation measures (e.g., hazards mitigation plans, emergency preparedness plans) to ensure the prevention of hazards and

hazardous materials impacts. The proposed Project would be required to ensure compliance with General Plan goals and policies listed below.

City of Los Angeles General Plan

The Safety Element of the City of Los Angeles General Plan (City of Los Angeles 1996) provides a contextual framework for understanding the relationship between hazard mitigation, response to a natural disaster and initial recovery from a natural disaster. Relevant goals, objectives, and policies of the General Plan include:

Goal 1: A city where potential injury, loss of life, property damage and disruption of the social and economic life of the City due to fire, water related hazard, seismic event, geologic conditions, or release of hazardous materials disasters is minimized.

Objective 1.1 Implement comprehensive hazard mitigation plans and programs that are integrated with each other and with the City’s comprehensive emergency response and recovery plans and programs.

Policy 1.1.1 Coordination: Coordinate information gathering, program formulation and program implementation between City agencies, other jurisdictions and appropriate public and private entities to achieve the maximum mutual benefit with the greatest efficiency of funds and staff.

Policy 1.1.2 Disruption reduction: Reduce, to the greatest extent feasible and within the resources available, potential critical facility, governmental functions, infrastructure, and information resource disruption due to natural disaster.

Policy 1.1.3 Facility/systems maintenance: Provide redundancy (back-up) systems and strategies for continuation of adequate critical infrastructure systems and services so as to assure adequate circulation, communications, power, transportation, water and other services for emergency response in the event of disaster related systems disruptions.

Policy 1.1.4 Health/environmental protection: Protect the public and workers from the release of hazardous materials and protect City water supplies and resources from contamination resulting from accidental release or intrusion resulting from a disaster event, including protection of the environment and public from potential health and safety hazards associated with program implementation.

Policy 1.1.5 Risk reduction: Reduce potential risk hazards due to natural disaster to the greatest extent feasible within the resources available, including provision of information and training. [All programs that incorporate current data, knowledge, and technology in revising and implementing plans (including this Safety Element), codes, standards and procedures that are designed to reduce potential hazards and risk from hazards potentially associated with natural disasters implement this policy.]

Policy 1.1.6 State and federal regulations: Assure compliance with applicable state and federal planning and development regulations, e.g., Alquist-Priolo Earthquake Fault Zoning Act, State Mapping Act and Cobey-Alquist Flood Plain Management Act.

Goal 2 A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage and disruption of the social and economic life of the City and its immediate environs.

Objective 2.1 Develop and implement comprehensive emergency response plans and programs that are integrated with each other and with the City's comprehensive hazard mitigation and recovery plans and programs.

Policy 1.1.6 Standards/fire. Continue to maintain, enforce, and upgrade requirements, procedures, and standards to facilitate more effective fire suppression. [All peak load water and other standards, code requirements (including minimum road widths, access, clearances around structures) and other requirements or procedures related to fire suppression implement this policy.]

Silver Lake-Echo Park-Elysian Valley Community Plan

The goal of the Silver Lake-Echo Park-Elysian Valley Community Plan (Community Plan) is to promote an arrangement of land uses, streets, and services which encourage and contribute to the economic, social, and physical health safety, welfare and conveniences of the people who live and work in the community (City of Los Angeles 2004). Part of this plan includes providing adequate services in response to a variety of emergencies, including fires. Relevant goals and policies of the Community Plan include:

Goal 1-6: Limit the density of residential development in hillside areas to that which can reasonably be accommodated by infrastructure and natural topography.

Policy 1-6.2: Ensure the availability of adequate sewers, drainage facilities, fire protection services and facilities and other public utilities to support development within hillside areas.

3.9.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to hazards and hazardous materials are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Refer to Impact 3.9-1)
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Refer to Impact 3.9-2)
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment. (Refer to Impact 3.9-3)
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the proposed Project area. (Refer to Impact 3.9-4)

- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Refer to Impact 3.9-5)
- Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. (Refer to Impact 3.9-6)

In addition, the 2006 L.A. CEQA Thresholds Guide holds that the determination of significance shall be made on a case-by-case basis after considering the following factors:

Risk of Upset/Emergency Preparedness

- The probable frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of a hazardous substance; (Refer to Impact 3.9-1)
- The degree to which the project may require a new, or interfere with an existing, emergency response or evacuation plan, and the severity of the consequences; and (Refer to Impact 3.9-5)
- The degree to which project design will reduce the frequency or severity of a potential accidental release or explosion of a hazardous substance. (Refer to Impact 3.9-1)

Human Health Hazards

- The probable frequency and severity of consequences to people from exposure to the health hazard; and (Refer to Impact 3.9-1)
- The degree to which project design would reduce the frequency of exposure or severity of consequences of exposure to the health hazard. (Refer to Impact 3.9-1)

Methodology

The Phase I for the proposed Project was conducted in accordance with the ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (ASTM E1527-21), as well as with the USEPA Final Rule regarding Standards and Practices for All Appropriate Inquiries (70 *Federal Register* [FR] 66070, November 1, 2005; 40 Code of Federal Regulations [CFR] Part 312) (AAI Rule).

Tasks performed for the Phase I included (1) site reconnaissance at the SLRC to verify current proposed Project area conditions and check for visible evidence of previously disposed and/or currently present hazardous waste, surface contamination, underground storage tanks (USTs), aboveground storage tanks (ASTs), and other environmental hazards; (2) review of currently and readily available documents, including maps, aerial photographs, governmental databases of known hazardous waste sites and USTs, other consultant reports (if any), fire insurance maps, and other accessible records; and (3) consultation with appropriate governmental agencies having jurisdiction related to past history of the proposed Project site, complaints, or incidents in the immediate area and permits that may have been issued.

Information for this assessment of impacts relative to emergency response, wildfire, and airport hazards is based on a review of literature research (e.g., General Plan documents, fire severity zone maps provided by CAL FIRE). The proposed Project would be regulated by the laws, regulations, and policies summarized in Section 3.9.2, *Regulatory Framework*. Compliance by the proposed Project with applicable federal, state, and local laws and regulations is assumed in this

analysis, and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now.

3.9.4 Project Design Features

The following Project Design Features (PDF) would be implemented for the proposed Project.

PDF-TRA-1: Construction Traffic Management Plan, PDF-TRA-2: Construction Staging Plan, PDF-TRA-3: Construction Traffic, PDF-TRA-4: Access to Parcels, and PDF-TRA-5: Site-Specific Traffic Control and Transit Plan for Large Events as described in Section 3.16, *Transportation*, and PDF-WF-5. Brush Clearing Activities as described in Section 3.19, *Wildfire*.

3.9.5 Impacts and Mitigation Measures

Hazardous Materials

Impact 3.9-1: Would the proposed Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction

As described in Section 2.6, *Project Construction*, construction activities within the proposed Project area would include demolition, mass grading, excavation, trenching, new building construction, asphalt paving, architectural coating, piling within reservoir beds, and landscaping. The construction activities described above would require the use of heavy equipment such as trucks, bulldozers, concrete mixers, and excavators, and deliveries of fuel would occur daily to refuel equipment in staging and stockpiling areas. These construction activities would involve the temporary transport, storage, use, and disposal of hazardous materials, which could include, but not be limited to, fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures. In addition, LADWP currently stores water treatment chemicals (i.e., sodium thiosulfate and bleach) at the existing Silver Lake Chlorination Station, in the vicinity of the proposed construction areas. Accidental release of these materials could potentially impact construction workers, contaminate soil, and/or affect nearby groundwater bodies, or surface water bodies, including the on-site reservoirs. Further, the use of potentially flammable and explosive materials during construction would temporarily increase the probable frequency and severity of consequences to workers or property in the event of an accidental release or ignition.

Once an operator has been determined, the operator and the City would be required to implement emergency response planning and training procedures at the proposed Project site in accordance with a Consolidated Emergency Response/Contingency Plan (CERC) regulated by the LAFD CUPA. The CERC includes procedures for preventing and mitigating hazardous materials releases, emergency evacuation, and worker training, lists on-site emergency equipment, and includes existing arrangements for emergency services (LADWP 2020a). At the discretion of the LAFD CUPA, LADWP may be required to revise the CERC to incorporate proposed changes to

hazardous materials handling and waste generation at the Project site, or submit new emergency response, contingency, and/or evacuation plans. Continued compliance with applicable CUPA program requirements would ensure that impacts to workers, the public, and the environment related to hazardous materials release from the Silver Lake Chlorination Station would remain less than significant.

Proposed upgrades to the existing Silver Lake Recreation Center in the South Valley zone would require demolition of 8,200 square feet of building material. As the Silver Lake Recreation Center originally built in the 1930s and was expanded in the mid-1980s, demolition of existing structures would potentially generate hazardous waste that would require disposal including ACM and LBP. Other hazardous debris would potentially be generated during removal of hardscapes throughout the proposed Project site. If improperly handled, hazardous materials containing ACM and LBP could result in significant impacts to human health or contamination of the surrounding environment.

All construction activities would be required to comply with various hazardous materials regulations (See Section 3.9.2, *Regulatory Framework*) designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment. Construction projects that disturb one acre of land or more are required to obtain coverage under the NPDES Construction General Permit (see Section 3.9.2, *Regulatory Framework*). The SWPPP required by the NPDES Construction General Permit would include spill prevention measures to avoid and, if necessary, clean up accidental releases of hazardous materials. Compliance with all NPDES Construction General Permit requirements including the preparation and implementation of a SWPPP and associated BMPs would minimize the potential for mishandling and/or the release of hazardous materials. Examples of BMPs include controlling runoff and runoff from the site; avoiding overtopping construction equipment fuel tanks; routine maintenance of construction equipment; and proper disposal of discarded containers of fuels and other chemicals. During ground disturbing activities in proximity to the reservoir, it is anticipated that BMPs to contain soils and materials from dumping or spreading into the reservoirs would involve removal of hardscape above the water line, replanting/installation of terraces, and installation of netting. In addition, California Code of Regulations (CCR) Title 8 requires hazardous building materials, such as ACM and LBP, to be removed from the proposed Project site prior to the start of demolition activities.

Compliance with applicable federal, state, and local standards is required; therefore, construction impacts related to the transport, use, or disposal of hazardous materials or accidental release of hazardous materials, and construction impacts to the frequency and severity of consequences to people or property as a result of a potential accidental release or explosion of hazardous substances, would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Once constructed, the proposed Project would be a public park with facilities and improvements throughout all seven park zones including embankment enhancement, habitat terraces, seating terraces, and lookouts around the reservoirs; walking paths, play areas, ornamental gardens, lawn areas, picnic grove, new and enhanced habitat areas, new Education Center; and at the South Valley a new Multi-Purpose Facility along with relocated or expanded Recreation Center and other associated facilities including parking, and a renovated Dog Park. The proposed Project site would be operated similar to existing conditions. No facilities are proposed that would require substantial amounts of new hazardous materials being transported, stored, or used within the proposed Project area. As discussed in Section 2.7, *Project Operations and Maintenance*, the proposed Project would require routine cleaning and maintenance of park spaces and park facilities, clearing paths and walkways, trash removal, and cleaning of park facilities such as the proposed Education Center, Multi-Purpose Facility, and restrooms. Thus, minimal amounts of hazardous materials such as fuels and oils associated with maintenance vehicles and equipment would be transported to the SLRC and used in the proposed Project area. Maintenance activities for the proposed habitat areas and ornamental gardens may involve periodic use of herbicide to remove invasive species and/or light applications of compost or fertilizer. However, herbicide application would not include the use of neonicotinoids, which have been linked to bee deaths and are also harmful to humans.

The proposed Project is required to comply with applicable federal, state, and local standards and would implement BMPs for handling hazardous materials. As stated above in the discussion of construction impacts, once an operator has been determined, the operator and the City would update its CERC or develop new emergency plans and procedures for mitigating hazardous materials releases, emergency evacuation, and worker training. Therefore, operation related impacts related to the transport, use, or disposal of hazardous materials or accidental release of hazardous materials would be considered less than significant. In addition, since the proposed Project would include limited changes to hazardous materials use and storage at the Project site compared to existing operations, less-than significant impacts would occur with regard to the frequency or severity of a potential accidental release or explosion of a hazardous substance during operations.

The proposed Project would construct wetland terraces and floating wetlands that would have the potential to support substantial vector populations capable of transmitting diseases or causing nuisances to people, such as mosquitos. Significant management problems related to mosquito control could occur if the wetland habitats do not also provide habitat for beneficial predators that feed on mosquito adults and larvae, such as birds, frogs, fish, and insects. The City would prepare Wetlands Management Plan section to be included as part of the Operation and Maintenance Plan (Refer to Section 2.7.1, *Operations and Maintenance Plans*). The plan would outline methods and procedures to ensure design and maintenance of wetland habitats provide for a healthy array of predator species to reduce potential mosquito populations. Therefore, impacts related to the

exposure of people to health hazards due to vector populations are considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Hazardous Materials Near Schools

Impact 3.9-2: Would the proposed Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction

As discussed in Impact 3.9-1, construction of the proposed Project and offsite improvements would require the routine transport, use, storage, and/or disposal of the hazardous materials. Materials that would be transported on nearby haul routes would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures. In addition, demolition of existing structures in the Project area would potentially generate hazardous waste that would require disposal including ACM and LBP. The materials that would be used during construction are not acutely hazardous. However, the routine transport, use, storage, and/or disposal of the hazardous materials listed above in proximity to existing schools would have the potential to impact the probable frequency and severity of consequences to students, staff, as well as the general public as a result of a potential accidental release or explosion of hazardous substances, or health hazards. As discussed in Section 3.3, *Air Quality*, children are most sensitive to hazardous emissions containing high levels of particulate matter, and exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

The nearest school in the vicinity of the proposed Project is the Neighborhood Nursery School (2700 Tesla Avenue, Los Angeles) at the northeast boundary of the SLRC. Other schools that are located approximately one-quarter mile from the proposed Project site along roads that may be construction haul routes include: St. Theresa of Avila Elementary (2215 Fargo Street, Los Angeles), southeast of the proposed Project site along Glendale Boulevard; Camelot Kids Preschool (2880 Rowena Avenue), north of the proposed Project site; and Ivanhoe Elementary School (2828 Herkimer Street, Los Angeles), north of the proposed Project site along Rowena Avenue. It is anticipated that construction equipment and vehicles transporting hazardous materials to the proposed Project area would enter/exit the site from existing access points along Silver Lake Boulevard at Armstrong Avenue or the Dog Park. The primary route that would be used for construction trips would be northeast of the proposed Project site, and involve transport of materials along Silver Lake Boulevard, Glendale Boulevard, and Fletcher Drive before accessing State Route 2 (SR-2) and Interstate-5 (I-5) freeways. Based on the anticipated route of travel, the proposed construction haul routes would not transport hazardous materials in the vicinity of an existing or proposed schools.

Potential impacts of the proposed Project related to the exposure of sensitive receptors, including children at nearby schools, to hazardous air emissions are discussed in Section 3.3, *Air Quality*. The analysis concluded that the proposed Project would not cause or contribute to the exposure of sensitive receptors to ground-level particulate matter concentrations in excess of health-protective level during short-term and temporary construction activities. In addition, Title 8 of the CCR requires hazardous building materials including LBP, to be removed from the proposed Project site prior to the start of demolition activities.

It should be noted that water treatment chemicals are also currently stored in the Silver Lake Chlorination Station within the LADWP-owned portion of the SLRC. However, since these areas would not be demolished or otherwise affected as part of construction, and the water treatment chemicals would continue to be stored and used similar to existing conditions, new impacts related to accidental release of water treatment chemicals would not occur.

Construction activities for the proposed Project and offsite improvements would comply with federal, state, and local regulations to reduce the probable frequency and severity of consequences to nearby schools as a result of a potential accidental release or explosion of hazardous substances, or health hazards. Compliance all applicable regulations is required and would ensure impacts would remain less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As discussed above for Impact 3.9-1, operation of the proposed Project would require transport and use of minimal amounts of hazardous materials, such as fuels and oils associated with vehicles and equipment during routine maintenance activities. Existing storage of water treatment chemicals at the Silver Lake Chlorination Station and water treatment activities, which are outside of the proposed Project area, but within the SLRC would continue similar to existing conditions, and no new impacts associated with accidental release of water treatment chemicals are anticipated.

As discussed above for Impact 3.9-1, the City would prepare a Wetlands Management Plan as part of the Operations and Maintenance Plan (Refer to Section 2.7.1, *Operations and Maintenance Plans*). The plan would outline methods and procedures to ensure design and maintenance of wetland habitats to minimize vectors including mosquito populations. Therefore, impacts to human health are considered less than significant.

No other facilities are proposed that would require substantial amounts of hazardous materials being transported, stored, used, or disposed of at the SLRC. Compliance with applicable federal, state, and local standards for handling hazardous materials during operations is required.

Therefore, operational impacts to schools within one-quarter mile of the proposed Project would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Hazardous Material Site Listing

Impact 3.9-3: Would the proposed Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Construction

According to the Phase I prepared for the proposed Project, the SLRC includes two sites that are on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (See Appendix I to this Draft EIR). The Silver Lake Chlorination Station, which stores bleach and sodium thiosulfate for reservoir water treatment, is listed as an active Hazardous Waste Generator and is permitted with the local CUPA. In addition, the Silver Lake and Ivanhoe Reservoirs Aeration and Recirculation Systems Project is listed as a permitted use under Clean Water Act Section 401. Based on the lack of reported spills, leaks, or violations from the site listings, these sites have been determined to not pose a material threat of a future release of hazardous materials. In addition, all of these listed facilities are located outside of the proposed Project area and within the LADWP-managed areas. The proposed Project would not include physical alterations to the listed facilities, nor would it involve activities that could increase the likelihood of hazardous materials release from the sites into the Project area. Therefore, no impact would occur.

Mitigation Measures:

None Required.

Significance Determination:

No Impact.

Operation

As described above, two hazardous materials sites in the proposed Project area are included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Operation of the proposed Project would not include activities that would affect transport, use, or storage of hazardous materials at the listed sites. Compliance with applicable federal, state, and local standards for transport, use, and disposal of hazardous materials is required. Therefore, no impact would occur.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Safety Hazards Near Airport

Impact 3.9-4: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the proposed Project result in a safety hazard or excessive noise for people residing or working in the proposed Project area?

Construction/ Operation

The proposed Project area would be located outside of the AIAs for the operational airports in Los Angeles County, and would not be located within two miles of a public airport or a public use airport (ALUC 2004). The nearest airport is Bob Hope Airport, located approximately 8.5 miles northwest of the proposed Project area. Therefore, the proposed Project would not result in an airport-related safety hazard for people residing or working in the proposed Project area. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Emergency Preparedness

Impact 3.9-5: Would the proposed Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction

As stated in the discussion for Impact 3.9-1, LADWP implements emergency response planning and training procedures at the proposed Project site in accordance with a CERC regulated by the LAFD CUPA. At the discretion of the LAFD CUPA, LADWP may be required to revise the CERC to incorporate proposed changes to hazardous materials handling and waste generation at the Project site, or submit new emergency response, contingency, and/or evacuation plans. Continued compliance with applicable CUPA programs regulating emergency response and emergency evacuation planning is required. Therefore, the proposed Project would not impair implementation of or physically interfere with the CERC.

City evacuation routes consist of major interstates, highways, and primary arterials in the proposed Project area. Some potential evacuation routes have been pre-selected by the City based on a number of considerations (e.g., tsunami evacuation routes in coastal areas), while other routes are shared in real time depending on which disaster and suitable evacuation routes are identified. The City's All-Hazard Mitigation Plan, EOP, and Safety Element do not identify any specific evacuation routes in the vicinity of the proposed Project area (City of Los Angeles 2018, 1996; EMD 2018). However, while there are no evacuation routes have been pre-selected by the

City for use during hazards or disasters, Silver Lake Boulevard is the nearest arterial roadway and would be the most likely evacuation route that could be used during a natural hazard or disaster.

Construction activities would be confined primarily to within the perimeter of the SLRC and would not impact surrounding roadways or restrict access for emergency vehicles. However, during construction of offsite improvements, such as trenching of drainage and underground utilities, and restriping along Silver Lake Boulevard for the addition of parking spaces and/or bike lanes, partial road closures would be required that would temporarily affect emergency response times. These closures would be temporary, lasting approximately 2.5 weeks. The proposed Project would include implementation of PDF-TRA-1 and PDF-TRA-2, requiring the implementation of a traffic management plan and construction staging plan which would include detour routes and BMPs, as well as coordination with and advance notice to local emergency providers. In addition, PDF-TRA-3 would require construction trips to be scheduled during off-peak hours, and PDF-TRA-4 would ensure that temporary access shall be provided to any parcels that may be impacted by construction (Refer to Section 3.16, *Transportation*). Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

It is expected that visitorship to the proposed Project area would increase at the completion of construction once each park zone is finalized. As described in Chapter 2, *Project Description*, visitorship within each park zone would increase as detailed in Tables 2-7 and 2-8. Operation and maintenance activities within the proposed Project area would be similar to current conditions respective to emergency response and evacuation. A small number of daily vehicle trips for new workers and security personnel (approximately five workers daily) would travel on roadways to the proposed Project area. During public events PDF-TRA-5 would ensure that event permittees develop a site-specific traffic control plan to minimize congestion and vehicle miles traveled. Traffic control strategies for events will include inbound/outbound flex lanes and sheriff-controlled intersections. Traffic control plans will also identify nearby public parking facilities and identify passenger pick-up/drop-off locations. Permittees will be required to consider the cumulative traffic impacts of their event in relation to other events in the Project area. The traffic control plans will also identify emergency services egress and access. Therefore, the anticipated increases to visitorship and traffic volumes during operation of the proposed Project would not impair or physically interfere with an adopted emergency response plan or emergency evacuation plan (Refer to Section 3.16, *Transportation*). Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Wildland Fires

Impact 3.9-6: Would the proposed Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Construction

The proposed Project would be located within an LRA VHFHSZ. As discussed in Impact 3.19-2 in Section 3.19, *Wildfire*, the operation of construction equipment and vehicles and use of combustible materials, such as diesel fuel, could pose a wildfire risk to people and property with possible ignition sources such as internal combustion engines, gasoline-powered tools, and equipment that could produce a spark, fire, or flame during construction. However, all personnel within the proposed Project area would be required to comply with PRC Sections 4427, 4428, 4431, and 4442, which are regulations relating to the handling of combustible fuels and equipment that can exacerbate fire risks. During construction, adherence to existing State and local fire hazard regulations would ensure that any risk to exacerbate wildfire would be remain less than significant. Additionally, all construction activities and crews must comply with fire protection and prevention requirements specified by the CCR and Cal/OSHA. This includes various measures such as easy accessibility of firefighting equipment, proper storage of combustible liquids, no smoking in service and refueling areas, and worker training for firefighter extinguisher use. The risk of construction-based ignition events could also be exacerbated by Santa Ana winds, which are known to occur in the proposed Project region. However, through compliance with federal, State, and local regulations as discussed above, impacts would be considered less than significant.

As discussed in Section 3.14, *Public Services*, fire protection services, and emergency response services (including ambulance services) would be met with existing facilities and staff levels. Project areas, including the proposed buildings would be equipped with a fire protection system. The firewater supply and pumping system would provide the code-required quantity of firefighting water to yard hydrants, hose stations, and water spray and sprinkler systems. Therefore, the proposed Project would not require the addition of a new fire station or the expansion, consolidation, or relocation of an existing facility, and proposed Project construction would not adversely affect existing service ratios, response times, or other performance objectives. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Once operational, the proposed Project would become a public park and recreation center and would largely resemble existing conditions for wildfire. Operation-related activities would

involve the use of a limited number of maintenance trucks for inspections and material delivery, and new staff vehicles. These trucks and personal vehicles would be limited to established access roads and parking lots, which have a low potential of producing sparks, fire, or flame, which could result in uncontrolled spread of wildfire. Furthermore, the majority of the proposed Project area would include the existing reservoirs, which would pose little risk to exacerbate wildfire, and the proposed Project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

As discussed in Section 2.7.1, *Operations and Maintenance Plans*, the City would prepare a Brush Clearance Plan to be included as part of the Operations and Maintenance Plan and would comply with PDF-WF-5 which outlines brush clearing activities. The proposed Project would continue to allow the City and the County of Los Angeles Fire Departments to use the reservoir water for firefighting purposes, similar to existing conditions. The City would coordinate with LAFD to ensure the Project area is maintained in accordance with the Brush Clearance Plan and the Fire Code (L.A.M.C. 57.322) on all native brush, weeds, grass, trees, and hazardous vegetation within 200 feet of any structures/buildings, and within 10 feet of any combustible fence or roadway/driveway used for vehicular travel. The Operations and Maintenance Plan would identify evacuation routes and protocols that are consistent with existing evacuation routes and protocols identified by RAP and LAFD for the proposed Project area. The proposed Project would not expose people or structures to significant risk of loss, injury, or death involving wildland fires. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Safety Hazards Near Private Airstrip

Impact 3.9-7: Would the proposed Project be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the Project area?

Construction/ Operation

As discussed above for Impact 3.9-4, the nearest airport to the proposed Project would be Bob Hope Airport, located approximately 8.5 miles to the northwest. No private airstrips would be located in the vicinity of the proposed Project. Therefore, the proposed Project would not result in an airport-related safety hazard for people residing or working in the proposed Project area. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Cumulative Impact

Impact 3.9-8: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively considerable impact to hazards and hazardous materials?

Table 3-2 identifies thirteen related projects that are planned or are under construction within the Project area. The geographic scope of analysis for cumulative hazards and hazardous materials impacts is limited to the Project site and its immediately adjacent area. This is because impacts relative to hazards and hazardous materials are generally site-specific. For example, hazardous materials incidents tend to be limited to a smaller and more localized area surrounding the immediate spill location and extent of the release, and could only be cumulative if two or more hazardous materials releases spatially overlapped. Two of the thirteen related projects listed in Table-3-2 are adjacent to the proposed Project. Related Project 13 includes water infrastructure improvements within Silver Lake and Ivanhoe Reservoirs at Project site and Related Project 14 would involve sidewalk repairs along roadways located adjacent to the Project site. Construction activities for the projects would require temporary use, storage, and transport of hazardous materials (e.g., equipment, oils, and fuel) and staging in rights of way that would have the potential to result in impacts related to the accidental release of hazardous materials and emergency access. Once constructed, Related Projects 13 and 14 would not involve substantial hazardous materials use (LADWP 2020b; City of Los Angeles 2019). Thus, operational impacts of the related projects are considered less than significant.

The Project would have no impact with respect to proximity to airports. Accordingly, the Project could not contribute to cumulative impacts related to this topic and this topic is not discussed further. To minimize the potential for hazards, all construction and operational activities would be required to comply with hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment (See Section 3.9.2, *Regulatory Framework*). Construction contractors would be required to implement BMPs for handling hazardous materials during construction activities, including following manufacturers' recommendations and regulatory requirements for: use, storage, and disposal of chemical products and hazardous materials used in construction; avoiding overtopping construction equipment fuel tanks; routine maintenance of construction equipment; and proper disposal of discarded containers of fuels and other chemicals. The California Fire Code would also require measures for the safe storage and handling of hazardous materials.

The proposed Project would also include implementation of PDF-TRA-1 and PDF-TRA-2, requiring the implementation of a traffic management plan and construction staging plan which would include detour routes and BMPs, as well as coordination with and advance notice to local emergency providers. In addition, PDF-TRA-3 would require construction trips to be scheduled during off-peak hours, and PDF-TRA-4 would ensure that temporary access shall be provided to any parcels that may be impacted by construction (Refer to Section 3.16, *Transportation*).

Therefore, based on compliance with these requirements, the proposed Project would not contribute considerably to a cumulative impact related to hazards and hazardous materials. This impact would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.9.6 Summary of Impacts

Table 3.9-1 summarizes the impact significance determinations and lists mitigation measures related to hazards and hazardous materials.

**TABLE 3.9-1
SUMMARY OF PROPOSED PROJECT IMPACTS TO HAZARDS AND HAZARDOUS MATERIALS**

Impact	Mitigation Measure	Significance
3.9-1: Hazardous Materials	None Required	LTS
3.9-2: Hazardous Materials Near Schools	None Required	LTS
3.9-3: Hazardous Material Site Listing	None Required	NI
3.9-4: Safety Hazards Near Airport	None Required	NI
3.9-5: Emergency Preparedness	None Required.	LTS
3.9-6: Wildland Fires	None Required	LTS
3.9-7: Safety Hazards Near Private Airstrip	None Required	NI
3.9-8: Cumulative	None Required	LTS

NOTES:

NI = No Impact, no mitigation proposed
LTS = Less than Significant, no mitigation proposed
LTSM = Less than Significant Impact with Mitigation Incorporated
SU = Significant and Unavoidable

3.9.7 References

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3.10 Hydrology and Water Quality

This section addresses the potential impacts to hydrology and water quality associated with implementation of the proposed Project. This section includes: a description of the existing hydrologic and water quality conditions in and around the proposed Project area; a summary of applicable regulations related to hydrology and water quality; and an evaluation of the potential impacts of the proposed Project related to hydrology and water quality in and around the Project area. Impacts to hydrology and water quality are less than significant, and no mitigation is required.

The information included in this section is partly based on the results of two studies prepared for the SLRC Master Plan: The Water Resources Report and the Water Quality Model Technical Report (Water Quality Model) (CWE 2019, 2020). The Water Resources Report describes existing and historical water resources at the SLRC, water quality goals, opportunities and constraints related to water issues, and potential funding sources for the proposed Project. The Water Quality Model was prepared to estimate the future condition of water quality in the SLRC following implementation of the proposed Project.

3.10.1 Environmental Setting

Regional and Local Hydrology

The proposed Project would be located in the Silver Lake neighborhood of the City of Los Angeles. The existing Silver Lake Reservoir Complex (SLRC) is situated in an urbanized valley within the eastern foothills of the Santa Monica Mountain Range. The SLRC includes the Silver Lake and Ivanhoe Reservoirs and three dams operated by LADWP, as well as recreational facilities and LADWP operations facilities in adjacent SLRC areas (see Figure 2-2). The SLRC is located west and adjacent to the San Fernando Valley Groundwater Basin (Basin 4-12), whose surface waters include the Los Angeles River and its major tributaries. The Silver Lake and Ivanhoe Reservoirs are no longer in service for the City's potable water needs. Starting in 2018, LADWP has maintained water levels in the Silver Lake and Ivanhoe Reservoirs by pumping treated Basin 4-12 groundwater from Pollock Well #3, located in the LADWP Ripple Street Yard northeast of the SLRC (CWE 2019). The SLRC is bound by the Los Angeles River and Ballona Creek Watersheds on the east and west sides of the property (ULARA Watermaster 2019; Ballona Creek Watershed Task Force 2004).

Surface Water Hydrology

The topography in surrounding neighborhood areas is characterized by steep slopes which ascend from the reservoir to the north, west, and east, and descend to the south. Both reservoirs in the SLRC have paved side slopes of 30 vertical feet which extend to an approximate elevation of 428 above mean sea level (amsl). The bottom of Silver Lake Reservoir is composed of compacted clay material and the bottom of Ivanhoe Reservoir is lined with asphaltic concrete. Silver Lake Reservoir is graded to drain to a low point in the center at elevation 414 amsl, while Ivanhoe Reservoir's bottom slopes to the southwest to an elevation of 422 amsl (CWE 2020). A concrete spillway is located at the dam that separates Ivanhoe Reservoir from Silver Lake Reservoir,

which allows water to spill into Silver Lake Reservoir when the water elevation at Ivanhoe Reservoir is above 451 feet.

The SLRC is also equipped with an overflow spillway structure on the west side of Silver Lake Reservoir (see Figure 2-2). The overflow spillway connects to a drain pipe that tunnels underneath the hillside to the west of Silver Lake Reservoir and discharges to the Los Angeles County Flood Control District (LACFCD) storm drain network, which is tributary to Ballona Creek (CWE 2020). Water discharges through the overflow spillway if surface water levels in Silver Lake Reservoir rise above 454 feet in elevation. However, the SLRC does not receive tributary surface water flows and only receives limited amounts of water from precipitation. Surface water levels are further reduced by seepage and evaporation that result in an 82 acre-feet per year (AFY) and 9 AFY of water loss within Silver Lake and Ivanhoe Reservoirs, respectively. In the past, LADWP has operated the Silver Lake and Ivanhoe Reservoirs to maintain water levels between 440 and 451 feet. The water levels historically maintained by LADWP were several feet below the overflow elevation of 451 feet to avoid discharge under normal operating conditions (CWE 2020).

As discussed in Section 2.7.3, *Drought Emergency Contingencies*, operational constraints may require modifications to the water levels corresponding to overall system needs, including the need to prioritize use of local groundwater to augment potable water supplies during periods of drought. LADWP utilizes conjunctive use strategies to balance supplies with dry period demands, while also preventing overdraft of its basins. During previous successive dry-year periods, LADWP pumped groundwater at greater-than-average rates for the first few years of the dry period, then lowered its pumping rates and increased surface water use in subsequent years to facilitate groundwater replenishment (LADWP 2021). The ability to curtail groundwater pumping during emergency droughts that would normally be supplied to the reservoirs would reduce impacts to the groundwater basin, while ensuring that potable water demands relying on groundwater are met. In addition, the reservoirs are currently used as a source of water for firefighting operations by the City and the County of Los Angeles Fire Departments and would continue to serve this purpose after construction of the proposed Project.

Absent spillway discharge, the SLRC reservoirs are isolated bodies of water that are tributary to neither the Los Angeles River nor Ballona Creek. As such, the SLRC is currently managed in a manner that is discrete from the Los Angeles River and Ballona Creek Watershed Enhanced Watershed Management Programs (EWMP), whose watersheds bound either side of the SLRC (CWR 2019). Nonetheless, it is assumed that limited amounts of water drain from the SLRC to the Ballona Creek watershed via the existing storm drain network, either through seepage in the reservoirs or stormwater runoff near the boundaries of the SLRC (e.g. from rainfall on recreation spaces outside of the reservoir basin).

As discussed above, the Silver Lake and Ivanhoe Reservoirs are artificially constructed reservoirs with no naturally occurring surface water flow. **Table 3.10-1** lists inflow and outflow sources affecting surface water levels in the reservoirs, as provided in the Water Quality Model prepared for the Project. The reservoirs are not considered Waters of the United States (USEPA 2022).

**TABLE 3.10-1
 RESERVOIR INFLOW AND OUTFLOW SOURCES**

Direction	Source
Inflow	Precipitation
	Pollock Well Water*
Inflow/Outflow	Overflow from Ivanhoe to Silver Lake
	Recirculation from Silver Lake to Ivanhoe**
Output	Exfiltration
	Evaporation
	Transpiration**
	Overflow Discharge to Ballona Creek (Silver Lake only)
	Maintenance Discharge (Silver Lake only)

* Pollock Well flow rate and operating procedure will be altered due to the proposed Project.

SOURCE: CWE 2020

Water Quality

Existing water quality within the SLRC is generally in good condition due in part to the limited size of the tributary watershed. The predominant source of water used to fill the reservoirs since 2017 has been a mix of potable water and non-potable treated groundwater from Pollock Well #3, with very little precipitation. The only stormwater that can currently enter the SLRC comes from precipitation that falls on the SLRC, which is generally of good quality. Stormwater tends to have more impaired water quality due to picking up sediments and pollutants from the ground surface as it moves over land (CWE 2019).

Pollock Wellfield extracts groundwater from Basin 4-12, which has been impacted by contamination plumes from hexavalent chromium and from volatile organic compounds (VOCs) such as trichloroethylene (TCE) and perchloroethylene (PCE) (CWE 2019). Due to existing groundwater contamination at the Pollock Wellfield, the Los Angeles Regional Water Quality Control Board (RWQCB) granted a Waste Discharge Permit (WDR) requiring LADWP to treat groundwater extracted from Pollock Well #3 with a granular activated carbon (GAC) system before discharging to the SLRC (RWQCB 2017).

Groundwater

As described previously, the reservoirs at the SLRC are supplied with treated Basin 4-12 groundwater from Pollock Well #3. Under current operating procedures, groundwater water is pumped through a portable GAC treatment facility at a peak rate of approximately three cubic feet per second (cfs). The Water Quality Model for the proposed Project estimates that the annual average volume of Basin 4-12 groundwater pumped into the SLRC is 241 AFY (CWE 2020).

Basin 4-12 consists of 112,000 acres and is the largest of four basins in the Upper Los Angeles River Area (ULARA) (ULARA Watermaster 2019). Urban development in ULARA over time has resulted in a significant portion of the rainfall being collected and routed into storm drains

and/or lined channels that discharge directly into the Los Angeles River. However, groundwater levels in this basin have been fairly stable over about the past 20 years since adjudication of the basin (DWR 2004; ULARA Watermaster 2019). Generally, groundwater flows from the edges of the San Fernando Valley Basin toward the middle of the basin, then beneath the Los Angeles River Narrows (the river segment which is located a 0.5-mile northeast of the SLRC) into the Coastal Plain of Los Angeles Basin (Basin 4-11) (DWR 2004). The Central and West Coast Subbasins of Basin 4-11 span the areas south and west of the SLRC to the Pacific Ocean. In the event of a probable maximum precipitation storm, described above, the overflow spillway at the SLRC would discharge water into the the Central and West Coast Subbasins via the Ballona Creek watershed.

Basins 4-11 and Basin 4-12 are both designated by the California Department of Water Resources (DWR) as very low priority basins under the Sustainable Groundwater Management Act (SGMA), and do not have specific groundwater management plans (DWR 2021). Further discussion on the SGMA is included below in Section 3.10.2, *Regulatory Framework, Sustainable Groundwater Management Act of 2014*.

Flood Hazards

Flood hazards in an urban environment are influenced by development patterns, as storm events contribute to rapid runoff over impervious surfaces and can flood local drainages. In addition, flood hazards can occur due to emergency releases from dams that lead to local or regional inundation. The existing Silver Lake and Ivanhoe Reservoirs are in Zone A (“1 percent annual chance flood hazard contained in a channel”), which is a special flood hazard area without base flood elevation.¹ However, given that the existing reservoirs are within a closed basin (i.e., the reservoir basin is closed off by dams), the Silver Lake and Ivanhoe Reservoirs would not be considered to be at risk from flooding due to a 100-year storm event. Lands surrounding the existing reservoirs are in Zone X, defined by FEMA as an area of minimal flood hazard (FEMA 2008). Issues with flood hazards associated with the proposed Project are related to dam safety and inundation areas, as described below.

Dam Safety

The SLRC comprises two reservoir basins totaling approximately 94 acres: Ivanhoe to the north (9 acres) and Silver Lake to the south (85 acres). Both reservoirs combined hold approximately 2,200 acre-feet of water at the elevation of the spillway crest between the reservoirs, at approximately 451 feet. The bottom of Silver Lake Reservoir is composed of compacted clay material and the bottom of Ivanhoe Reservoir is lined with asphaltic concrete. The existing reservoirs are under the jurisdiction of the Division of safety of Dams (DSOD), which requires preparation of inundation maps for areas downstream of dams which could be subject to flooding in the event of a dam failure, as discussed further in Section 3.10.2, *Regulatory Framework*.

DSOD hazard potential classifications are based on Federal guidelines published by the Federal Emergency Management Agency (FEMA). FEMA recommends a three-step rating system that

¹ Zone A means that FEMA has determined that the area may be subject to a 100-year flood event but has not prepared a detailed hydraulic analysis to quantify the base flood elevation or potential flood depth.

defines low, significant, and high hazard potential classifications, determined from factors including potential loss of life, economic loss, and environmental damage resulting from a hypothetical dam failure scenario. DSOD further subdivides FEMA's High classification to an Extremely High classification in order to identify dams upstream of highly populated areas or extensive development dams with short evacuation waiting times. When the population within the inundation area consists of 1,000 persons or more, the dam is generally assigned an "Extremely High" risk classification.

Inundation maps for the SLRC indicate that under existing conditions, the potential area of inundation for Silver Lake Dam would extend southwest for approximately 8 miles through nearby residential communities before reaching Ballona Creek near the Interstate 10 freeway (I-10) (LADWP 2020a). The mapped inundation area for Ivanhoe Dam is much more localized, and extends north from the SLRC through nearby residential communities along Silver Lake Drive and Rokeby Street before ending at Armstrong Avenue (LADWP 2020b). The areas downstream of Silver Lake Dam and upstream of Ivanhoe Dam are highly populated, thus the downstream hazard for the existing reservoirs are classified by DSOD as extremely high (DSOD 2021).

Tsunami and Seiche Hazards

Tsunamis are ocean waves generated by vertical movement of the sea floor, normally associated with earthquakes or volcanic eruptions. The proposed Project site is not located in a coastal area subject to tsunamis (DOC 2022a).

Seiches are oscillations of enclosed or semi-enclosed bodies of water that result from seismic events, wind stress, volcanic eruptions, underwater landslides, and local basin reflections of tsunamis. As the proposed Project site is located approximately one-mile south of the Hollywood-Raymond Hill Fault, 8 miles northeast of the Newport-Inglewood Fault, and 32 miles southwest of the San Andreas Fault, seiches due to seismic and wind-driven wave activity have the potential to occur within the Silver Lake and Ivanhoe Reservoirs (DOC 2022b).

3.10.2 Regulatory Framework

Federal

Clean Water Act

Regulatory authorities exist on both the state and federal levels for the control of water quality in California. The USEPA is the federal agency responsible for water quality management pursuant to the Clean Water Act (CWA) of 1977. The purpose of the CWA is to protect and maintain the quality and integrity of the Nation's waters by requiring states to develop and implement state water plans and policies. The relevant sections of the CWA are summarized below.

CWA Section 303: Water Quality Standards and Implementation Plans

Section 303 of the CWA requires states to designate beneficial uses for water bodies or segments of water bodies and to establish water quality standards to protect those uses for all waters of the United States. Under Section 303(d) of the CWA, states, territories, and authorized tribes are required to develop lists of impaired waters. Impaired waters are waters that do not meet water quality standards established by the state. The law requires that these jurisdictions establish a

priority ranking for listed waters and develop action plans to improve water quality. Inclusion of a water body on the Section 303(d) List of Impaired Water Bodies triggers development of a Total Maximum Daily Load (TMDL) for that water body and a plan to control the associated pollutant/stressor on the list. The TMDL is the maximum amount of a pollutant/stressor that a water body can assimilate and still meet the water quality standards. Typically, a TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources.

Although the SLRC is not on the 303(d) list, other nearby reservoirs such as Echo Park Lake are on the 303(d) list. The Water Quality Model prepared for the proposed Project assumes that water quality objectives similar to those in other nearby reservoirs would be established for the SLRC sometime in the future. The proposed Project would be subject to the water quality goals listed in **Table 3.10-2**, which are based on numerical water quality limits established for Echo Park Lake. It should also be noted that Ballona Creek is also identified on the 303(d) list, and therefore Ballona Creek TMDL requirements may also apply to the SLRC if the SLRC eventually falls under the jurisdiction of the watershed. However, as described above in Section 3.10.1, *Environmental Settings*, the potential for SLRC spillway discharge into Ballona Creek is very low; thus, the SLRC would likely be able to comply with the watershed’s TMDL requirements without physical modifications to the spillway (CWE 2019).

**TABLE 3.10-2
 ANTICIPATED WATER QUALITY GOALS OF THE SLRC**

Pollutant	Related Numerical Limits Not to Exceed
Algae, Ammonia, Eutrophic, Odors	<ul style="list-style-type: none"> • Total Nitrogen: 1 mg/L • Ammonia-N: 2.15 mg/L (30-day average) • Ammonia-N: 5.95 mg/L (one-hour average) • Total Phosphorus: 0.1 mg/L • Chlorophyll-a 20 µg/L • Dissolved Oxygen: ≥5 mg/L (single sample one foot from bottom)
Copper	22 µg/L
Lead	11 µg/L
pH	6.5 to 8.5
Trash	Zero
Total Coliform	<ul style="list-style-type: none"> • 10,000 MPN/100 mL (single sample) • 1,000 MPN/100 mL (single sample, Fecal/Total ≥ 0.1) • 1,000 MPN/100 mL (geometric monthly mean)
<i>E. coli</i>	<ul style="list-style-type: none"> • 235 MPN/100 mL (single sample) • 126 MPN/100 mL (geometric monthly mean)
Enterococci	<ul style="list-style-type: none"> • 104 MPN/100 mL (single sample) • 35 MPN/100 mL (geometric monthly mean)

SOURCE: RWQCB 2014; CWE 2020

In addition to meeting the numerical limits listed in Table 3.10-2, the proposed Project would also be required to meet various narrative goals based on beneficial uses of Silver Lake and Ivanhoe

Reservoirs, as designated in the *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). Refer to Section 3.10.2, *Regulatory Framework, Water Quality Control Plan for the Los Angeles Region*, below for further discussion of the Basin Plan.

CWA Section 402: National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program under Section 402 of the CWA is one of the primary mechanisms for controlling water pollution through the regulation of sources that discharge pollutants into waters of the United States. USEPA has delegated authority of issuing NPDES permits in California to the SWRCB, which has nine RWQCBs. The Los Angeles RWQCB regulates water quality in the Program area. The NPDES permit program is discussed in detail further below under *Regional* regulations.

Federal Antidegradation Policy

The Federal Antidegradation Policy has been incorporated within the Clean Water Act and requires states to develop state-wide antidegradation policies and identify methods for implementing them (USEPA 2010). Pursuant to the Code of Federal Regulations, state antidegradation policies and implementation methods must, at a minimum, protect and maintain: (1) existing in-stream water uses; (2) existing water quality, where the quality of the waters exceeds levels necessary to support existing beneficial uses, unless the state finds that allowing lower water quality is necessary to accommodate economic and social development in the area; and (3) water quality in waters considered an outstanding national resource.

Executive Order 11988 and National Flood Insurance Program

Under Executive Order 11988, FEMA is responsible for management of floodplain areas, defined as the lowland and relatively flat areas adjoining inland and coastal waters subject to a 1 percent or greater chance of flooding in any given year (representing the 100-year flood hazard zone). Also, FEMA administers the NFIP, which requires that local governments covered by federal flood insurance enforce a floodplain management ordinance that specifies minimum requirements for any construction within the 100-year flood zone. To facilitate identifying areas with flood potential, FEMA has developed Flood Insurance Rate Maps that can be used for planning purposes, including floodplain management, flood insurance, and enforcement of mandatory flood insurance purchase requirements.

Specifically, the NFIP requires that participating communities adopt certain minimum floodplain management standards, including restrictions on new development in designated floodways, a requirement that new structures in the 100-year floodplain be elevated to or above the 100-year flood level (known as base flood elevation), and a requirement that subdivisions be designed to minimize exposure to flood hazards. Participating communities agree to adopt and enforce ordinances that meet or exceed FEMA requirements to reduce the risk of flooding. The City of Los Angeles is a participating jurisdiction in the NFIP. Therefore, all new development must comply with the minimum requirements of the NFIP.

State

California Department of Water Resources, Division of Safety of Dams

The DSOD, through Division 3 of the California Water Code, is entrusted with regulatory authority and oversight for dam safety. The DSOD provides oversight of the design, construction, and maintenance of over 1,200 jurisdictional sized dams in California. Jurisdictional dams are dams that are more than 6 feet high and impound 50 acre-feet or more of water, or 25 feet or higher and impound more than 15 acre-feet of water. The Silver Lake and Ivanhoe Reservoirs are considered jurisdictional dams (DSOD 2021). The DSOD ensures dam safety by:

- Reviewing and approving dam enlargements, repairs, alterations, and removals to ensure that the dam appurtenant structures are designed to meet minimum requirements.
- Performing independent analyses to understand the performance of the dam and appurtenant structures. These analyses can include structural, hydrologic, hydraulic, and geotechnical evaluations.
- Overseeing construction to ensure work is being done in accordance with the approved plans and specifications.
- Inspecting each dam on an annual basis to ensure it is safe, performing as intended, and is not developing issues. Roughly 1/3 of these inspections include in-depth instrumentation reviews of the dam surveillance network data.
- Periodically reviewing the stability of dams and their major appurtenances in light of improved design approaches and requirements, as well as new findings regarding earthquake hazards and hydrologic estimates in California.

The California Office of Emergency Services Dam Safety Program was enhanced through passage of SB 92 (2017). The bill required preparation of Emergency Action Plans (EAPs) (except for dams designated as low-hazard) and brings inundation mapping under the jurisdiction of DWR. This legislation set forth additional provisions for EAPs including compliance requirements, exercises of the plan and coordination with local public safety agencies. EAPs are written documents that identify potential emergency conditions at a dam and specify pre-planned actions to help minimize property damage and loss of life should these conditions occur. EAPs contain procedures and information that instruct dam owners to issue early warning and notification messages to downstream emergency management authorities. EAPs also provide assistance and guidance to local jurisdictions on their emergency planning for a dam failure event to ensure effective dam incident emergency response procedures and planning.

SB 92 also requires EAPs be updated (at minimum) every 10 years or when there are significant changes at the dam, its critical appurtenant structures, or downstream hazard classification (DSOD 2019). Portions of the proposed Project design impacting dams and reservoirs have taken these restrictions into consideration based on a preliminary coordination with DWR and a courtesy review by DSOD. However, any future design impacting the dams and reservoirs would be subject to more restrictions and oversight, and would be required to be reviewed and approved by LADWP and DSOD.

Porter-Cologne Water Quality Act (California Water Code)

The Porter-Cologne Water Quality Control Act established the legal and regulatory framework for water quality control in California (Division 7 of the California Water Code). The California Water Code (CWC) authorizes the State Water Resources Control Board (SWRCB) to implement the provisions of the CWA, including the authority to regulate waste disposal and require cleanup of discharges of hazardous materials and other pollutants. In California, the NPDES stormwater permitting program is administered by the SWRCB.

Under the CWC, the State of California is divided into nine Regional Water Quality Control Boards (RWQCBs), which govern the implementation and enforcement of the CWC and the CWA. The proposed Project site is located within Region 4, also known as the Los Angeles RWQCB. The RWQCBs develop and enforce water quality objectives and implement plans that will best protect California's waters, acknowledging areas of different climate, topography, geology, and hydrology. Each RWQCB is required to formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The Basin Plan establishes beneficial use definitions for the various types of water bodies, and serves as the basis for establishing water quality objectives, discharge conditions and prohibitions, and must adhere to the policies set forth in the CWC and established by the SWRCB. In this regard, the RWQCB issued the Los Angeles Basin Plan on August 29, 2014 for the Coastal Watersheds of Los Angeles and Ventura Counties, with subsequent amendments. The RWQCB is also given authority to issue waste discharge requirements, enforce actions against stormwater discharge violators, and monitor water quality. The Basin Plan and the NPDES permits relevant to the proposed project are discussed further below.

Section 13050 of the CWC, part of the Porter-Cologne Act, defines pollution, contamination, and nuisance. Pollution is defined as alteration of water quality such that it unreasonably affects the water's beneficial uses; contamination is defined as impairment of water quality to the degree that it creates a hazard to public health; and a nuisance is defined as anything that is injurious to health, offensive to the senses, an obstruction to property use, and which affects a considerable number of people.

California Antidegradation Policy

The SWRCB Anti-Degradation Policy, formally known as the Statement of Policy with Respect to Maintaining High Quality Water in California (SWRCB Resolution No. 68-16), restricts degradation of surface and ground waters. Specifically, this policy protects water bodies where existing quality is higher than necessary for the protection of beneficial uses and requires that existing high quality be maintained to the maximum extent possible.

Under the Anti-Degradation Policy, any actions that can adversely affect water quality in all surface and ground waters must: (1) be consistent with maximum benefit to the people of California; (2) not unreasonably affect present and anticipated beneficial use of the water; and (3) not result in water quality less than that prescribed in water quality plans and policies. Furthermore, any actions that can adversely affect surface waters are also subject to the federal Anti-Degradation Policy (40 CFR Section 131.12) developed under the CWA. Discharges from the proposed Project that could affect surface water quality would be required to comply with the

Anti-Degradation Policy, which is included as part of the NPDES permit requirements for point discharges.

California Toxics Rule

In 2000, the California Environmental Protection Agency (CalEPA) promulgated the California Toxics Rule, which establishes water quality criteria for certain toxic substances to be applied to waters in the State. CalEPA promulgated this rule based on CalEPA's determination that the numeric criteria of specific concentrations of regulated substances are necessary for the State to protect human health and the environment. The California Toxics Rule establishes acute (i.e., short-term) and chronic (i.e., long-term) standards for bodies of water such as inland surface waters and enclosed bays and estuaries that are designated by the Los Angeles RWQCB as having beneficial uses protective of aquatic life or human health.

Water Quality Control Plan for the Los Angeles Region (Basin Plan)

The Los Angeles RWQCB's Basin Plan is designed to preserve and enhance water quality and protect the beneficial uses of all regional terrestrial surface water bodies (e.g., creeks, rivers, streams, and lakes), groundwater, coastal drainages, estuaries, coastal lagoons, and enclosed bays within the Los Angeles RWQCB's jurisdictional area. The preparation and adoption of Basin Plans are required by California Water Code Section 13240. According to Water Code Section 13050, Basin Plans establish the beneficial uses to be protected for the waters within a specified area, water quality objectives to protect those uses, and an implementation program for achieving the objectives. Because beneficial uses, together with their corresponding water quality objectives, can be defined per federal regulations as water quality standards, the Basin Plans are regulatory references for meeting the state and federal requirements for water quality control. The water quality objectives are thus incorporated into NPDES permits. The Basin Plan is designed to preserve and enhance water quality and protect beneficial uses of all waters. Specifically, it:

1. Designates beneficial uses for surface and ground waters.
2. Sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy.
3. Describes implementation programs for achieving objectives to protect all waters in the region.

Table 3.10-3 lists the existing and potential future designated beneficial uses identified by the Los Angeles RWQCB for water bodies at the SLRC (the Silver Lake and Ivanhoe Reservoirs). As described above in Section 3.10.1, *Environmental Settings*, due to the isolated nature of its water bodies, the SLRC would not be tributary to Ballona Creek or Los Angeles River under normal operating conditions and therefore would not impact beneficial uses in these waters.

**TABLE 3.10-3
 CURRENT AND POTENTIAL FUTURE DESIGNATED BENEFICIAL USES**

Silver Lake Reservoir and Ivanhoe Reservoir	MUN	IND	PROC	WARM	WILD	REC-1	REC-2	SPWN	WET
Current Designated Beneficial Uses (Basin Plan)	E	E	E	P	P	P	E		
Potential Future Designated Beneficial Uses	E	E	E	E	E	P	E	P	P

Acronyms:

- E: Existing Beneficial Use
- P: Potential Beneficial Use
- MUN – Municipal and Domestic Supply
- IND – Industrial Service Supply
- PROC – Industrial Process Supply
- WARM – Warm Freshwater Habitat
- WILD – Wildlife Habitat
- REC-1 – Water Contact Recreation
- REC-2 – Non-Contact Water Recreation
- SPWN – Spawning, Reproduction, and/or Early Development
- WET – Wetland Habitat

SOURCE: RWQCB 2019; CWE 2019

Sustainable Groundwater Management Act of 2014

The Sustainable Groundwater Management Act of 2014 creates a framework for sustainable, local groundwater management in California. The SGMA allows local agencies to customize groundwater sustainability plans to their regional economic and environmental needs. The act requires local regions to create a groundwater sustainability agency (GSA) and to adopt groundwater management plans for groundwater basins or subbasins that are designated as medium or high priority; and sets a 20-year timeline for implementation. High-priority basins or subbasins in critical overdraft were required to adopt groundwater management plans by 2020; medium-priority basins or subbasins are required adopt groundwater management plans by 2022. Basins were initially prioritized under the SGMA by DWR in 2014 under the California Statewide Groundwater Elevation Monitoring Program.

Groundwater is supplied to the proposed Project site from Basin 4-12, which is designated as a very low priority basin. The San Fernando Valley Groundwater Basin has not been identified as a critically overdrafted basin by SGMA and, as such, does not have a specific groundwater management plan and is not subject to SGMA (DWR 2021).

Regional

NPDES Waste Discharge Program

The federal CWA established the NPDES program to protect the water quality of receiving waters of the United States. Under CWA Section 402, discharging pollutants to receiving waters of the United States is prohibited unless the discharge is in compliance with an NPDES permit. In California, administration of the NPDES program has been delegated by USEPA to the SWRCB. The SWRCB administers water rights, water pollution control, and water quality functions throughout the state, while the RWQCBs conduct planning, permitting, and enforcement activities. Through the nine RWQCBs, point source dischargers are required to obtain NPDES permits (or, in California under authority of Porter-Cologne, Waste Discharge Requirements). Point sources include municipal and industrial wastewater facilities and stormwater discharges.

Effluent limitations serve as the primary mechanism in NPDES permits for controlling discharges of pollutants to receiving waters. When developing effluent limitations for an NPDES permit, a permit applicant must consider limits based on both the technology available to control the pollutants (i.e., technology-based effluent limits) and limits that are protective of the water quality standards of the receiving water (i.e., water quality-based effluent limits² if technology-based limits are not sufficient to protect the water body). For inland surface waters and enclosed bays and estuaries, the water quality-based effluent limitations are based on criteria in the National Toxics Rule and the California Toxics Rule, and objectives and beneficial uses defined in the applicable Basin Plan. There are two types of NPDES permits: individual permits tailored to an individual facility and general permits that cover multiple facilities or activities within a specific category. The NPDES permits relevant to construction and operation of the proposed Project are described below.

Prior to issuance of any NPDES permits for construction activities or operational discharges, or issuance of licenses, a review and authorization process by the Los Angeles RWQCB is required to ensure such permits and licenses are protective of designated beneficial uses and water quality and that TMDL requirements are incorporated as permit conditions in a manner consistent with relevant plans, policies, and guidelines.

NPDES Construction General Permit

The State of California adopted a Construction General Permit on September 2, 2009 (Order No. 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ) (Construction General Permit). The Construction General Permit regulates construction site stormwater management. Dischargers whose projects disturb one or more acres of soil, or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the Construction General Permit for discharges of stormwater associated with construction activity. The proposed Project would be required to comply with the permit requirements to control stormwater discharges from the construction sites. Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation, as well as construction of buildings and linear underground projects, including installation of water pipelines.

In the proposed Project area, the Construction General Permit is implemented and enforced by the Los Angeles RWQCB, which administers the stormwater permitting program. To obtain coverage under this permit, project operators must electronically file Permit Registration Documents, which include a Notice of Intent, a Stormwater Pollution Prevention Plan (SWPPP), and other compliance-related documents. An appropriate permit fee must also be mailed to SWRCB. The SWPPP identifies best management practices (BMPs) that must be implemented to reduce construction effects on receiving water quality based on potential pollutants. The BMPs identified are directed at implementing both sediment and erosion control measures as well as other measures to control potential chemical contaminants. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-

² Water quality-based effluent limits specify the level of pollutant (or pollutant parameter), generally expressed as a concentration, that is allowable.

stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, and vehicle and equipment washing and fueling. The SWPPP also includes descriptions of the BMPs to reduce pollutants in stormwater discharges after all construction phases have been completed at the site (post-construction BMPs).

The Construction General Permit includes several new requirements (as compared to the previous Construction General Permit, 99-08-DWQ), including risk-level assessment³ for construction sites, an active stormwater effluent monitoring and reporting program during construction (for Risk Level II and III sites), rain event action plans for certain higher risk sites,⁴ and numeric effluent limitations for pH and turbidity as well as requirements for qualified professionals that prepare and implement the plan. The risk assessment and SWPPP must be prepared by a State-qualified SWPPP Developer and implementation of the SWPPP must be overseen by a State-qualified SWPPP Practitioner. Project construction activities would be consistent with the Construction General Permit; compliance is required by law and the provisions of the permit and BMPs for construction and post-construction phases have proven effective in protecting water quality at construction sites and downgradient receiving waters.

Los Angeles County Municipal Separate Storm Sewer System Permit

The Municipal Stormwater Permitting Program regulates stormwater discharges from municipal separate storm sewer (drain) systems (MS4s). Stormwater runoff and authorized non-storm flows (conditionally exempt discharges) are regulated under NPDES stormwater permits. Phase I NPDES permits require medium and large cities, or certain counties with populations of 100,000 or more, to obtain NPDES permit coverage for their stormwater discharges. Phase II permits require regulated small MS4s in urbanized areas, as well as small MS4s outside the urbanized areas that are designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges. The MS4 permits require the discharger to develop and implement a Stormwater Management Plan/Program with the goal of reducing the discharge of pollutants to the maximum extent practicable, the performance standard specified in CWA Section 402(p), typically through the application of BMPs. The management programs specify what BMPs would be used to address certain program areas. The program areas include public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations.

The current Los Angeles County MS4 Permit (Order No. R4-2021-0105) became effective on September 11, 2021. Stormwater runoff and authorized non-storm flows (conditionally exempt discharges) from unincorporated areas of Los Angeles County under County jurisdiction, and 84 cities within the Los Angeles County Flood Control District (the Permittees), including the City of Los Angeles where the SLRC is located, are regulated under the MS4 NPDES permit. The MS4 permit contains minimum standards that the Permittees must enforce when construction activities disturb an area greater than one acre, such as the Project would (see also requirements

³ The Construction General Permit defines three levels of risk (Risk Levels I, II, and III) that may be assessed for a construction site. Risk is calculated based on the “project sediment risk,” which determines the relative amount of sediment that can be discharged given the project and location details, and the “receiving water risk” (the risk sediment discharges pose to the receiving waters).

⁴ Those sites that have a high potential for mobilizing sediment in stormwater and drain to a sediment-sensitive water body.

for the statewide construction permit discussed above, which is a permit that the construction contractor must apply for and adhere to). Compliance with MS4 construction requirements includes implementation of worksite BMPs similar to those described for the Construction General Permit for erosion, sediment, non-stormwater management, and waste management.

During operation of the proposed Project, non-stormwater discharges from facility sites would be prohibited (with some conditional exceptions). Stormwater discharges must meet water-quality-based effluent limitations, or water quality standards for discharges leaving the site, and must not cause or contribute to the exceedance of receiving water limitations (water quality standards for receiving waters). The MS4 permit requires implementation of a Planning and Land Development Program for all “New Development” and “Redevelopment” projects subject to the Order to accomplish the following objectives:

- Lessen the water quality impacts of development by using smart growth practices such as compact development, directing development toward existing communities via infill or redevelopment, and safeguarding of environmentally sensitive areas.
- Minimize the adverse impacts from stormwater runoff on the biological integrity of Natural Drainage Systems and the beneficial uses of water bodies in accordance with requirements under the California Environmental Quality Act (CEQA).
- Minimize the percentage of impervious surfaces on land developments by minimizing soil compaction during construction, designing projects to minimize the impervious area footprint, and employing low-impact development (LID) design principles to mimic predevelopment water balance hydrology through infiltration, evapotranspiration, and rainfall harvest and use.
- Maintain existing riparian buffers and enhance riparian buffers when possible.
- Minimize pollutant loadings from impervious surfaces such as rooftops, parking lots, and roadways through the use of properly designed, technically appropriate BMPs (including Source Control BMPs such as good housekeeping practices), LID Strategies, and Treatment Control BMPs.
- Properly select, design, and maintain LID and Hydromodification Control BMPs to address pollutants that are likely to be generated, reduce changes to predevelopment hydrology, ensure long-term function, and avoid the breeding of vectors.
- Prioritize the selection of BMPs to remove stormwater pollutants, reduce stormwater runoff volume, and beneficially use stormwater to support an integrated approach to protecting water quality and managing water resources.

The MS4 permit order specifies the criteria or thresholds for determining projects that are classified as “New Development” and “Redevelopment Projects” subject to the requirements above. Redevelopment projects subject to approval for the design and implementation of post-construction controls to mitigate stormwater pollution, before completion of a project, include the following:

- Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site.

- Where redevelopment results in an alteration to more than 50 percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, the entire project must be mitigated.
- Where redevelopment results in an alteration of less than 50 percent of impervious surfaces of a previously existing development, and the existing development was not subject to post-construction stormwater quality control requirements, only the alteration must be mitigated, and not the entire development.

Under the Los Angeles County MS4 Permit, permittees are required to implement a development planning program to address stormwater pollution. This program requires project applicants for certain types of projects to implement a Low Impact Development (LID) Plan. The purpose of the LID Plan is to reduce the discharge of pollutants in stormwater by outlining BMPs, which must be incorporated into the design of new development and redevelopment. These treatment control BMPs must be sufficiently designed and constructed to treat or retain the 0.75-inch, 24-hour rain event, or the 85th percentile, 24-hour storm event, whichever is greater, and achieve applicable water quality-based effluent limitations and/or receiving water limitations established pursuant to TMDLs. The discharger would be required to prepare a Monitoring and Reporting Program documenting outfall-based stormwater monitoring data (where stormwater exits the facility), wet and dry weather receiving water monitoring data, outfall-based non-stormwater monitoring data, and other relevant regional studies. The frequency of required monitoring and sampling activities is determined by a number of factors, including the types of receiving water body. In case of exceedance, the discharger would be required to submit an Integrated Monitoring and Compliance Report. This report would be used to determine additional measures to prevent or reduce pollutants contributing to the exceedance of receiving water limitations.

The proposed Project would be required to comply with the MS4 permit as administered by the local jurisdictions (i.e., the various cities), in addition to statewide water quality program administered by the RWQCB including the Porter-Cologne Water Quality Control Act. As such, discharges of the Project covered under the MS4 permit requirements would be required to adhere with the Waste Load Allocations assigned to MS4 discharges for applicable TMDLs.

Los Angeles County Hydrology Manual

Per the City's Special Order No. 007-1299, issued on December 3, 1999, the City has adopted the Los Angeles County Department of Public Works' Hydrology Manual (LADPW Hydrology Manual) as its basis of design for storm drainage facilities. The Hydrology Manual requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event (also called Q50). Areas with sump conditions⁵ are required to have a storm drain conveyance system capable of conveying flow from a 50-year storm event (LADPW 2006). The County also limits the allowable discharge into existing storm drain facilities based on the MS4 permit, which is enforced on all new developments that discharge directly into the County's storm drain system. Any proposed drainage improvements of County-owned storm drain facilities, such as catch

⁵ A sump, or depression, is an area from which there is no surface flow outlet.

basins and storm drain line, require review and approval by the Los Angeles County Flood Control District.

Local

City of Los Angeles Municipal Code

Section 62.105, Construction “Class B” Permit

Proposed drainage improvements within the street right-of-way or any other property owned by, to be owned by, or under the control of the City, requires the approval of a B-permit (Los Angeles Municipal Code [LAMC] Section 62.105). Under the B-permit process, storm drain installation plans are subject to review and approval by City of Los Angeles Bureau of Engineering (BOE). Additionally, connections to the City’s storm drain system from a property line to a catch basin or a storm drain pipe require a storm drain permit from BOE.

Sections 12.40 through 12.43, Landscape Ordinance (Ordinance No. 170,978)

In 1996, Ordinance No. 170,978 amended LAMC Sections 12.40 through 12.43 to establish consistent landscape requirements for new projects within the City. Section 12.40 contains general requirements, including a point system for specific project features and techniques in order to determine compliance with the ordinance, and defines exemptions from the ordinance. Section 12.41 sets minimum standards for water delivery systems (irrigation) to landscapes. Section 12.42 provides various regulations, of which two are applicable to stormwater management. The Heat and Glare Reduction regulation states among its purposes the design of vehicular use areas that reduce stormwater runoff and increase groundwater recharge; and the Soil and Watershed Conservation regulation is intended, among other purposes, to increase the “residence time of precipitation” within a given watershed. Implementation guidelines developed for the ordinance provide specific features and techniques for incorporation into projects, and include water management guidelines addressing runoff, infiltration, and groundwater recharge.

Section 64.70, Stormwater and Urban Runoff Pollution Control Ordinance (Ordinance No. 172,176)

In 1998, LAMC Section 64.70, the Stormwater and Urban Runoff Pollution Control Ordinance (Stormwater Ordinance), was added by Ordinance No. 172,176, and prohibits the discharge of unauthorized pollutants in the City. The Watershed Protection Program (Stormwater Program) for the City is managed by the Department of Public Works, Bureau of Sanitation (LASAN), along with all City Flood Protection and Pollution Abatement (Water Quality) Programs, including but not limited to, regulatory compliance, implementation, operations, reporting and funding.

The Stormwater Ordinance applies to all dischargers and places of discharge that discharge stormwater or non-stormwater into any storm drain system or receiving waters. While this practice is prohibited under the County’s Municipal NPDES Permit, adoption of this ordinance allows enforcement by the Department of Public Works, as well as the levy of fines for violations. The Stormwater Ordinance prohibits the discharge of pollutants by persons operating or performing industrial or commercial activities into the storm drain system and receiving waters, except as authorized by a general or separate NPDES permit; defines illicit, exempt, and conditionally exempt discharges; prohibits the placement or discharge of trash, sewage, hazardous materials, and other waste in storm drains or receiving waters, or the accumulation,

storage, or disposal of these materials in such a way as to contaminate runoff discharged to these facilities; requires control of pollutants from parking lots; and prohibits illicit connections to municipal storm drain facilities.

Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities

LAMC Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities, was added by Ordinance 173,494 (LID Ordinance) in 2000 and sets forth requirements for construction activities and facility operations of development and redevelopment projects to comply with the requirements of the NPDES permit requirements. The provisions of this section contain requirements for construction activities and facility operations of development and redevelopment projects to comply with the Land Development requirements of the Los Angeles County MS4 permit through integrating LID practices and standards for stormwater pollution mitigation, and maximize open, green and pervious space on all developments and redevelopments consistent with the City's Landscape Ordinance and other related requirements in the Watershed Protection Division of LASAN's Development Best Management Practices (BMP) Handbook.

Section 91.7013 and 91.7014, Erosion Control and Drainage Devices

Earthwork activities, including grading, are governed by the Los Angeles Building Code, which is contained in LAMC, Chapter IX, Article 1. Specifically, LAMC Section 91.7013 includes regulations pertaining to erosion control and drainage devices, and Section 91.7014 includes general construction requirements, as well as requirements regarding flood and mudflow protection.

City of Los Angeles Low Impact Development (LID) Ordinance (No. 181,899 and 183,833)

In October 2011, the City adopted a Citywide LID Ordinance that amends the City's existing Stormwater Ordinance (LAMC Sections 64.70.01 and 64.72, described above) to expand the applicability of the existing SUSMP requirements by imposing rainwater LID strategies on projects that require building permits. The LID Ordinance became effective on May 12, 2012 and was updated in September 2015 (Ordinance No. 183,833).

LID is a stormwater management strategy with goals to mitigate the impacts of increased runoff and stormwater pollution as close to its source as possible. LID promotes the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater. The goal of these LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Through the use of various infiltration strategies, LID is aimed at minimizing impervious surface area. Where infiltration is not feasible, the use of bioretention, rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff may be used.⁶

⁶ City of Los Angeles Department of Public Works, Bureau of Sanitation (LASAN), Watershed Protection Division, Planning and Land Development Handbook for Low Impact Development (LID), Part B, 5th Edition, May 9, 2016.

The intent of LID standards is to:

- Require the use of LID practices in future developments and redevelopments to encourage the beneficial use of rainwater and urban runoff;
- Reduce stormwater/urban runoff while improving water quality;
- Promote rainwater harvesting;
- Reduce off-site runoff and provide increased groundwater recharge;
- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

The Citywide LID strategy addresses land development planning, as well as storm drain infrastructure. Toward this end, LID is implemented through BMPs that fall into four categories: site planning BMPs, landscape BMPs, building BMPs, and street and alley BMPs. While the LID Ordinance and BMPs contained therein are compliant with County Municipal NPDES Permit requirements for stormwater management, those requirements apply only to proposed new development and redevelopment of a certain size, primarily address stormwater pollution prevention as opposed to groundwater recharge, and vary over time as the permit is reissued every five years. The LID Ordinance provides a consistent set of BMPs that are intended to be inclusive of, and potentially exceed, SUSMP standards, apply to existing, as well as new, development, and emphasize natural drainage features and groundwater recharge in addition to pollution prevention in receiving waters. The LID Ordinance requires the capture and management of the first 0.75 of an inch of runoff flow during storm events defined in the City's SUSMP BMPs, through one or more of the City's preferred SUSMP improvements: on-site infiltration, capture and reuse, or biofiltration/biotreatment BMPs, to the maximum extent feasible as described below.

- On-site infiltration refers to the physical process of percolation, or downward seepage, of water through a soil's pore space. As water infiltrates, the natural filtration, adsorption, and biological decomposition properties of soils, plant roots, and microorganisms work to remove pollutants prior to the water recharging the underlying groundwater. Infiltration BMPs include infiltration basins, infiltration trenches, infiltration galleries, bioretention without an underdrain, dry wells, and permeable pavement. Infiltration can provide multiple benefits, including pollutant removal, peak flow control, groundwater recharge, and flood control. However, conditions that can limit the use of infiltration include soil properties, proximity to building foundations and other infrastructure, geotechnical hazards (e.g., liquefaction, landslides), and potential adverse impacts on groundwater quality (e.g. industrial pollutant source areas, contaminated soils, groundwater plumes). To ensure that infiltration would be physically feasible and desirable, a categorical screening of site feasibility criteria must be completed prior to the use of infiltration BMPs.
- Capture and reuse refers to a specific type of BMP that operates by capturing stormwater runoff and holding it for efficient use at a later time. On a commercial or industrial scale, capture and reuse BMPs are typically cisterns, which can be implemented both above and below ground. Cisterns are sized to store a specified volume of water with no surface discharge until this volume is exceeded. The primary use of captured runoff is for subsurface drip irrigation. The temporary storage of roof runoff reduces the runoff volume from a property and may reduce the peak runoff velocity for small, frequently occurring storms. In

addition, by reducing the amount of stormwater runoff flowing into a stormwater conveyance system, fewer pollutants are transported through the conveyance system into local streams and the ocean. The on-site reuse of the stored water for non-potable domestic purposes conserves City-supplied potable water and, where directed to unpaved surfaces, can recharge groundwater in local aquifers.

- **Biofiltration BMPs** are landscaped systems that capture and treat stormwater runoff through a variety of physical and biological treatment processes. Biofiltration systems normally consist of a ponding area, mulch layer, planting soils, plants, and, in some cases, an underdrain. Runoff that passes through a biofiltration system is treated by the natural adsorption and filtration characteristics of the plants, soils, and microbes with which the water comes into contact. Biofiltration BMPs include vegetated swales, filter strips, planter boxes, high flow biotreatment units, bioinfiltration systems, and bioretention systems with underdrains. Biofiltration can provide multiple benefits, including pollutant removal, peak flow control, and low amounts of volume reduction through infiltration and evapotranspiration.

Per the City's 2016 LID Manual's Figure 3.3 and Section 4.1, the City's preferred LID improvement is on-site infiltration of stormwater since it allows for groundwater recharge and reduces the volume of stormwater entering municipal drains.⁷ If project site conditions are not suitable for infiltration, the City requires on-site retention via stormwater capture and reuse. Should capture and reuse be deemed technically infeasible, high efficiency bio-filtration/bioretention systems should be utilized. Lastly, under the LID Ordinance (LAMC Section 64.72 C.6), as interpreted in the LID Manual, if no single approach listed in the LID Manual is feasible, then a combination of approaches may be used.⁸

City of Los Angeles Water Quality Compliance Master Plan for Urban Runoff

The Water Quality Compliance Master Plan for Urban Runoff (Water Quality Compliance Master Plan) was developed by the City's Department of Public Works, Bureau of Sanitation (LASAN), Watershed Protection Division, in collaboration with stakeholders, in response to a 2007 City Council motion (Motion 07-0663) for the development of a water quality master plan addressing pollution from urban runoff within the City. The Water Quality Compliance Master Plan was adopted in April 2009.

The Water Quality Compliance Master Plan addresses planning, budgeting, and funding for achieving clean stormwater and urban runoff for the next 20 years and presents an overview of the status of urban runoff management within the City. The Water Quality Compliance Master Plan identifies the City's four watersheds; summarizes water quality conditions in the City's receiving waters as well as known sources of pollutants; summarizes regulatory requirements for water quality; describes BMPs required by the City for stormwater quality management; and discusses related plans for water quality that are implemented within the Los Angeles region, particularly TMDL Implementation Plans and Watershed Management Plans in Los Angeles.

⁷ City of Los Angeles Department of Public Works, LASAN, Watershed Protection Division, Planning and Land Development Handbook for Low Impact Development (LID), Part B, 5th Edition, May 9, 2016.

⁸ City of Los Angeles Department of Public Works, LASAN, Watershed Protection Division, Planning and Land Development Handbook for Low Impact Development (LID), Part B, 5th Edition, May 9, 2016.

3.10.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to hydrology and water quality are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Would the proposed Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality? (Refer to Impact 3.10-1)
- Would the proposed Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? (Refer to Impact 3.10-2)
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - a. Result in substantial erosion or siltation on- or off-site;
 - b. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
 - c. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - d. Impede or redirect flood flows? (Refer to Impact 3.10-3)
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? (Refer to Impact 3.10-4)
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? (Refer to Impact 3.10-5)

In addition, the 2006 L.A. CEQA Thresholds Guide holds that the determination of significance shall be made on a case-by-case basis after considering the following factors:

Surface Water Hydrology

- Whether the project would cause flooding during the projected 50-year developed storm event, which would have the potential to harm people or damage property or sensitive biological resources;

Surface Water Quality

- Whether the discharges associated with the project would create pollution, contamination or nuisance as defined in Section 13050 of the CWC or that cause regulatory standards to be violated, as defined in the applicable NPDES stormwater permit or Water Quality Control Plan for the receiving water body. (Refer to Impact 3.10-1)

Groundwater Quality

- Whether the proposed Project would:
 - Affect the rate or change the direction of movement of existing contaminants;

- Expand the area affected by contaminants;
- Result in an increased level of groundwater contamination (including that from direct percolation, injection, or saltwater intrusion); or
- Cause regulatory water quality standards at an existing production well to be violated, as defined in the California Code of Regulations (CCR), Title 22, Division 4, and Chapter 15 and in the Safe Drinking Water Act;

Methodology

The information included in the Water Resources Report and Water Quality Model provide the basis for much of the analysis in this section (CWE 2019, 2020). Discussions regarding future nutrient and contamination concentrations rely specifically on the results of the Water Quality Model,⁹ which modeled the future water quality in the SLRC following implementation of the proposed Project.

The proposed Project would be regulated by the various laws, regulations, and policies summarized in Section 3.10.2, *Regulatory Setting*. Compliance by the proposed Project with applicable federal, State, and local laws and regulations is assumed in this analysis and local and State agencies would be expected to continue to enforce applicable requirements to the extent that they do so now.

2020 SLRC Master Plan Project Changes and Modeling Accuracy

The Water Quality Model calculated the effects of the proposed Project on water quality in the Silver Lake and Ivanhoe reservoirs by modeling the different ways that water supplies that would enter and exit the SLRC. Since the Water Quality Model was prepared, LADWP has halted its plans to implement the Stormwater Capture Projects, which partially contributed to the future water quality conditions predicted in the model. The elimination of stormwater runoff as a variable could therefore affect the accuracy of the Water Quality Model with respect to future water supplies and water quality conditions. The discussion below provides reasoning for continued use of the Water Quality Model as the basis of the analysis despite this change.

Water Quality Model and Water Quality

In order to determine whether substantially different water quality impacts would occur for the proposed Project without the Stormwater Capture Projects, it must first be determined whether future water quality conditions were primarily attributable to the Stormwater Capture Projects. The following inputs/outputs were used to model future water quality conditions in the SLRC reservoirs under the proposed Project, or the “Master Plan Proposed Scenario” in the Water Quality Model: precipitation, bird droppings, atmospheric disposition, Pollock Wellfield groundwater, overflow from Ivanhoe to Silver Lake Reservoir, recirculation from Silver Lake to Ivanhoe Reservoir, Stormwater Capture Project runoff, exfiltration, evaporation, transpiration, overflow, and maintenance discharge.

⁹ The Water Quality Model takes the form of a spreadsheet mass balance model that estimated the in-lake concentrations of nutrients and contaminants of concern over time. Transformations and removal of nutrients and contaminants within the SLRC were simulated based on rates from scientific and engineering literature.

The Water Quality Model also includes separate forecasts for future water quality conditions that would occur under baseline conditions together with future LADWP projects (no treatment wetlands), under baseline conditions only (no stormwater capture, recirculation or aeration projects and no treatment wetlands), and under baseline conditions without groundwater pumping. The models for these scenarios demonstrate how removing an increasing number of components affects future water quality conditions.

There were no model scenarios that included all components and excluded only the Stormwater Capture Projects. However, the results of the Water Quality Model generally identify the component that contributed most to differences in future water quality conditions across the various Project scenarios (CWE 2020, p. 48). Additionally, the “LADWP Project Baseline Scenario” models all components of the proposed Project except for the treatment wetlands. As such, the results of this scenario have been compared to the results of the Master Plan Proposed Scenario to determine whether stormwater runoff or the treatment wetlands had the greater impact on water quality.

The Water Quality Model found that implementation of the Stormwater Capture Projects under both the Master Plan Proposed Scenario and the LADWP Project Baseline Scenario would contribute runoff and increase the following pollutants within the SLRC reservoirs: suspended solids and sediment; total dissolved solids (TDS) concentrations; bacteria; copper and lead concentrations; and nitrogen and phosphorus concentrations.

The Water Quality Model projected the following with regard to overall water quality conditions under the LADWP Project Baseline Scenario (stormwater capture without treatment wetlands) and Master Plan Proposed Scenario (stormwater capture with treatment wetlands):

- Suspended solids concentrations were very similar under each scenario, with only a slight decrease observed under the Master Plan Proposed Scenario.
- TDS concentrations would increase at a faster rate under the LADWP Project Baseline Scenario, whereas TDS concentrations under the Master Plan Proposed Scenario would remain below the TDS limits set for similar bodies of water after 20 years.
- Bacteria concentrations under the LADWP Project Baseline Scenario would occasionally exceed total coliform limits, whereas the Master Plan Proposed Scenario was projected to exceed the limit once over the course of 20 years due to the wetland treatment systems.
- Copper and lead concentrations would be similar under each scenario, with only a slight decrease observed under the Master Plan Proposed Scenario.
- Nitrogen concentrations exceed limits under the LADWP Project Baseline Scenario due to additions of Pollock Well Water, whereas treatment wetlands under the Master Plan Proposed Scenario reduce nitrogen concentrations.

The results summarized above suggest that the proposed Project would not result in a substantially greater or worse impact to water quality conditions in the SLRC if all other components analyzed under the Master Plan Proposed Scenario are implemented, regardless of receiving runoff from the Stormwater Capture Projects. In fact, elimination of stormwater supplies would likely reduce the amount of pollutants that would have otherwise entered the

SLRC and would be a net benefit to water quality conditions when compared to the future conditions predicted in the model. The results of the Water Quality Model would therefore remain accurate with respect to the proposed Project's impacts on water quality. The analysis below will rely on Water Quality Model's findings for the Master Plan Proposed Scenario as a conservative estimate of future water quality conditions.

Water Quality Model and Water Supplies

Water levels in the reservoirs were projected to be similar under all modeled scenarios receiving Pollock Wellfield groundwater supplies regardless of receiving additional supplies from Stormwater Capture Projects (CWE 2020, p. 30). Furthermore, elimination of the additional runoff supplies from the Stormwater Capture Projects would have no effect on the volume and frequency of groundwater pumping from Pollock Wellfield during operations. Therefore, the results of the Water Quality Model remain accurate with respect to the proposed Project's impacts on groundwater supplies.

Pollock Wellfield Supply Reliability

The Water Quality Model for the 2020 SLRC Master Plan was based on the assumption that Pollock Well #3 water would be available throughout the operation of the proposed Project. However, as discussed in Section 3.10.1, *Environmental Setting*, LADWP has since incorporated operable flexibility into the proposed refill operations that would allow reservoir water to be lowered below levels suitable for wetland growth and sustainability during drought emergencies. Temporary restrictions on groundwater water supplies would have the potential to reduce the water quality benefits of the proposed wetlands and degrade water quality in Silver Lake and Ivanhoe Reservoirs relative to the impacts described below. Although immediate impacts to water quality would not occur, the water quality in the SLRC reservoirs would have the potential to degrade gradually to reflect similar results of Water Quality Model's "Isolated Baseline" scenario the longer groundwater refill operations are paused. The results of the Master Plan Proposed Scenario would therefore remain accurate in the short term but could become increasingly inaccurate over time under emergency drought conditions. Since groundwater supplies are currently available, Pollock Wellfield groundwater is considered a baseline condition. Therefore, the analysis below considers the Water Quality Model's findings for the Master Plan Proposed Scenario to be accurate.

Other changes to the proposed Project that have occurred since the year 2020, such as the addition of off-site parking spaces on existing streets, would have no effects with respect to the proposed Project's impacts on water supplies or water quality.

3.10.4 Project Design Features

No specific project design features are proposed with regard to hydrology and water quality.

3.10.5 Impacts and Mitigation Measures

Water Quality

Impact 3.10-1: Would the proposed Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

Construction of the proposed Project and offsite improvements would include the use of heavy-duty equipment for vegetation grubbing and other ground disturbing activities, including demolition, trenching, paving, and mass grading and excavation. The proposed construction activities would include stockpiling of soils and construction materials at the site and would require the use of hazardous materials such as fuels and oils, paints and thinners, and solvents and cleaning solutions. Sediment and other pollutants generated during construction would have the potential to be mobilized and transported by stormwater runoff (nonpoint-source pollution), potentially degrading surface and groundwater quality on- and off-site. In addition, hazardous materials associated with construction equipment could adversely affect water quality if spilled or stored improperly and transported by stormwater runoff. In the absence of planned mitigation during construction, stormwater runoff would have the potential to substantially degrade surface water quality in the Silver Lake and Ivanhoe Reservoirs, and Ballona Creek.

Because the overall footprint of construction activities would exceed one acre, construction of the proposed Project would require compliance with the NPDES General Construction Permit and its required preparation and implementation of a SWPPP to comply with Section 402 of the federal CWA (refer to Section 3.10.2, *Regulatory Framework, NPDES Construction General Permit*). In accordance with the requirements of the permit, the proposed Project would require the preparation and implementation of a site-specific SWPPP that adheres to the Watershed Protection Division of LASAN's BMP Handbook. As part of the proposed Project, temporary netting would be installed near the reservoirs to prevent soils and other materials from dumping or spreading into the reservoirs during construction. The SWPPP would include specific BMPs to prevent sediment and pollutants from contacting stormwater and moving into downstream receiving waters including the two reservoirs. (See Section 3.10.2, *Regulatory Framework, NPDES Construction General Permit*).

Compliance with hazardous materials regulations would ensure that excavated soils are transported, used, stored, and disposed of in a safe manner to protect worker safety, and reduce the potential for a release of hazardous materials into the environment. Materials containing lead-based paint (LBP), asbestos-containing material (ACM), or other hazardous building debris would be removed from the proposed Project site prior to the start of demolition activities as required under the California Code of Regulations (CCR) Title 8. The regulations require that all work with these materials must be conducted by a State-certified professional who would be responsible for ensuring compliance with all applicable regulations. Compliance with applicable federal, State, and local requirements concerning the handling, storage and disposal of hazardous waste, such as applicable provisions of 22 CCR, would reduce the potential for construction of the Project to release contaminants into surface water and groundwater.

The proposed Project would comply with the NPDES Construction General Permit requirements, including the preparation and implementation of a SWPPP and BMPs, and applicable federal, State, and local requirements concerning the handling, storage, and disposal of hazardous materials, potential violations of water quality standards and/or waste discharge requirements. The proposed Project would result in a less than significant impact.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As shown in Table 3.10-3, the proposed Project may change the water function of all or a portion of the SLRC (Refer to Section 3.10.2, *Regulatory Framework, Water Quality Control Plan for the Los Angeles Region*). The proposed Project would construct wetland habitats and may introduce fish species to the reservoirs, and therefore may result eventually to a change in the designated beneficial uses within the Basin Plan as outlined in Table 3.10-3. Public access to the water is not being considered as part of the proposed Project except through guided kayak tours conducted by an ecologist. The reservoir would remain in compliance with designated water quality standards if future water quality conditions do not exceed the designated water quality goals established in the Basin Plan, which are listed Table 3.10-2 (Refer to Section 3.10.2, *Regulatory Framework, CWA Section 303: Water Quality Standards and Implementation Plans*).

As described previously, the Water Quality Model estimated future water quality conditions under the Master Plan Scenario, which accounts for effects of the proposed Project. The results of the Water Quality Model indicate that the proposed Project would provide a significant water quality benefit for nitrogen, phosphorus, chlorophyll, and algae¹⁰ within the SLRC compared to existing conditions. Concentrations of copper and lead may increase due to the introduction of groundwater and stormwater. However, the modeling results indicate that implementation of the proposed Project would not result in exceedances of most of the water quality goals, with the possible exception of total coliform bacteria limits (See Table 3.10-2). Although the Water Quality Model predicted that total coliform limits could be exceeded, this would occur for only one day over the 20-year modeling timespan. Further, absent implementation the proposed wetland habitats under the proposed Project, water quality impacts from bird droppings would result in coliform being exceeded on 14 days (CWE 2020). The proposed Project would therefore result in a reduction to total coliform under the Master Plan Scenario, representing a water quality benefit. Therefore, impacts to designated beneficial uses and associated water quality standards as a result of the proposed Project would be less than significant. The results of the Water Quality Model for existing and future nutrient and contaminant concentrations in the SLRC are listed in **Table 3.10-4**. Note that the modeled concentrations would all be within the regulatory numerical limits.

¹⁰ Chlorophyll-a and algae concentrations were modeled and depended on phosphorus concentrations.

**TABLE 3.10-4
 WATER QUALITY MODEL RESULTS**

Pollutant	Existing Baseline Scenario*		Master Plan Scenario		Numerical Limits
	Silver Lake	Ivanhoe	Silver Lake	Ivanhoe	
Total Nitrogen	1.2 mg/L	2.2 mg/L	0.2 mg/L	0.3 mg/L	<1 µg/L
Total Phosphorus	0.058 mg/L	0.053 mg/L	0.019 mg/L	0.019 mg/L	<0.1 µg/L
Chlorophyll-a	12.0 µg/L	11.3 µg/L	5.2 µg/L	5.2 µg/L	<20 µg/L
Dissolved Oxygen	7.9 mg/L	7.9 mg/L	7.9 mg/L	7.9 mg/L	>5 µg/L
Total Copper	8.0 µg/L	4.3 µg/L	16.7 µg/L	16.1 µg/L	<22 µg/L
Total Lead	0.8 µg/L	0.4 µg/L	4.9 µg/L	4.7 µg/L	<11 µg/L
Total Coliform	0 days	0 days	0 days	1 day	<1,000 MPN per 100 mL

* Water Quality Model results for existing baseline water quality conditions, including Pollock Well water.

** Following initial depreciation period.

MPN = most probable number; ml = milliliters

SOURCE: CWE 2020

The beneficial water quality impacts described above are attributed primarily to the proposed wetland terraces and floating wetland habitats. The proposed wetland terraces and transition habitat areas would mimic the water quality processes of treatment wetlands that use biological processes to remove nutrients through transformation and uptake by microbes and plants. Floating treatment wetlands would improve water quality by allowing aquatic plant roots to grow in the water column, and would be as effective as conventional flow-through wetlands at nitrogen and phosphorus removal (CWE 2020). As described in Section 2.7.2, *Horticulture Maintenance and Water Management*, SLRC water management would include water quality monitoring as well as maintenance activities in the reservoirs to sustain the water quality treatment function of the proposed wetlands, such as the removal of dead plant material, inspections for trash and debris accumulation, repairs to undercut areas and erosion, and vector control. Once an operator has been determined, the operator and the City would prepare and ensure implementation of Operations and Maintenance Procedures, which would include a Wetlands Management Plan section that outlines methods and frequency for the maintenance of the shoreline wetland areas and floating wetland features in a manner sufficient to maintain water quality goals. The Plan will include at a minimum vegetation clearing methods, replanting triggers and methods, wildlife avoidance measures, nesting bird avoidance measures, debris disposal methods and frequency, points of contact for responsible parties, reporting methods and frequencies. Potential impacts of the proposed wetlands related to mosquitos and their potential to transmitting diseases to people are discussed under Impact 3.9-1 in Section 3.9, *Hazards and Hazardous Materials*.

As described in Section 3.10.1, *Environmental Setting, Water Quality*, Pollock Wellfield extracts groundwater from Basin 4-12, which has been impacted by contamination plumes from hexavalent chromium and from VOCs such as TCE and PCE (CWE 2019). Groundwater supplies would be pumped into the reservoirs similar to the existing conditions (Refer to Impact 3.10-2), and would be subject to RWQCB WDRs requiring treatment of Basin 4-12 groundwater to ensure

water quality objectives are met. Therefore, the proposed Project would not affect the rate or change the direction of movement of existing contaminants, expand the area affected by contaminants, or result in an increased level of contamination for the existing Basin 4-12 contamination plumes.

Stormwater diversions into the reservoirs would also be subject to water quality objectives outlined in Table 3.10-2. Stormwater BMPs such as bioswales and the proposed wetlands would assist in maintaining stormwater quality entering the reservoirs. As described in Section 2.7, *Project Operations and Maintenance*, and PDF-UTIL-3, decentralized drainage strategies would be incorporated into the design of the proposed Project. Areas adjacent to the reservoir, such as the great lawn and seating terraces, would be designed for surface runoff to move thorough the proposed habitat island areas before entering the reservoirs. The natural bioremediation processes present in the wetland plants and soils would filter out contaminants in water, and are a treatment control BMP as described in the LACDPW LID Standards Manual. In other areas, stormwater runoff would be treated by infiltration gardens located throughout the SLRC. Stormwater falling on the outer boundary of the SLRC would drain southwest to the Ballona Creek watershed similar to existing conditions and routed into the municipal stormwater system, and would be required to comply with the standards of the MS4 permit and LADPW Hydrology Manual discussed in Section 3.10.2, *Regulatory Framework*. With implementation of the decentralized drainage strategy and compliance with MS4 and LADPW requirements, the water quality impacts of the proposed Project related to stormwater runoff would remain less than significant.

Operation of newly constructed or enhanced buildings such as the proposed Multi-Purpose Facility and Education Center would contain small quantities of cleaning solutions stored inside the building. Spills of chemicals, if any, would be contained inside the building and quickly cleaned up. Source control measures per the City's LID requirements, including good housekeeping, removal of trash and maintenance of driveways and parking areas, and proper use and storage of pesticides, would also reduce surface water quality impacts and would prevent pollutants from entering groundwater by percolation within landscaped areas or other permeable surfaces. Any on-site use of hazardous materials to be used in association with operation of the Project, such as small quantities of potentially hazardous materials in the form of cleaning solvents, painting supplies, pesticides for landscaping, and pool maintenance, as well as fuel storage associated with maintenance and/or emergency equipment, would be contained, stored, and used in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations, such that no hazardous materials be exposed to or otherwise would adversely impact groundwater quality. Impacts would be less than significant.

Operation of the proposed Project would not result in discharges that violate any water quality standards or waste discharge requirements; rather, it would improve water quality compared to existing conditions. Therefore, impacts resulting from Project operation with respect to surface water quality and groundwater quality would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Groundwater Supplies

Impact 3.10-2: Would the proposed Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Construction

The proposed Project site consists of isolated water bodies that do not discharge or substantially contribute to groundwater recharge under normal operations. Construction activities for the proposed Project and offsite improvements would not require drainage of the reservoirs or alterations to bottom of the basin. Thus, water which is lost through seepage in the reservoirs would continue to percolate into the adjacent watershed and infiltrate into groundwater Basin 4-11 similar to existing conditions. Limited amounts of water typically required for construction activities would be supplied by water trucks and would not require use of Basin 4-12 groundwater from Pollock Wellfield #3. Therefore, construction of the proposed project would not impede sustainable management of groundwater basins and the impact would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Operation of the proposed Project would result in direct alteration of the landscape, including approximately 11.5 acres of asphalt paving that would impact the site's capacity for groundwater recharge. The addition of the paving would reduce recharge within the footprint of the new pavement. However, the proposed Project would implement a decentralized drainage strategy to redirect that stormwater into the reservoirs. The existing footprint of the reservoir would continue to be a source of recharge to groundwater at existing levels through seepage as the bottom of the reservoir would not be altered. Any reduction in seepage to the groundwater basin from within the unpaved park areas would be negligible. Further, stormwater on the outer boundaries of the SLRC would runoff into the existing storm drain network to the Ballona Creek Watershed or infiltrate into Basin 4-11 similar to existing levels, and would be required to comply with applicable MS4 and LADPW regulations. Impacts with regard to physical alterations of the SLRC to groundwater supplies and sustainable management of Basin 4-11 are therefore considered less than significant.

The proposed Project includes a suggested water level elevation range between elevations 445 and 447 feet for optimal wetland habitats growth and sustainability. It is anticipated that continuous flows of Basin 4-12 groundwater would be needed when the reservoir elevation is low, and sporadic pumping of groundwater would be required every three to six hours when reservoir elevations are high. Although it is anticipated that the proposed Project would require

more frequent pumping to maintain water levels to sustain the proposed wetland habitats, the results of the Water Quality Report indicate that the proposed Project would reduce the average volumes of groundwater required to refill the SLRC each year. The proposed Project would require pumping 227 AFY of groundwater from Pollock Well #3, whereas 241 AFY are currently needed to maintain water levels under existing operations (CWE 2020).

Further, as discussed in Section 2.7.3, *Drought Emergency Contingencies*, operational constraints may require modifications to the water levels corresponding to overall system needs, including the need to prioritize use of local groundwater to augment potable water supplies during periods of drought. LADWP utilizes conjunctive use strategies to balance supplies with dry period demands, while also preventing overdraft of its basins. During previous successive dry-year periods, LADWP pumped groundwater at greater-than-average rates for the first few years of the dry period, then lowered its pumping rates and increased surface water use in subsequent years to facilitate groundwater replenishment (LADWP 2021). Thus, during emergency drought conditions, groundwater supplies typically available for pumping into the Silver Lake and Ivanhoe Reservoirs from the Pollock Wellfield may be limited. Such a reduction in groundwater availability may require water levels in the reservoirs to be temporarily adjusted lower than suggested levels (between 445 and 447 feet). If possible, water levels would be held at levels high enough to maintain varied shallow wading habitat for waterfowl within the proposed wetland terraces in accordance with the Wetlands Management Plan (Refer to Section 2.7.1, *Operation and Maintenance Plans*). The ability to curtail groundwater pumping during emergency droughts that would normally be supplied to the reservoirs would reduce impacts to the groundwater basin, while ensuring that potable water demands relying on groundwater are met. The proposed Project would therefore result in no impact in relation to groundwater supplies.

As discussed in Section 3.10.1, *Groundwater*, Basin 4-12 is designated as a very low priority basin under the SGMA, and does not have specific groundwater management plans (DWR 2021). Further, the proposed Project would result in a reduction in the amount of groundwater supplies which are pumped into the reservoirs for existing operations. Compliance of the proposed refill operations with applicable federal, State, and local regulations related to sustainable groundwater management is required. Impacts are considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Alteration of Drainage Patterns

Impact 3.10-3: Would the proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows?

Construction

As discussed under Impact 3.9-1, construction of the proposed Project would include the use of heavy-duty equipment for vegetation grubbing and other ground disturbing activities, including demolition, trenching, paving, and mass grading and excavation. Ground disturbing activities could temporarily alter existing drainage patterns and flows on the proposed Project site by exposing the underlying soils, modifying flow direction, and making the Project site temporarily more permeable. Exposed and stockpiled soils could be temporarily subject to erosion and conveyance into nearby storm drains during storm events. Sediment and other pollutants generated during construction would have the potential to be mobilized and transported by stormwater runoff, potentially degrading surface and groundwater quality on- and off-site.

Because the proposed construction site would be greater than one acre, the proposed Project would require the preparation and implementation of a site-specific SWPPP that adheres to the Watershed Protection Division of LASAN's BMP Handbook. Construction activities would be temporary, and flow directions and runoff volumes during construction would be controlled. As discussed under Impact 3.10-1, construction of the proposed Project would comply with NPDES Construction General Permit requirements including preparation of a SWPPP, implementation of BMPs, and compliance with applicable City grading regulations. Therefore, construction of the proposed Project would not substantially alter the drainage patterns of the Project site in a manner that would result in substantial changes to drainage patterns or associated erosion, sedimentation, flooding, exceedance of drainage system capacities, or impeding or redirecting flood flows. The proposed Project would result in a less-than-significant impact.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

The proposed Project would implement facilities that would increase areas of impermeable surfaces, which could result in increased runoff rates and/or quantities. In addition, operation of the proposed Project would include decentralized drainage facilities which would cause increased surface runoff to enter the reservoirs. As described in Section 3.10.1, *Site Drainage and Existing Topography*, LADWP maintains water levels in the reservoirs several feet below the overflow

elevation. As such, the existing overflow spillway does not discharge water from within the SLRC to the LACFCD storm drain system west of the proposed dam under normal operating conditions (CWE 2020). Operation of the proposed Project would not require physical alterations to overflow spillway, or result in substantial increases to water levels in the reservoirs due to proposed drainage facilities and groundwater pumping, which could increase the likelihood for discharge. As discussed above for Impact 3.10-2, operational constraints, particularly during prolonged drought conditions, may require lower water levels. However, in the unlikely event of discharge due to increases in water levels, the spillway has capacity to convey 74 cubic feet per second (LADWP 1973). Further, the natural bioremediation processes present in the wetland plants and soils would filter out contaminants in water prior to potential discharge. As required under DSOD regulations, LADWP would continue to monitor weather and lower the water levels in the reservoirs in advance of an anticipated storm event to prevent overtopping the reservoirs or exceeding the stormwater drainage capacity west of the reservoir. Stormwater falling on the outer boundary of the SLRC would drain southwest to the Ballona Creek watershed similar to existing conditions and routed into the municipal stormwater system.

Therefore, the proposed Project would continue to capture stormwater within the proposed Project site. Compliance with applicable federal, State, and local regulations, such as those regulating stormwater runoff in the MS4 and LADPW Hydrology Manual, would ensure impacts remain less than significant with regard to flood flows, erosion, and runoff.

Impacts of the proposed Project would not impede or redirect flood flows. Impacts pertaining to erosion and runoff would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Flood Hazard, Tsunami, or Seiche

Impact 3.10-4: Would the proposed Project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

As discussed in Section 3.10.1, *Tsunami and Seiche Hazards*, the proposed Project site is not located in an area subject to tsunamis, and would not have the potential to result in impacts. Impacts relative to the release of pollutants associated with flood hazards are analyzed above in Impacts 3.10-1 and 3.10-2, which concluded a less than significant impact. Operation-related impacts for Impact 3.10-1 concluded a less than significant impact with incorporation of mitigation. Impacts relative to seiches and flooding due to dam failure are analyzed below.

Construction

As described in Section 3.10.1, *Flood Hazards*, inundation maps indicate that flooding would occur in highly populated areas downstream of Silver Lake Dam and upstream of Ivanhoe Dam in the unlikely event of a dam breach. Thus, the downstream flood hazard for the existing reservoirs

is considered to be extremely high (DSOD 2021). Further, seiches due to seismic and wind-driven wave activity have the potential to occur within the Silver Lake and Ivanhoe Reservoirs due to the proximity of several active faults in the region (DOC 2022b).

The proposed Project would construct structures and other facilities within the reservoirs, such as overlooks, terraces, and a floating dock. Pile foundations would be installed in waterside construction areas to strengthen the soil layers within the reservoir bed, which would make them stable enough for the foundation of a structure for supporting the weight of pedestrians. In addition, the proposed Project would construct new walkways or improvements along the dams to allow connection across the reservoirs. As described in Section 3.10.2, *Regulatory Framework, Department of Water Resources Division of Safety of Dams*, SB 92 requires EAPs be updated (at minimum) every 10 years or when there are significant changes at a dam, its critical appurtenant structures, or downstream hazard classification (DSOD 2019). Construction of the Project facilities would not result in changes to the dam or critical appurtenant structures. Therefore, updates to the EAP would not be required.

As dam enlargements, repairs, alterations, and removals require review and approval by DSOD, construction of the proposed facilities in and around the three dams (Silver Lake Dam, Ivanhoe Dam, and the Divider Dam) would be subject to more restrictions and oversight. Design of the proposed Project has taken these restrictions into consideration based on a preliminary coordination with DWR and a courtesy review by the DSOD. For example, some of the DSOD constraints include restrictions on the types of vegetation allowed on the land designated as a dam; thus, embankment edges within DSOD jurisdictional areas are proposed to be resurfaced with smooth concrete to comply with DSOD development requirements, whereas embankment edges outside the DSOD jurisdictional areas and those related to habitat terraces may be softened by planting native groundcovers. However, future design of facilities within DSOD jurisdictional areas would require additional review and approval of by LADWP and DSOD prior to construction to reduce potential impacts to the safety of the dams and reservoirs. Coordination with DWR's DSOD, and compliance with applicable regulations during construction would ensure that impacts relative to flooding would be less than significant.

During construction, the reservoir water levels would be decreased from existing conditions. The lower water levels would decrease the potential for a damaging seiche, in the event of an earthquake, resulting in an impact of less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As described in Section 3.10.1, *Flood Hazards*, given that the existing reservoirs are within a closed basin, the Silver Lake and Ivanhoe Reservoirs would not be considered to be at risk from flooding due to a 100-year storm event. Issues with flood hazards associated with the proposed

Project are related to dam safety and inundation areas. LADWP would continue to have operational responsibilities for the SLRC, such as maintaining the integrity of the dams and active use and maintenance of LADWP onsite facilities. Regular coordination with DWR's DSOD DWR for dam safety inspections is required. Further, if substantial changes to the dam, its appurtenant structures, or downstream hazard classifications occur in the future, the proposed Project would be required to comply with notification procedures in the EAP. Compliance with applicable regulations, monitoring requirements, and notification procedures during operation of the proposed Project would result in less than significant impacts to flooding.

The reservoir basin is situated at lower elevation than surrounding areas at the proposed Project site. Surface water elevations in the reservoirs would be maintained at levels several feet below the top of the embankments. Operation, maintenance, and monitoring of the reservoirs by LADWP in compliance with applicable regulatory requirements would ensure that the proposed Project would not result in inundation or pollutant release due to seismic or wind-related seiches. Therefore, impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Water Quality Control Plan or Sustainable Groundwater Management Plan

Impact 3.10-5: Would the proposed Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed in Section 3.10.1, *Environmental Setting*, the Project site is not located within a high or medium priority groundwater basin and therefore is not subject to a sustainable groundwater management plan.

Construction

Implementation of the proposed Project would include ground disturbing activities, such as excavation, trenching, and grading. Sediment and other pollutants generated during construction would have the potential to be mobilized and transported by stormwater runoff (nonpoint-source pollution), potentially degrading surface and groundwater quality on- and off-site.

As discussed in Impact 3.10-1, the proposed Project would comply with the conditions stipulated in the Construction General Permit. In accordance with the requirements of the permit, the proposed Project would require the preparation and implementation of a site-specific SWPPP that adheres to the Watershed Protection Division of LASAN's BMP Handbook. The SWPPP required by the Construction General Permit would include BMPs to minimize impacts related to site runoff, and would ensure that excavated soils are transported, used, stored, and disposed of in a safe manner to protect worker safety, and reduce the potential for a release of hazardous materials into the environment.

Through compliance with the NPDES Construction General Permit requirements, including the preparation and implementation of a SWPPP and BMPs, and applicable federal, State, and local requirements concerning the handling, storage, and disposal of hazardous materials, the proposed Project would not conflict with or obstruct implementation of the Basin Plan. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As discussed under Impact 3.10-1, substantial degradations to water quality within the SLRC and off-site surface water and groundwater would not occur during operation of the proposed Project, primarily due to beneficial water quality impacts of the proposed wetland terraces and floating wetland habitats. Further, implementation of the decentralized drainage strategy in compliance with MS4 and LADPW requirements reduce the potential for stormwater runoff to result in substantial water quality impacts to the reservoirs or off-site surface water and groundwater. The proposed Project would be consistent with the goals of the Basin Plan related to surface and groundwater quality.

As discussed under Impact 3.10-2, the proposed Project would result in less groundwater supplies being pumped from Pollock Well #3 for reservoir refill operations. Compliance of the proposed Project with applicable federal, State, and local regulations related to sustainable groundwater management is required during design and implementation of the required refill operations. Therefore, the proposed Project would be consistent with the goals of the Basin Plan, resulting in a less than significant impact.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Cumulative Impact

Impact 3.10-6: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to hydrology and water quality?

Table 3-2 in Chapter 3, *Environmental Setting, Impact Analysis, and Mitigation Measures* identifies thirteen related projects that are planned or are under construction within the Project area. The geographic scope of analysis for cumulative hydrology and water quality impacts encompasses and is limited to the Project site and its immediately adjacent area. This is because impacts relative to hydrology and water quality are generally site-specific. For example, the effect of erosion to water quality would tend to be limited to the localized area of a Project and could

only be cumulative if erosion occurred as the result of two or more adjacent projects that spatially overlapped. Two of the thirteen related projects listed in Table-3-2 are adjacent to the proposed Project. Related Project 13 includes water infrastructure improvements within Silver Lake and Ivanhoe Reservoirs at the Project site and Related Project 14 would involve sidewalk repairs along roadways located adjacent to the Project site. Due to their location, ground disturbing activities that would occur during construction of Related Projects 13 and 14 could result in impacts to stormwater pollution at the Project site. Operational activities for the projects would not involve ground disturbing activities or substantial use of groundwater supplies that could impact hydrology and water quality (LADWP 2020b; City of Los Angeles 2019). Additionally, it should be noted that future water quality impacts of the Aeration and Recirculation System Project (Related Project 13) within the Silver Lake and Ivanhoe Reservoirs were estimated in the Water Quality Model, where it was determined beneficial impacts would occur during operations.

As discussed in Section 3.7, *Geology, Soils, and Mineral Resources*, the state Construction General Permit would require the proposed Project and all related projects greater than one acre to prepare and implement a SWPPP. The SWPPP would describe BMPs to control runoff and prevent erosion or degradation of water quality for each project. Through compliance with this requirement, the potential for erosion and water quality impacts would be reduced. The Construction General Permit has been developed to address cumulative conditions arising from construction throughout the state, and is intended to maintain cumulative effects of projects subject to this requirement below levels that would be considered significant. For example, two adjacent construction sites would be required to implement BMPs to reduce and control the release of sediment and/or other pollutants in any runoff leaving their respective sites. The runoff water from both sites would be required to achieve the same action levels, measured as a maximum amount of sediment or pollutant allowed per unit volume of runoff water. Thus, even if the runoff waters were to combine after leaving the sites, the sediments and/or pollutants in the combined runoff would still be at concentrations (amount of sediment or pollutants per volume of runoff water) below action levels and would not be cumulatively considerable.

As described above in Section 3.10-1, groundwater supplies used to fill the reservoirs are obtained from the Upper Los Angeles River Area (ULARA) watershed managed by the ULARA Watermaster. The ULARA Watermaster is responsible for ensuring the San Fernando Groundwater Basin does not experience overdraft conditions. None of the other related projects would receive water supply from groundwater, since they would require connections with LADWP's potable water service. Conformance with the Watermaster's Groundwater Management Plan would ensure that the proposed Project would not contribute to a depletion in groundwater supplies. Consequently, the proposed Project would not contribute significantly in combination with related projects to cumulative groundwater impacts.

As described above in Section 3.10.2, *Regulatory Framework, Regional, Los Angeles County Municipal Separate Storm Sewer System Permit*, the Project and related projects would be required to comply with the regional MS4 Permit. Under the Los Angeles County MS4 Permit, permittees are required to implement a development planning program to address stormwater pollution. This program requires project applicants for certain types of projects to implement a LID Plan to reduce the discharge of pollutants in stormwater by outlining BMPs, which must be

incorporated into the design of new development and redevelopment. The purpose of the MS4 Permit is to improve the quality of the cumulative runoff in Los Angeles County, and locally, for the Ballona Creek watershed. Compliance with the requirements of the MS4 permit would minimize water quality degradation and would be consistent with the Basin Plan.

The proposed Project would not alter drainages, but would contribute to stormwater runoff capture to improve runoff quality compared to existing conditions. Furthermore, the proposed project would not be affected by tsunamis, and would not increase the potential for seiche waves. As a result, the proposed Project’s contribution to water quality impacts considering the existing urban environment and related projects, would not be considerable. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.10.6 Summary of Impacts

Table 3.10-5 summarizes the impact significance determinations and lists mitigation measures related to energy.

**TABLE 3.10-5
 SUMMARY OF PROJECT IMPACTS TO HYDROLOGY AND WATER QUALITY**

Impact	Mitigation Measure	Significance
3.10-1: Water Quality	None Required	LTS
3.10-2: Groundwater Supplies	None Required	LTS
3.10-3: Alteration of Drainage Patterns	None Required	LTS
3.10-4: Flood Hazard, Tsunami, or Seiche	None Required	LTS
3.10-5: Water Quality Control Plan or SGMA	None Required	LTS
3.10-6: Cumulative	None Required	LTS

NOTES:

- NI = No Impact, no mitigation proposed
- LTS = Less than Significant, no mitigation proposed
- LTSM = Less than Significant Impact with Mitigation Incorporated
- SU = Significant and Unavoidable

3.10.7 References

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3.11 Land Use

This section describes the land use impacts of the proposed Project. Specifically, the section includes a description of existing land uses, a summary of applicable regulations related to land use and planning, and an evaluation of the potential for the proposed Project to result in environmental impacts related to land use and planning. Impacts to land use are less than significant and no mitigation is required.

3.11.1 Environmental Setting

Local Setting

The 116-acre Project site is located within the 127-acre Silver Lake Reservoir Complex in the Silver Lake neighborhood of the City of Los Angeles (City) in Los Angeles County (County). The County covers an area of about 4,084 square miles and includes 88 cities and approximately 2,654 square miles of unincorporated area (County of Los Angeles 2022 a,b). The City of Los Angeles is the most populated city in California with an estimated population of four million (City of Los Angeles 2022b). Silver Lake, and therefore the proposed Project, is in the Silver Lake – Echo Park – Elysian Valley Community Plan Area of the City’s General Plan (City of Los Angeles 2022a).

Existing Project Site Land Use

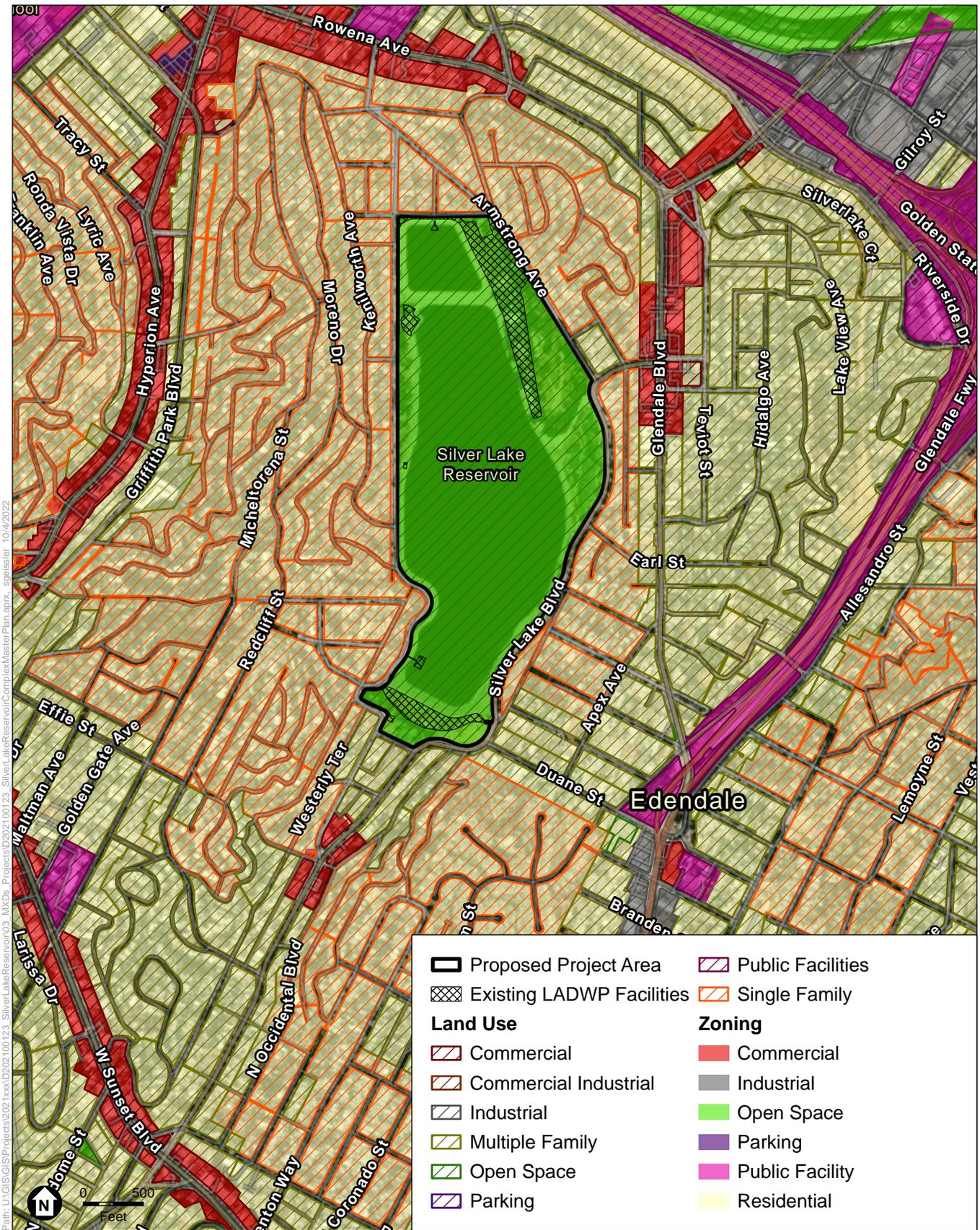
The SLRC includes Ivanhoe and Silver Lake Reservoirs, three dams, recreational buildings, water and stormwater infrastructure, interior roads, and public recreational facilities. The Silver Lake and Ivanhoe Reservoirs are bound by three LADWP-managed dams: Ivanhoe Dam at the north end of Ivanhoe Reservoir; Silver Lake Dam at the south end of Silver Lake Reservoir; and Divider Dam (with a spillway) separating Ivanhoe and Silver Lake reservoirs. Several land areas and structures within the SLRC are excluded from the proposed Project site to enable LADWP to continue its required operations (Figure 2-2). The Project site is within the SLRC and excludes all LADWP facilities as shown on Figure 2-4.

Major components of the SLRC include the 3-acre Meadow, a public park; a 4-acre dog park; two public pathways adjacent to and west of the Ivanhoe Reservoir and atop Silver Lake dam; and four acres of paved surfaces at the reservoirs’ perimeters and at the base of the Knoll (see Figure 2-2). The City of Los Angeles Recreation and Parks Department (RAP) maintains and operates the existing Meadow and dog park.

The Project site is zoned Open Space (OS) (City of Los Angeles 2022c). The City of Los Angeles County General Plan designates the Project site as Open Space (**Figure 3.11-1**).

Surrounding Land Use

The area adjacent to and surrounding the Project site is primarily residential, but also includes commercial, institutional, and recreational uses, such as the Neighborhood Nursery School and the Tesla Pocket Park, located near the northeast end of the Ivanhoe Reservoir.



SOURCE: Nearmap, 2021; ESA, 2021

Silver Lake Reservoir Complex Master Plan Project

Figure 3.11-1
Project Area Zoning



Residential neighborhoods exist north, east, west, and south of the Project site beyond the roadways that border the SLRC. North of Tesla Avenue, neighborhoods are predominantly designated as Low Single Family Residential use. East of Armstrong Avenue and Silver Lake Boulevard and west of W. Silver Lake Drive, neighborhoods are primarily designated Low Single Family Residential and Low Medium I Multi-family Residential. Residential uses designated as multi-family residential are located south of the Project site. The area surrounding the Project site is zoned Residential (City of Los Angeles 2022c). The Project vicinity is highly urbanized and developed, with little to no vacant space.

3.11.2 Regulatory Framework

State

California Government Code Section 65302

California law requires that every city and county prepare and adopt a long-range comprehensive General Plan to guide future development and to identify the community's environmental, social, and economic goals. Section 65302 states, "The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principle, standard, and plan proposals." Further, Section 65302 requires a general plan to contain the community vision for future growth and to address certain elements of the environment, including land use, circulation, housing, conservation, open space, noise, and safety. The City of Los Angeles General Plan, discussed below, regulates and guides development on the Project site in compliance with CGC Section 65302.

California Green Building Standards (CALGreen) Code

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality." As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the State. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and nonresidential uses; the new measures took effect on January 1, 2020 (California Department of Housing and Community Development 2021). The proposed Project would comply with applicable regulatory requirements for the design of new buildings such as the Education Center, Multi-purpose facility, amphitheater, and shade canopy depicted in Figure 2-5, including the provisions set forth in the Title 24 standards and CALGreen Code.

Regional

Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy

The Southern California Association of Governments (SCAG) is the federally designated MPO with responsibilities pertaining to regional planning issues for the following six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial. SCAG is a joint powers agency and its mandated responsibilities include developing plans and policies addressing the region's population growth, transportation programs, air quality, housing, land use, sustainability, and economic development. The 2020–2045 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) presents a transportation vision for the region through the year 2045 and provides a long-term investment framework for addressing the region's transportation and related challenges.

Adopted by SCAG on September 3, 2020, the 2020-2045 RTP/SCS builds on the long-range vision of the prior 2016-2040 RTP/SCS to balance future mobility and housing needs with economic, environmental and public health goals (SCAG 2020). Proposed Project consistency with the 2020-2045 RTP/SCS is also addressed in Section 3.8, *Greenhouse Gas Emissions*, of this Draft EIR.

The applicable 2020-2045 RTP/SCS goals include:

Goal 6: Support healthy and equitable communities

Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network

Goal 10: Promote conservation of natural and agricultural lands and restoration of habitats

South Coast Air Quality Management District Air Quality Management Plan

The South Coast Air Quality Management District (SCAQMD) was established in 1977 pursuant to the Lewis-Prezley Air Quality Management Act to ensure that air quality in the South Coast Air Basin (Basin) conforms with federal and State air pollution standards. The SCAQMD sets in place regulations for monitoring ambient air pollution levels throughout the Basin and for developing and implementing attainment strategies. The SCAQMD's Air Quality Management Plan (AQMP) presents strategies for achieving the air quality planning goals set forth in the Federal and California Clean Air Acts (CCAA), including a comprehensive list of pollution control measures aimed at reducing emissions (SCAQMD 2017). Additional discussion of the AQMP, and proposed Project consistency with the AQMP, is addressed in Section 3.3, *Air Quality*, of this Draft EIR.

Local

City of Los Angeles General Plan

The City of Los Angeles General Plan sets forth goals and objectives to guide future development of the City, while integrating seven state-mandated elements: Land Use, Circulation, Housing, Conservation, Open Space, Safety, and Noise. In addition to the mandated elements, the City's

General Plan also includes an Air Quality Element (see Section 3.3, *Air Quality*, of this Draft EIR), Framework Element, and Health and Wellness Element (Plan for a Healthy Los Angeles). The Land Use Element is in the form of the Silver Lake-Echo Park-Elysian Valley Community Plan, which provides policy guidance at the community level.

Land use policies set forth in the General Plan in addition to those in the GP Land Use Element (Silver Lake-Echo Park-Elysian Valley Community Plan) include those in the Framework Element of the General Plan. The Framework Element establishes the conceptual basis for the City's General Plan (City of Los Angeles 1995) and sets forth a Citywide comprehensive long-range growth strategy and establishes Citywide policies regarding land use, housing, urban form and neighborhood design, open space and conservation, economic development, transportation, infrastructure and public services. Framework Element land use policies are further refined through policies contained in Community Plans and Specific Plans for specific geographic areas.

The Land Use chapter of the Framework Element designates Districts (i.e., Neighborhood Districts, Community Centers, Regional Centers, Downtown Centers, and Mixed-Use Boulevards) and provides policies applicable to each District to support the vitality of the City's residential neighborhoods and commercial districts. These designations do not connote land use entitlements or affect existing zoning for specific properties, but rather are intended to guide community plan and specific plan updates to bring uses into alignment (City of Los Angeles 1995). The Framework Element is not applicable to the proposed Project since the Project site is not located within a designated District.

Urban Form and Neighborhood Design

The Urban Form and Neighborhood Design chapter of the Framework Element establishes the goal of creating a livable city for existing and future residents; a city that is attractive to future investment; and a city of interconnected, diverse neighborhoods that builds on the strength of those neighborhoods and functions at both the neighborhood and citywide scales. "Urban form" is defined as "the general pattern of building height and development intensity" and the structural elements that define the City physically, such as natural features, transportation corridors, activity centers, and focal elements. "Neighborhood design" refers to the physical character of neighborhoods and communities within the City (City of Los Angeles 1995). The Framework Element does not directly address the design of individual neighborhoods or communities but embodies generic neighborhood design and implementation programs that guide local planning efforts and lay a foundation for the updating of community plans. With respect to neighborhood design, the Urban Form and Neighborhood Design chapter encourages growth in regional centers, which have a sufficient base of both commercial and residential development to support transit services. Relevant goals, objectives and policies from the Urban Form and Neighborhood Design chapter of the Framework Element are related to community facility improvements, access, and safety.

Open Space and Conservation

The Open Space and Conservation chapter of the Framework Element encourages an integrated citywide/regional public and private open space system that serves and is accessible to the City's population. The policies of this chapter recognize that there are communities where open space

and recreation resources are currently in short supply and, therefore, suggest that vacated railroad lines, drainage channels, planned transit routes and utility rights-of-way, or pedestrian-oriented streets and small parks, where feasible, might serve as important resources for serving the open space and recreation needs of residents (City of Los Angeles 1995). Relevant goals, objectives and policies from the Open Space and Conservation chapter of the Framework Element are related to integrating public and private open space systems, outdoor recreation, public safety, and community stability.

Transportation (Mobility Plan 2035)

The Transportation chapter of the Framework Element is implemented through Mobility Plan 2035, which was adopted by the City Council on September 7, 2016, and is a comprehensive update of the prior Transportation Element. Additional discussion of the proposed Project's consistency with the transportation goals and guidelines of the City is addressed in Section 3.16, *Transportation*, of this Draft EIR. Relevant goals, objectives and policies from the Circulation Element (Mobility Plan 2035) are related to equitable land use decisions that result in fewer vehicle trips, access, and safety.

Infrastructure and Public Services

The Infrastructure and Public Services chapter of the Framework Element includes goals, objectives and policies to address public infrastructure and services necessary to support population growth and maintain and improve quality of life.

Health and Wellness

The Health and Wellness Element (Plan for a Healthy Los Angeles) includes a high-level policy vision, along with measurable objectives and implementation programs to elevate health as a priority for the City's future growth and development. Relevant goals, objectives and policies from the Health Element (Plan for a Healthy Los Angeles) are related to community use of existing parks and open spaces by improving safety and access in and around parks and open spaces by encouraging land use, design, and infrastructure improvements.

Open Space

The City's Open Space Element (Open Space Element) was prepared in June 1973 to provide an official guide to the City Planning Commission, the City Council, the Mayor, and other governmental agencies and interested citizens for the identification, preservation, conservation, and acquisition of open space in the City. This document distinguishes open space areas as privately- or publicly-owned, and includes goals, objectives, policies, and programs directed towards the regulation of privately-owned lands both for the benefit of the public as a whole and for protection of individuals from the misuses of these lands.

The City's General Plan Open Space Element update was formally initiated pursuant to a Council motion adopted on May 24, 2001 (Council File 96-1358) and has been undergoing revisions by the Department of City Planning. Until approval of the pending updates to the Open Space Element, the RAP is operating under the guidance of the Public Recreation Plan (PRP) discussed further in Section 3.15, *Recreation and Parks*.

Safety

The Safety Element of the City of Los Angeles General Plan (City of Los Angeles 1996) provides a contextual framework for understanding the relationship between hazard mitigation, response to a natural disaster and initial recovery from a natural disaster. The safety element is intended to be the primary vehicle for relating local safety planning to land use planning and decisions. Relevant goals, objectives, and policies of the General Plan are related to considering hazard information and available mitigations when making decisions about future land use.

Noise

The Noise Element of the City's General Plan policies include the CNEL guidelines for land use compatibility as shown in Table 3.12-8 in Section 3.12, *Noise and Vibration*, and includes a number of goals, objectives, and policies for land use planning purposes. The overall purpose of the Noise Element is to guide policymakers in making land use determinations and in preparing noise ordinances that would limit exposure of citizens to excessive noise levels (City of Los Angeles 1999).

Silver Lake-Echo Park-Elysian Valley Community Plan

General Plan policies are implemented at the local level through the community planning process. The community plans are oriented toward specific geographic areas of the city and are intended to promote an arrangement of land uses, streets, and services that will encourage and contribute to the economic, social, and physical health; and safety, welfare, and convenience of those who live and work in the community. Goals, objectives, policies, and programs are created to meet the existing and future needs of the community. The proposed Project site is located within the Silver Lake-Echo Park-Elysian Valley Community Plan Area. The Silver Lake-Echo Park-Elysian Valley Community Plan was most recently updated and adopted in 2004 (City of Los Angeles 2004).

The Silver Lake-Echo Park-Elysian Valley Community Plan Area is located approximately 2 miles north of Downtown Los Angeles, beyond Chinatown. The Community Plan Area's 4,579 acres (7 square miles) are bordered by the Hollywood and Wilshire Community Plan Areas to the west, Westlake Community Plan Area to the southwest, Central City North Community Plan Area to the south and the Northeast Community Plan Area to the north and east.

The Community Plan includes residential objectives and policies that establish a development concept for its neighborhoods and districts. Key provisions regarding the development in the proposed Project vicinity relevant to land use are applicable to the proposed Project because the SLRC is located adjacent to residential development (City of Los Angeles 2004).

Chapter 5, Urban Design of the Community Plan identifies broad, general policies for projects and community design elements. Specifically, this Chapter establishes public open space standards to guide the design of new public plazas and open spaces and refers to the Silver Lake Reservoir Master Plan design guidelines.

City of Los Angeles Municipal Code and Los Angeles Building Code

Los Angeles Municipal Code (LAMC), Chapter 1 (Planning and Zoning Code) identifies a range of zoning classifications throughout the city, identifies the specific permitted uses applicable to each zone designation, and applies development regulations to each zone. The proposed Project site is zoned Open Space (OS), which permits outright the following uses (City of Los Angeles 2022d):

- (i) Parks and recreation facilities, including: bicycle trails, equestrian trails, walking trails, nature trails, park land/lawn areas, children's' play areas, childcare facilities, picnic facilities, and athletic fields (not to exceed 200 seats in park) used for park and recreation purposes. (Amended by Ord. No. 176,545, Eff. 5/2/05.)
- (ii) Natural resource preserves for the managed production of resources, including, but not limited to, forest lands, waterways and watersheds used for commercial fisheries; agricultural lands used for food and plant production; areas containing major mineral deposits ("G" Surface Mining Districts) and other similar uses.
- (iii) Marine and ecological preserves, sanctuaries and habitat protection sites.
- (iv) Sanitary landfill sites which have received certificates of closure in compliance with federal and state regulations.
- (v) Public water supply reservoirs (uncovered) and accessory uses which are incidental to the operation and continued maintenance of such reservoirs.
- (vi) Water conservation areas, including percolation basins and flood plain areas.

The City of Los Angeles Building Code is codified in the Los Angeles Municipal Code, Chapter IX, Article I.

L.A.'s Green New Deal (Sustainable City pLAN 2019)

In April 2019, Mayor Eric Garcetti released L.A.'s Green New Deal. Rather than an adopted plan, the Green New Deal is a mayoral initiative that consists of a program of actions designed to create sustainability-based performance targets through 2050 that advance economic, environmental, and equity objectives. The City's Green New Deal is the first four-year update to the City's first Sustainable City pLAN that was released in 2015. The 2019 initiative augments and adds detail to the City's vision for a sustainable future and contains new goals and accelerated targets related to climate change.

L.A.'s Green New Deal milestones and initiatives applicable to the proposed Project include (Mayor Eric Garcetti 2019):

Milestones and Initiative: Incorporate additional cooling features such as innovative shade designs, water features, and cooling centers at parks.

Milestones and Initiative: Monitor biodiversity and natural areas.

Milestones and Initiative: Preserve and expand connectivity and access to natural habitats.

Milestones and Initiative: Protect and restore sensitive habitats.

Milestones and Initiative: Increase the number of native and pollinator-friendly gardens and natural areas in public spaces.

Near-term outcomes related to GHG emission reduction include reduction of potable water use, building energy vehicle miles traveled (VMT) per capita, urban/rural temperature differential and an increase in the cumulative new housing construction, percentage of electric and zero emission vehicles in the city, and landfill diversion rate.

One Water LA 2040 Plan

The One Water LA 2040 Plan considers the City's surface water, groundwater, potable water, wastewater, recycled water, dry weather runoff, and stormwater as "One Water" and identifies multi-departmental and multi-agency integration opportunities to manage water in a more efficient, cost effective, and sustainable manner. The One Water LA 2040 Plan represents the City's continued and improved commitment to proactively manage all its water resources and implement innovative solutions. The One Water LA 2040 Plan is a guide for strategic decisions for integrated water projects, programs, and policies within the City. The proposed Project would be consistent with the One Water LA 2040 Plan.

City of Los Angeles Complete Streets Design Guide

The Complete Streets Design Guide provides design concepts and best practices to promote safe and accessible streets for all transportation users (e.g., pedestrians, bicyclists, transit riders, and motorists) within the City. The purpose of the guide is to supplement existing engineering practices and requirements in order to meet the goals of California's Complete Streets Act (AB 1358). The guide accompanies Mobility Plan 2035 and provides a framework for stakeholders to plan for, implement, and maintain complete streets.

City of Los Angeles Vision Zero Action Plan

The stated goal of Vision Zero is to eliminate traffic-related deaths in Los Angeles by 2025 through a number of strategies, including modifying the design of streets to increase the safety of vulnerable road users. Ongoing crash data analysis is conducted to prioritize intersections and corridors for implementation of projects that will have the greatest effect on overall fatality reduction. Vision Zero Corridor Plans help implement Vision Zero. If a proposed project is within the High Injury Network, appropriate improvements will be determined in consultation with LADOT (Los Angeles Department of Transportation, 2019). The Project site is not located within the High Injury Network.

City of Los Angeles Department of Recreation and Parks, Tree Preservation Policy and City of Los Angeles, Protected Tree and Shrub Ordinance

The RAP Tree Preservation Policy includes regulations for orderly protection of specified trees, maintaining tree value, and avoiding significant negative impacts to the ecosystem. This policy also provides additional protection to urban forest trees within parks, in addition to the protections in the Los Angeles Protected Tree and Shrub Ordinance (City Tree Ordinance) (City of Los Angeles Municipal Code [LAMC] Chapter IV, Article 6). The City Tree Ordinance regulates the relocation or removal of all Southern California native oak trees (*Quercus* sp.; excluding scrub oak), Southern California black walnut trees (*Juglans californica*), western

sycamore (*Platanus racemosa*) trees, California bay trees (*Laurus nobilis*), Mexican elderberry (*Sambucus mexicana*), and toyon (*Heteromeles arbutifolia*) of at least 4 inches in diameter at breast height. These tree and shrub species are considered “protected” by the City of Los Angeles. Native trees and shrubs that have been planted as part of a tree planting program are exempt from this ordinance and are not considered protected. The ordinance prohibits, without permit, the removal of any regulated protected tree, including “acts which inflict damage upon root systems or other parts of the tree ...” and requires that all regulated protected trees that are removed be replaced on at least a 4:1 basis with trees and shrubs that are of a protected variety. The City requires that a report be prepared by a qualified tree expert discussing the subject tree(s), their preservation, effects of proposed construction, and mitigation measures pursuant to the removal or replacement thereof. As discussed above, in Section 3.11.1, the existing Meadow, Silver Lake Recreation Center, and Dog Park are managed by the RAP. More information on consistency with the RAP Tree Preservation Policy is included in Section 3.4, *Biological Resources*, of this Draft EIR.

3.11.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to land use and planning are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Physically divide an established community. (Refer to Impact 3.11-1)
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. (Refer to Impact 3.11-2)

In addition, an evaluation was conducted using screening criteria included in the City’s 2006 *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (L.A. CEQA Thresholds Guide). The evaluation concluded that none of the thresholds related to Land Use and Planning were triggered by the proposed Project. As a result, further analysis using the 2006 L.A. CEQA Thresholds Guide thresholds is not required for this topic.

3.11.4 Project Design Features

No specific project design features are proposed with regard to land use.

3.11.5 Impacts and Mitigation Measures

Divide Established Community

Impact 3.11-1: Would the proposed Project physically divide an established community?

Construction/Operation

Total construction durations for each proposed park zone are identified in Chapter 2, Project Description. Construction of the proposed park zones may occur simultaneously or sequentially with the shortest construction duration occurring within a 5-year period and would not result in any permanent physical divisions of a community or changes to the SLRC boundaries.

Temporary disruptions to on-site and surrounding land uses may include short-term access changes, detours, or lane closures. No physical division of the community would result from the proposed Project.

In the long term, after construction is complete, the proposed Project's uses would be consistent with existing land uses at the SLRC. The proposed Project would not result in changes to the surrounding land uses. The analysis throughout this EIR assumes a 2-phased approach as outlined in Chapter 2, *Project Description*. The number, degree, and type of secondary impacts to surrounding land uses that could result from implementation of the proposed Project have been analyzed throughout this EIR (refer to Chapter 3).

The proposed Project would not include changes to the existing zoning or open space land use designation and would not result in land use or development patterns that would result in infrastructure changes that could physically divide an established community. Since the zoning and open space land use designation would not change, a "spot" zone would not occur. Furthermore, the proposed Project would not include the construction of linear features such as an interstate highway, railroad tracks, or permanent removal of a means of access, such as a local road or bridge that would impact mobility within an existing community or between a community and outlying area resulting in the physical division of the established community. As such, the proposed Project would not physically divide an established community. Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Land Use Plans

Impact 3.11-2: Would the proposed Project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Construction / Operation

Proposed Project development would be subject to various land use plans and policies as well as development standards in the LAMC's Planning and Zoning Code. Proposed Project consistency with the applicable plans, policies, guidance, and regulations discussed in Section 3.11.2 above are addressed below in **Table 3.11-1**. The proposed Project would be consistent with the adopted land use designation for the site in the Community Plan; the General Plan; and adopted environmental goals or policies contained in other applicable plans. The extent of the area that would be impacted, the nature and degree of impacts, and the type of land uses within that area are identified throughout this EIR and in Table 3.11-1, below.

**TABLE 3.11-1
 CONSISTENCY WITH APPLICABLE PLANS AND GOALS, OBJECTIVES AND POLICIES**

Goal or Objective	Consistency
City's Framework Element – General Plan	
Urban Form and Neighborhood Design	
<p><i>Community Facilities and Improvements</i> Objective 5.4: Encourage the development of community facilities and improvements that are based on need within the centers and reinforce or define those centers and the neighborhoods they serve.</p>	<p><u>Consistent.</u> The proposed Project would allow for a wider range of recreational and educational activities for the community. New hours and lighting would improve accessibility.</p>
<p><i>Livable Neighborhoods</i> Objective 5.5: Enhance the livability of all neighborhoods by upgrading the quality of development and improving the quality of the public realm.</p>	<p><u>Consistent.</u> The proposed Project would improve the quality of the public realm by expanding the recreational facilities available to the public within the SLRC and through the enhancement of the existing habitat. The Project would enhance the quality of life for surrounding neighborhoods.</p>
<p><i>Improving Personal Safety Through Urban Form and Neighborhood Design</i> Objective 5.9: Encourage proper design and effective use of the built environment to help increase personal safety at all times of the day.</p>	<p><u>Consistent.</u> The proposed Project would improve safety and surveillance by providing lighting along walking path. Further, the proposed project would include security staff presence within the proposed Project site to provide oversight, details of which would be outlined in the Operation and Maintenance Plan's Safety Plan. LADWP facilities located within the SLRC, but outside of the proposed Project area would remain fenced and not accessible to the public to ensure personal safety. The proposed Project would not conflict with policies that encourage proper design and effective use of the built environment to help increase personal safety.</p>
Open Space and Conservation	
<p><i>Resource Conservation and Management</i> Goal 6A: An Integrated Citywide/regional public and private open space system that serves and is accessible by the City's population and is unthreatened by encroachment from other land uses. Objective 6.1: Protect the City's natural settings from the encroachment of urban development, allowing for the development, use, management, and maintenance of each component of the City's natural resources to contribute to the sustainability of the region.</p>	<p><u>Consistent.</u> The proposed Project would include improvements to habitat within the SLRC. The proposed Project would not convert the existing land use and zoning designation of the site. The Project site would remain open space and would include the addition of new passive and active recreational spaces for use by the public, and enhancement of habitat areas. The proposed Project would not conflict with policies that protect the City's natural settings from the encroachment of urban development, allowing for the development, use, management, and maintenance of each component of the City's natural resources to contribute to the sustainability of the region</p>
<p><i>Land Form and Scenic Vistas</i> Objective: Protect and reinforce natural and scenic vistas as irreplaceable resources and for the aesthetic enjoyment of present and future generations.</p>	<p><u>Consistent.</u> The proposed Project would enhance the visual and aesthetic quality of the SLRC. Refer to Section 3.1 Aesthetic Resources.</p>
<p><i>Outdoor Recreation</i> Objective 6.2: Maximize the use of the City's existing open space network and recreation facilities by enhancing those facilities and providing connections, particularly from targeted growth areas, to the existing regional and community open space system.</p>	<p><u>Consistent.</u> The proposed Project would enhance the SLRC and maintain community connections to the SLRC.</p>
<p><i>Public Safety</i> Objective 6.3: Ensure that open space is managed to minimize environmental risks to the public.</p>	<p><u>Consistent.</u> Under the proposed Project, security and lighting would be implemented throughout the proposed Project site. A Security Plan would be included as part of the Operations and Maintenance Plan for the Project site. Operation of the Project would incorporate a security program to ensure the safety of park visitors, which would include the use of security staff, emergency call boxes, and other public safety devices. Staff would provide</p>

Goal or Objective	Consistency
	oversight over the area's large acreage to address safety concerns related to the reservoir space and unsafe behavior. The Security Plan would be implemented in connection with the removal of the perimeter fence, as each proposed park zone is constructed. Existing LADWP facilities would remain fenced off and inaccessible to the public. As such, since LADWP facilities would be fenced to separate access from the proposed Project areas, this would minimize environmental risks to the public associated with safety, as it relates to the adjacent water treatment facility.
<p><i>Community Stability</i></p> <p>Objective 6.4: Ensure that the City's open spaces contribute positively to the stability and identity of the communities and neighborhoods in which they are located or through which they pass.</p>	<p><u>Consistent.</u> The proposed Project would contribute to the stability and character of the surrounding community by providing opportunities for the enjoyment of open space, a greater variety of active and passive recreational opportunities, habitats with native trees and vegetation, as well as community spaces with public use via the proposed Multi-Purpose Facility and Education Center. In addition, the proposed Project would upgrade the visible boundaries of the SLRC along the adjacent residential/commercial streets with updated habitat and landscaping. The proposed Project would provide more opportunity to enjoy Open Space via an upgraded community park. Therefore, the proposed Project would not conflict with policies that ensure that the City's open spaces contribute positively to the stability and identity of the communities and neighborhoods in which they are located or through which they pass.</p>
Infrastructure and Public Services	
<p>Goal 9C Adequate water supply, storage facilities, and delivery system to serve the needs of existing and future residents and businesses.</p>	<p><u>Consistent.</u> The proposed Project exists in an already-developed part of the city where existing public utilities and infrastructure exist. In addition, with implementation of Project Design Features (PDFs) related to water supply and stormwater, sufficient water supply would be available and existing stormwater infrastructure would have the capacity to meet the demands of the proposed Project (see Section 3.18, Utilities and Service Systems). The proposed Project would not conflict with policies associated with water supply.</p>
<p><i>Police</i></p> <p>Goal 9I Every neighborhood in the City has the necessary police services, facilities, equipment, and manpower required to provide for the public safety needs of that neighborhood.</p> <p>Objective 9.15 Provide for adequate public safety in emergency situations.</p>	<p><u>Consistent.</u> The proposed Project would improve safety and surveillance by providing lighting along pathways as described above. Further, as describe in Section 2, Proposed Project, a Security Plan would be prepared as part of the future Operations and Maintenance Plan, utilizing security personnel and safety devices, such as emergency call boxes. It is anticipated that staff would have a daily presence within the proposed Project site to provide oversight of the area's large acreage and to address safety concerns. The proposed Project would not conflict with goals and policies associated with police services, facilities, and equipment.</p>
<p><i>Fire</i></p> <p>Goal 9J Every neighborhood has the necessary level of fire protection service, emergency medical service (EMS) and infrastructure.</p> <p>Objective 9.17 Assure that all areas of the City have the highest level of fire protection and EMS, at the lowest possible cost, to meet existing and future demand.</p> <p>Objective 9.19 Maintain the Los Angeles Fire Department's ability to assure public safety in emergency situations.</p>	<p><u>Consistent.</u> The proposed Project would improve safety to reduce need for fire protection services by providing lighting along pathways as described above. Further, under the proposed Project, security staff would have a daily presence within the proposed Project area to provide oversight of the proposed Project area as outlined in the Project's Security Plan. The removal of the perimeter fence and walking paths around the proposed Project site would allow for access to emergency service personnel. The majority of the walking paths would be constructed to allow for LADWP maintenance vehicles to access the reservoirs and their restricted facilities within the SLRC. Vehicular access to the Project site would not</p>

Goal or Objective	Consistency
	be modified from existing conditions. LAFD would be able to serve the proposed Project and would not result in the need for new or altered fire facilities. The proposed Project would not conflict with goals and policies associated with fire services, facilities, and equipment.
Mobility Plan 2035	
<p><i>Safety</i></p> <p>Policy 1.1: Roadway User Vulnerability: Design, plan, and operate streets to prioritize safety of the most vulnerable roadway user.</p>	<p><u>Consistent.</u> Both off-site improvement options would include the installation of two-way protected bike lanes along the western side of the Silver Lake Boulevard, closest to the SLRC for ease of access to the site. Option 1, which includes additional parking on the western side of Silver Lake Boulevard, would include a new 5-foot sidewalk between the bike lanes and parking, improving bicycle safety on Silver Lake Boulevard.</p>
<p><i>Infrastructure</i></p> <p>Policy 2.3: Recognize walking as a component of every trip, and ensure high-quality pedestrian access in all site planning and public right-of-way modifications to provide a safe and comfortable walking environment.</p> <p>Policy 2.6: Provide safe, convenient, and comfortable local and regional bicycling facilities for people of all types and abilities.</p>	<p>Consistent. The proposed Project includes a total of approximately 33 acres of new useable space, including approximately 10 acres for active and passive recreation and approximately 5.5 miles of walking paths and trails to provide public access throughout the proposed Project area. The proposed Project's new usable spaces allow for biking along the SLRC boundaries via the existing bicycle network (Figure 2-16) and updated bike path proposed along Silver Lake Boulevard. Therefore, the proposed Project would support walking and bicycling as forms of travel and recreation within the proposed Project area.</p>
<p><i>Access</i></p> <p>Policy 3.1: Recognize all mode of travel, including pedestrian, bicycle, transit, and vehicular modes as integral components of the City's transportation system.</p> <p>Policy 3.3: Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.</p>	<p>Consistent. Connections to the proposed Project area from the surrounding neighborhood were informed by the existing bus stop locations along West Silver Lake Drive and Glendale Boulevard as well as the existing pedestrian pathways in the neighborhood. To allow for public access to park amenities, an accessible vehicle and bus parking area would be located at the corner of Silver Lake Boulevard and Armstrong Avenue. To create safe points of entry into the proposed Project area, new pedestrian-activated flashing beacon crossings would be added along Silver Lake Boulevard and West Silver Lake Drive. The proposed pathways would be implemented as pedestrian only with bike circulation around the perimeter. Bicycle parking and/or bike-share stations would be located at all key pedestrian connection points. These proposed Project circulation design elements recognize all modes of travel and would aid in the reduction of vehicle trips by providing opportunities for public access of the area via public transportation and walking/biking. The Project also includes the addition of parking along West Silver Lake Drive, and the addition of either Parking with an improved bike lane (Option 1) or an improved bike lane (Option 2) along Silver Lake Boulevard between Armstrong and Van Pelt. Both options would include protected bike lanes. Option 1 would include a sidewalk between the lanes of traffic and a two-way bike lane placed closest to the SLRC for ease of access to the site, improving bicycle circulation on Silver Lake Boulevard. Refer to Section 3.16, Transportation for further discussion on the Project's consistency with the Mobility Plan.</p>

Goal or Objective	Consistency
City of Los Angeles General Plan	
<u>Safety Element</u>	
<p>Goal 1: A city where potential injury, loss of life, property damage and disruption of the social and economic life of the City due to fire, water related hazard, seismic event, geologic conditions, or release of hazardous materials disasters is minimized.</p> <p>Objective 1.1 Implement comprehensive hazard mitigation plans and programs that are integrated with each other and with the City’s comprehensive emergency response and recovery plans and programs.</p> <p>Goal 2 A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage and disruption of the social and economic life of the City and its immediate environs.</p> <p>Objective 2.1 Develop and implement comprehensive emergency response plans and programs that are integrated with each other and with the City’s comprehensive hazard mitigation and recovery plans and programs.</p> <p>Goal 3 A city where private and public systems, services, activities, physical condition and environment are reestablished as quickly as feasible to a level equal to or better than that which existed prior to the disaster.</p> <p>Objective 3.1 Develop and implement comprehensive disaster recovery plans which are integrated with each other and with the City’s comprehensive hazard mitigation and emergency response plans and programs.</p> <p>Policy 3.1.1 Coordination: Coordinate with each other, with other jurisdictions and with appropriate private and public entities prior to a disaster and to the greatest extent feasible within the resources available, to plan and establish disaster recovery programs and procedures which will enable cooperative ventures, reduce potential conflicts, minimize duplication and maximize the available funds and resources to the greatest mutual benefit following a disaster. [All EOO recovery programs involving cooperative efforts between entities implement this policy.]</p>	<p><u>Consistent.</u> The local CUPA regulates the Silver Lake Chlorination Station under a Consolidated Emergency Response/Contingency Plan (CERC), which includes procedures for preventing and mitigating hazardous materials releases, emergency evacuation, and worker training. Continued compliance with the CERC would reduce potential impacts to workers associated with hazardous materials release from the Silver Lake Chlorination Station. The City’s All-Hazard Mitigation Plan, EOP, and Safety Element do not identify any specific evacuation areas or routes within the proposed Project area; therefore, construction activities within the proposed Project area would not interfere with an emergency evacuation plan. The proposed Project would not propose physical changes to Silver Lake Boulevard that would permanently impact its continued use in future emergencies.</p> <p>Construction activities would result in temporary increases to construction truck trips, which could cause delays along local roadways and affect emergency vehicle response times in the proposed Project vicinity. However, implementation of Mitigation Measure TRA-1 would require preparation of a Traffic Control Plan which would be coordinated with the City Transportation Department, as necessary, as well as with emergency responders, which include fire departments, police departments, and ambulances that have jurisdiction within the proposed Project area (Refer to Section 3.16, Transportation). Implementation of PDF-TRA-1 would ensure that the proposed Project would not conflict with the goals and policies of the Safety Element.</p>
Noise	
<p>Objective 2 (Non-airport): Reduce or eliminate non-airport related intrusive noise, especially relative to noise sensitive uses.</p>	<p><u>Consistent.</u> The proposed Project would incorporate publicly accessible open space and amenities, available to the general public. Construction noise associated with construction of the proposed Project is detailed in under Section 3.12 Noise. Special events, including outdoor concerts, movie nights, or luncheons could potentially be held at the outdoor open spaces and could require amplified sound. However, with implementation of Mitigation Measure NOISE-6, use of an amplified speaker system in The Meadow would be limited to a sound level equivalent to 78 dBA to reduce intrusive noise and alleviate noise that is deemed a public nuisance. Therefore, the Project would not conflict with objectives and policies established for non-airport related intrusive noise and proposed development of land and changes in land use.</p>

Goal or Objective	Consistency
Health and Wellness Element	
<p><i>Bountiful Parks and Open Spaces</i></p> <p>Objective: Increase the number of neighborhood and community parks so that every Community Plan Area strives for 3 acres of neighborhood and community park space per 1000 residents (excluding regional parks and open spaces).</p> <p>Objective: Increase access to parks so that 75% of all residents are within a 1/4 mile walk of a park or open space facility.</p> <p>Objective: Increase the number of parks that feature or incorporate universally-accessible features.</p>	<p><u>Consistent.</u> The proposed Project would redesign approximately 116-acres of the 127-acre SLRC with public community park amenities. Current public access is limited to the proposed Project site, and the Project would include new active and passive recreational opportunities for the community, included 5.5 miles of universally accessible walking paths. ADA accessible parking would be incorporated into the proposed Project site. In addition, the fence surrounding the facility would be removed and additional access points into the new park areas would be added along the east and west side of the Project site. Therefore, the proposed Project would not conflict with objectives and policies established for parks and open spaces and would relieve demand on the Community's recreational services and facilities.</p>
Silver Lake-Echo Park-Elysian Valley Community Plan	
<p>Objective 1-3: Preserve and enhance the varied and distinct character and integrity of existing single and multiple family neighborhoods.</p> <p>Objective 1-5: Preserve and enhance neighborhoods with distinctive and significant historic or architectural character.</p>	<p><u>Consistent.</u> As described in Chapter 2, <i>Project Description</i> and further in Section 3.1, <i>Aesthetics</i>, the proposed Project would design all proposed buildings and structures as an architectural ensemble that relate in form with mid-century modern architecture of the surrounding Silver Lake neighborhood. The scale of all proposed buildings and structures would be consistent with the residential character of the surrounding neighborhood. Additionally, proposed Project buildings and structures would be constructed with materials similar to those used in the surrounding buildings. Therefore, the proposed Project would enhance the existing SLRC with these proposed buildings and structures, while preserving the district character of the surrounding residential neighborhood.</p>
<p>Goal 4: Adequate recreation and park facilities which meet the needs of the residents in the plan area and create links to existing facilities to expand recreational opportunities citywide.</p> <p>Objective 4-1: To conserve, maintain and better use existing recreation and park facilities.</p>	<p><u>Consistent.</u> The proposed Project would expand the existing recreation and public park space within the SLRC and would, thus, meet this goal. The proposed Project objectives aim to conserve, maintain and better utilize existing recreation and park facilities which promote the recreational experience.</p> <p>The proposed Project would enhance the existing recreational facilities within the South Valley zone including the Recreation Center and Dog Park, and would also improve the existing Meadow. Further, by redesigning a majority of the SLRC and opening it up to public passive and active recreational uses, the proposed Project would be expanding recreational opportunities.</p>
<p>Goal 5: A community with sufficient open space in balance with new development to serve the recreational, environmental and health needs of the community.</p> <p>Objective 5-1: Preserve existing and develop new open space resources.</p> <p>Objective 5-2: Provide/ensure access to new recreational resources and open space developed throughout the Plan area, including trails and facilities along the Los Angeles River, and new parks.</p>	<p><u>Consistent.</u> See above descriptions of how the proposed Project would redesign existing open space within the Community to serve recreational needs. The proposed Project would be consistent with this goal and objectives.</p>

Goal or Objective	Consistency
<p>Silver Lake Reservoir Master Plan Design Guidelines</p> <ol style="list-style-type: none"> 1. Install and maintain a landscape buffer between the public street and a planned continuous running/walking path should consist of low shrubs and street trees to maintain views and whenever possible use drought tolerant species such as those suggested in the Silver Lake Reservoir Master Plan. 4. Encourage regular maintenance of fences as well as trimming and pruning of overgrown shrubs and trees to preserve views. 5. To further preserve views, encourage the use of smaller native trees and shrubs and space larger trees to prevent the formation of a solid wall of foliage and use species that are more narrow and columnar in character and do not create a hedge effect. 6. Preserve, as prescribed by the Master Plan, existing trees in the eucalyptus grove, the Recreation and Parks area, the olive grove and the knoll. 7. Tree plantings in parkways should consist of low plantings that are dense, evergreen and low maintenance. 11. Ensure that streetscape and other design improvements comply with Silver Lake Boulevard’s Scenic Highway designation, including the prohibitions on signs and the undergrounding or screening of utilities. 12. Sustainable design practices should be employed whenever possible including the use of drought-tolerant plantings, use of recycled materials and use of lighting with low-energy requirements. 	<p><u>Consistent.</u> The proposed Project would establish gateways to the open space resources around the reservoir that would provide seating options. A landscape buffer consisting of drought tolerant plantings would be installed between the public street and the perimeter walking path/promenade. Once an operator has been determined, the operator and the City would prepare an Operations and Maintenance Plan for the proposed project with detailed guidance on the operational needs for the proposed Project site. This Plan would include a section on Brush Clearance, Security, and Tree Succession Plan. Utilities associated with the proposed project would be located underground. In addition, drought-tolerant, coastal scrub planting palette would be installed consistent with the recommended use of drought-tolerant plantings identified in the Silver Lake Reservoir Master Plan Design Guidelines.</p>
<p>2020-2045 RTP/SCS</p>	
<p>Goal 6: Support healthy and equitable communities</p> <p>Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network</p> <p>Goal 10: Promote conservation of natural and agricultural lands and restoration of habitats</p>	<p><u>Consistent.</u> SCAG’s 2020–2045 RTP/SCS includes Goals 6, 7, and 10 that are applicable to the proposed Project which would avoid or reduce the proposed Project’s environmental impacts. The proposed Project would not conflict with applicable strategies of the 2020-2045 RTP/SCS. The goals of the 2020-2045 RTP/SCS are focused on priorities, such as promoting land use and growth patterns that facilitate transit use and active transportation (e.g., bicycling and walking), thus, reducing VMT and increasing energy efficiency. The proposed Project would not conflict with the strategy of the 2020-2045 RTP/SCS to encourage pedestrian and bicycle access through the provision of new recreational opportunities within the proposed Project area that would serve the immediate neighborhood and vicinity. Thus, the proposed Project would not conflict with 2020-2045 RTP/SCS strategies to promote sustainable transportation solutions and support healthy and equitable communities. The proposed Project would implement native groundcover and implement replanting strategies over time to increase species diversity and improve overall habitat value of SLRC areas such as the Knoll and Eucalyptus Grove. The ornamental garden areas would be a combination of native and drought-tolerant species appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Additionally, the proposed Project would add new floating habitat islands to both the Ivanhoe and Silver Lake Reservoir, and wetland habitat along the perimeter of the reservoirs which would create new habitat and increase</p>

Goal or Objective	Consistency
	species diversity within the proposed Project area, and aid in the overall health/water quality of the reservoirs. Therefore, the proposed Project would protect and restore habitat, consistent with the 2020-2045 RTP/SCS.
Complete Streets	
<p>Goal: The Complete Streets Design Guide provides a compilation of design concepts and best practices that promote safety, accessibility and convenience for all transportation users as described in California's Complete Streets Act of 2008 (AB 1358); including pedestrians, bicyclists, transit riders, and motorists. By prioritizing people over cars, the streets of Los Angeles can provide lively gathering places that foster community building and neighborhood identity, encourage healthy recreational activities such as walking, running, and bicycling.</p>	<p><u>Consistent.</u> As described in Section 2.0, <i>Project Description</i>, the proposed Project includes two Options associated with parking and/or bike improvements surrounding the SLRC. Option 1 would include a two-way improved bike lane on the west side of the road, closest to the SLRC, buffered by a 2-foot sidewalk running the length of this segment, followed by the addition of parallel parking on the west side of the road. Option 2 would include restriping along Silver Lake Boulevard with improvements to the bike lane only and no addition of parking. Under Option 2 the two-way improved bike lane would be on the west side of the road, followed by a marked buffer, and then traffic lanes in both directions. Figure 2-16 shows a cross section of both options. Both options would include protected bike lanes on the side closest to the SLRC allowing for easier access to the proposed Project site. The proposed Project would promote safety, accessibility, and convenience for all visitors, and encourage physical activities with the inclusion of various recreational amenities.</p>
L.A's Green New Deal	
<p>Incorporate additional cooling features such as innovative shade designs, water features, and cooling centers at parks.</p>	<p><u>Consistent.</u> The proposed Project would implement new shade pavilions and seated terraces/other resting stops throughout the proposed Project area. Additionally, implementation of the proposed Project would result in extensive landscaping improvements to create improved upland and new habitat areas that would maximize shade throughout the SLRC.</p>
<p>Monitor biodiversity and natural areas.</p>	<p><u>Consistent.</u> The proposed Project's wetland and upland habitat areas and ornamental gardens maintenance would include grass cutting and tree pruning, and specialized maintenance of plantings and vegetation, including wetland habitats. Water management would include water quality permitting, monitoring, and compliance as well as in-lake activities, such as debris removal and maintaining the floating wetland habitat islands. Horticulture maintenance and water management would require a total of approximately 5 staff, daily. Therefore, the proposed Project would monitor the natural areas of the SLRC.</p>
<p>Preserve and expand connectivity and access to natural habitats.</p>	<p><u>Consistent.</u> The proposed Project includes new walking paths and trails to provide public access and connectivity to natural habitats. Removal of the perimeter fence would also expand connectivity and wildlife access to the water.</p>
<p>Protect and restore sensitive habitats.</p>	<p><u>Consistent.</u> The proposed Project would plant native groundcover and implement replanting strategies over time to increase species diversity and improve overall habitat value of SLRC areas such as the Knoll and Eucalyptus Grove. Additionally, the proposed Project would add new floating habitat islands to both the Ivanhoe and Silver Lake Reservoir, and wetland habitat along the perimeter of the reservoirs which would create new habitat and increase species diversity within the proposed Project area, and aid in the overall health/water quality of the reservoirs. All biologically sensitive areas would contain wildlife fencing. Therefore, the proposed Project would protect and restore habitat.</p>

Goal or Objective	Consistency
Increase the number of native and pollinator-friendly gardens and natural areas in public spaces.	<u>Consistent</u> . With proposed Project implementation, a wide, tree-lined promenade along Silver Lake Boulevard would connect to the proposed ornamental gardens, which would encompass approximately 1.5 acres. The gardens would contain a mix of native and regionally adapted water-wise (drought-tolerant) plants with an emphasis on attracting pollinator species. Therefore, the proposed Project would increase the number of native and pollinator-friendly gardens within the SLRC.

Los Angeles Municipal Code

The proposed Project would be consistent with applicable provisions of the LAMC – which include Open Space Zoning. The entirety of the proposed Project area is zoned as Open Space (OS), which allows for the following applicable uses of the SLRC; parks and recreation facilities, including: bicycle trails, walking trails, nature trails, park land/lawn areas, children’s play areas, child care facilities, picnic facilities, and athletic fields, public water supply reservoirs (uncovered) and accessory uses which are incidental to the operation and continued maintenance of such reservoirs, water conservation and flood plain areas. The proposed Project would redesign existing park facilities. The zoning designation of the entire proposed Project area will not change with proposed Project implementation. The proposed uses would continue to be consistent with existing uses described above, which are permitted under the LACM. Therefore, the proposed Project would not result in significant environmental impacts related to inconsistency with the LAMC’s land use regulations. As such, impacts with respect to the land use provisions of the LAMC would be less than significant.

South Coast Air Quality Management District Air Quality Management Plan

The SCAQMD’s AQMP presents strategies for achieving the air quality planning goals set forth in the Federal and California Clean Air Acts (CCAA), including a comprehensive list of pollution control measures aimed at reducing emissions. The Project would be consistent with the AQMP as the Project would incorporate into its design appropriate control strategies set forth in the AQMP for achieving its emission reduction goals and would be consistent with the demographic and economic assumptions upon which the AQMP is based (see Chapter 2.5.7, *Sustainability Features*, of this Draft EIR for additional details). Additional discussion of the AQMP, and proposed Project consistency with the AQMP, is addressed in Section 3.3, *Air Quality*, of this Draft EIR.

City of Los Angeles Department of Recreation and Parks Tree Preservation Policy

As discussed in section 3.4, *Biological Resources* of this EIR, the proposed Project has the potential to result in impacts to native shrubs and trees regulated by the City of Los Angeles’ Department of Recreation and Parks (RAP) Native Tree and Shrub Ordinance (LAMC Chapter IV, Article 6). However, compliance with the City of Los Angeles Native Tree and Shrub Ordinance would ensure that the proposed Project would be consistent with the City of Los Angeles Department of Recreation and Parks Urban Forest Program Tree Preservation Policy, amended in March 2022. Trees removed would be replaced at ratios assigned by RAP. Furthermore, with implementation of PDF-BIO-1 through PDF-BIO-14 and Mitigation Measures

BIO-1 and BIO-5, the proposed Project would result in less than significant impacts related to conflicts with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. PDFs including PDF-BIO-1, which would require the replacement of ornamental native plants if impacted; PDF-BIO-4, which would establish tree protection fencing; PDF-BIO-5, which would restrict grading/trenching to areas outside the TPZ of the trees; PDF-BIO-6, which aims to avoiding root damage; PDF-BIO-7, which would require that soil levels be returned to the original grade, at which trees' roots were first established; PDF-BIO-8, which would ensure proper irrigation; PDF-BIO-9, which would ensure landscaping near protected trees would be drought-tolerant only unless trees are already accustomed to current landscape irrigation (to be confirmed by arborist); PDF-BIO-10, which would ensure tree pest inspection; PDF-BIO-11, which includes the development of a Pest Management Plan; and PDF-BIO-12, which would prevent pathogen spread; and PDF-BIO-14, which determines mitigation replacement ratios. All of these would ensure consistency with RAP's Tree Preservation Policy. As a result, the Project would be consistent and impacts would be considered less than significant.

The proposed Project would not result in impacts related to a conflict with a land use plan, policy, or regulation adopted for the purposes of avoiding or mitigating an environmental effect. Instead, as documented in Table 3.11-1, the proposed Project would promote consistency with applicable plans, policies, and regulations adopted for the purposes of avoiding or mitigating an environmental effect.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Cumulative Impact

Impact 3.11-3: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively considerable impact to land use and planning?

Table 3-2 in Chapter 3, *Environmental Setting, Impact Analysis, and Mitigation Measures*, of this Draft EIR, lists thirteen related projects that are planned or are under construction within the Project area. The proposed Project is not expected to result in significant impacts on Land Use and Planning. The related projects would include mixed-use developments, a childcare facility, residential, and commercial uses would be consistent with the City's vision for developing additional housing, and complimentary to the goals of increased recreational access. Many of the related projects would be limited to improvements to existing facilities and in-fill developments that would not conflict with existing land uses and zoning designations. These projects would be required to obtain all necessary permits and approvals (including CEQA) prior to construction, as well as comply with the City's development requirements and construction and building permits outlined in the City's Municipal Code and the California Building Standards Code. These projects would also be evaluated based on their consistency with the City's land use plans, policies, and

regulations. In addition, all related projects would be required to develop avoidance, minimization, and mitigation measures. Therefore, based on the proposed uses for the related projects and the Project, the related projects individually or in combination with the Project, would not conflict with policies of land use plans, adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the Project’s contribution to cumulative impacts would not be cumulatively considerable. As such, cumulative impacts with respect to conflict with plans and policies adopted to avoid or mitigate an environmental effect would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.11.6 Summary of Impacts

Table 3.11-2 summarizes the impact significance determinations and lists mitigation measures related to land use and planning.

**TABLE 3.11-2
 SUMMARY OF PROPOSED PROJECT IMPACTS TO LAND USE AND PLANNING**

Impact	Mitigation Measure	Significance
3.11-1: Divide Established Community	None Required	LTS
3.11-2: Land Use Plans	None Required	LTS
3.11-3: Cumulative	None Required	LTS

NOTES:

NI = No Impact, no mitigation proposed
 LTS = Less than Significant, no mitigation proposed
 LTSM = Less than Significant Impact with Mitigation Incorporated
 SU = Significant and Unavoidable

3.11.7 References

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3.12 Noise and Vibration

This section of the Draft EIR analyzes potential noise and vibration impacts of the proposed Project from construction activities and operations. Included in this section is a description of the existing noise environment within the Project area, an estimation of future noise and vibration levels at surrounding sensitive land uses associated with construction and operation of the Project, a description of the potential significant impacts, and the inclusion of mitigation measures to address any identified potential significant impacts. Additionally, this section of the Draft EIR evaluates the Project's incremental contribution to potential cumulative noise and vibration impacts resulting from past, present, and probable future projects. This section summarizes the noise and vibration information analyses provided in the Noise Technical Report included in Appendix J of the Draft EIR. Impacts to noise are significant and unavoidable, even with standard regulatory requirements and the implementation of Project Design Features (PDFs) **PDF-NOISE-1: Haul Route** and **PDF-NOISE-2: Construction Noticing and Community Liaison** and mitigation measures **NOISE-1: Equipment Controls**, **NOISE-2: Mobile Noise Barriers**, **NOISE-3: Construction Equipment Noise Shielding and Muffling Devices**, **Noise-4: Special Event Permit - Amplified Speaker System**, and **NOISE-5: Equipment Setbacks**. Project vibration impacts from construction activities with respect to human annoyance would also be significant and unavoidable. No feasible mitigation is available. Vibration impacts associated with structural damage from on-site construction activities would be less than significant. Finally, cumulative noise impacts related to construction and operations would be significant and unavoidable.

3.12.1 Environmental Setting

Due to the technical nature of noise and vibration impacts, a brief overview of basic noise principles and descriptors is provided below.

Noise and Vibration Basics

Noise Principles and 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). Noise is generally defined as undesirable (i.e., loud, unexpected, or annoying) sound. Acoustics is defined as the physics of sound and addresses its propagation and control (Caltrans 2013). In acoustics, the fundamental scientific 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 determine the sound level and characteristics of the noise perceived by the receiver.

Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) that is measured in decibels (dB), which is the standard unit of sound amplitude measurement and reflects the way people perceive changes in sound amplitude.¹ The dB scale is

¹ All sound levels measured in decibel (dB), as identified in the noise calculation worksheets included in Appendix J of this Draft EIR and in this section of the Draft EIR, are relative to 2×10^{-5} N/m².

a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound, with 0 dB corresponding roughly to the threshold of human hearing and 120 to 140 dB corresponding to the threshold of feeling pain. Pressure waves traveling through air exert a force registered by the human ear as sound (Caltrans 2013).

Sound pressure fluctuations can be measured in units of hertz (Hz), which correspond to the frequency of a particular sound. Typically, sound does not consist of a single frequency, but, rather, a broad band of frequencies varying in levels of magnitude. When all of the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequencies spanning 20 to 20,000 Hz. The sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum (Caltrans 2013). The typical human ear is not equally sensitive to the frequency range from 20 to 20,000 Hz. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to these extremely low and extremely high frequencies. This method of frequency filtering or weighting is referred to as A-weighting, expressed in units of A-weighted decibels (dBA), which is typically applied to community noise measurements (Caltrans 2013).

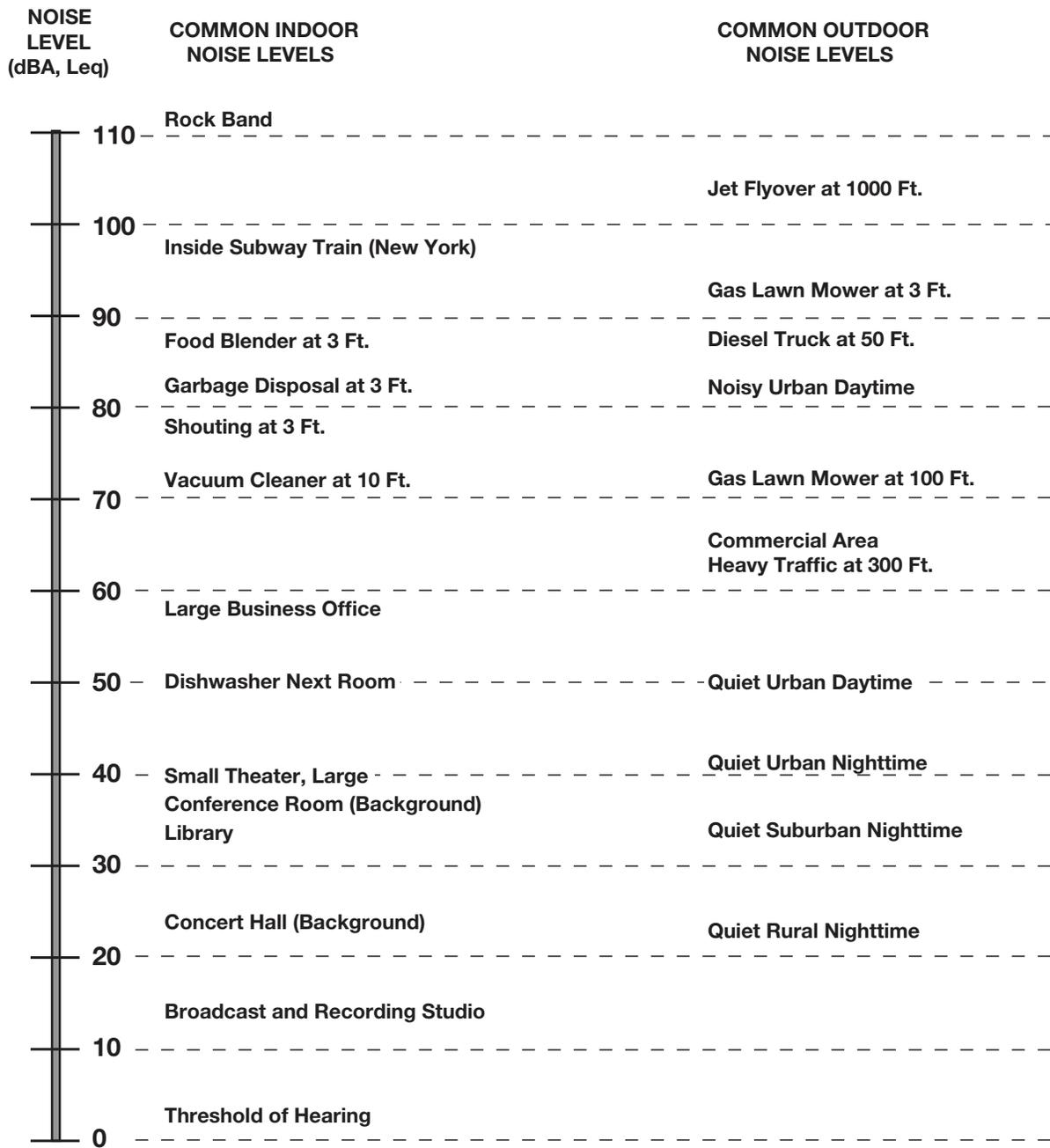
Representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in **Figure 3.12-1**.

Noise Exposure and Community Noise

Community noise exposure is typically measured over a period of time; a noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with many unidentifiable individual contributors. Single-event noise sources, such as aircraft flyovers, sirens, etc., may cause sudden changes in background noise level (Caltrans 2013). However, generally, background noise levels change gradually throughout the day, corresponding with the addition and subtraction of distant noise sources, such as changes in traffic volume.

These successive additions of sound to the community noise environment change the community noise level from moment to moment, requiring the noise exposure to be measured over periods of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. The following noise descriptors are used to characterize environmental noise levels over time (Caltrans 2013).

- L_{eq} : The equivalent sound level over a specified period of time, typically, 1 hour (L_{eq}). The L_{eq} may also be referred to as the average sound level.
- L_{max} : The maximum, instantaneous noise level experienced during a given period of time.
- L_{min} : The minimum, instantaneous noise level experienced during a given period of time.
- L_x : The noise level exceeded a percentage of a specified time period. For instance, L_{50} and L_{90} represent the noise levels that are exceeded 50 percent and 90 percent of the time, respectively.



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SOURCE: State of California, Department of Transportation (Caltrans), Technical Noise Supplement (TeNS). October 1998. Available: [http://www.dot.ca.gov/hq/env/noise/pub/Technical Noise Supplement.pdf](http://www.dot.ca.gov/hq/env/noise/pub/Technical%20Noise%20Supplement.pdf)

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Figure 3.12-1
Decibel Scale and Common Noise Sources



L_{dn}: The average A-weighted noise level during a 24-hour day, obtained after an addition of 10 dBA to measured noise levels between the hours of 10:00 p.m. to 7:00 a.m. the next day to account for nighttime noise sensitivity. The L_{dn} is also termed the day-night average noise level (DNL).

CNEL: The Community Noise Equivalent Level (CNEL) is the time average A-weighted noise level during a 24-hour day that includes an addition of 5 dBA to measured noise levels between the hours of 7:00 p.m. to 10:00 p.m. and an addition of 10 dBA to noise levels between the hours of 10:00 p.m. to 7:00 a.m. the next day to account for noise sensitivity in the evening and nighttime, respectively.

Effects of Noise on People

Noise is generally loud, unpleasant, unexpected, or undesired sound that is typically associated with human activity that is a nuisance or disruptive. The effects of noise on people can be placed into four general categories:

- Subjective effects (e.g., dissatisfaction, annoyance);
- Interference effects (e.g., communication, sleep, and learning interference);
- Physiological effects (e.g., startled response); and
- Physical effects (e.g., hearing loss).

Although exposure to high noise levels has been demonstrated to cause physical and physiological effects, the principal human responses to typical environmental noise exposure are related to subjective effects and interference with activities. Interference effects interrupt daily activities and include interference with human communication activities, such as normal conversations, watching television, telephone conversations, and interference with sleep.

The World Health Organization's Guidelines for Community Noise details the adverse health effects of high noise levels, which include hearing impairment, speech intelligibility, sleep disturbance, physiological functions (e.g., hypertension and cardiovascular effects), mental illness, performance of cognitive tasks, social and behavioral effects (e.g., feelings of helplessness, aggressive behavior), and annoyance (World Health Organization 1999).

With regard to the subjective effects, the responses of individuals to similar noise events are diverse and influenced by many factors, including the type of noise, the perceived importance of the noise, the appropriateness of the noise to the setting, the duration of the noise, the time of day and the type of activity during which the noise occurs, and individual noise sensitivity. Overall, there is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction on people. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted (i.e., comparison to the ambient noise environment). In general, the more a new noise level exceeds the previously existing ambient noise level, the less acceptable the new noise

level will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships generally occur (Caltrans 2013):

- Except in carefully controlled laboratory experiments, a change of 1 dBA in ambient noise levels cannot be perceived;
- Outside of the laboratory, a change of 3 dBA in ambient noise levels is considered to be a barely perceivable difference;
- A change of 5dBA in ambient noise levels is considered to be a readily perceivable difference; and
- A change of 10 dBA in ambient noise levels is subjectively heard as doubling of the perceived loudness.

These relationships between change in noise level and human hearing response occur in part because of the logarithmic nature of sound and the dB scale. Because the dBA scale is based on logarithms, two noise sources do not combine in a simple additive fashion, but, rather, logarithmically. Under the dBA scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two sources are each producing sound of the same loudness, the resulting sound level at a given distance would be approximately 3 dBA higher than one of the sources under the same conditions. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA. Under the dB scale, three sources of equal loudness together produce a sound level of approximately 5 dBA louder than one source, and 10 sources of equal loudness together produce a sound level of approximately 10 dBA louder than the single source (Caltrans 2013).

Noise Attenuation

When noise propagates over a distance, the noise level reduces, or attenuates, with distance depending on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as “spherical spreading.” The rate of sound attenuation for a point source, such as a piece of mechanical or electrical equipment (e.g., air conditioner) or idling vehicle (e.g., bulldozer), is 6 dBA per doubling of distance from the noise source to the receptor over acoustically “hard” sites and 7.5 dBA per doubling of distance from the noise source to the receptor over acoustically “soft” sites (Caltrans 2013). Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the reduction in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, which in addition to geometric spreading, provides an excess ground attenuation value of 1.5 dBA (per doubling distance) (Caltrans 2013). For example, an outdoor condenser fan that generates a sound level of 60 dBA at a distance of 50 feet from a point source at an acoustically hard site would attenuate to 54 dBA at a distance of 100 feet from the point source and attenuate to 48 dBA at 200 feet from the point source.

Roadways and highways consist of several localized noise sources on a defined path, and, hence, are treated as “line” sources, which approximate the effect of several point sources (Caltrans

2013). Noise from a line source propagates over a cylindrical surface, often referred to as “cylindrical spreading.” (Caltrans 2013) Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement (Caltrans 2013). Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

Structures (e.g., buildings and solid walls) and natural topography (e.g., hills and berms) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the “shadow” of the obstruction, such as behind a sound wall. This type of sound attenuation is known as “barrier insertion loss.” If a receptor is located behind the wall but still has a view of the source (i.e., the line-of-sight is not fully blocked), barrier insertion loss would still occur but to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall can reflect noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source and receiver) to an upper range of 20 dBA with a larger barrier (Caltrans 2013). Additionally, structures with closed windows can further attenuate exterior noise by a minimum of 20 dBA to 30 dBA (Caltrans 2013).

Receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels (Caltrans 2013). Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances. Other factors such as air temperature, humidity, and turbulence can, under the right conditions, also have substantial effects on noise levels (Caltrans 2013).

Vibration Fundamentals

Vibration can be interpreted as energy transmitted in waves through the ground or man-made structures, which generally dissipate with distance from the vibration source. Vibration is an oscillatory motion through a solid medium in which the motion’s amplitude can be described in terms of displacement, velocity, or acceleration. Since energy is lost during its transfer from one particle to another, vibration becomes less perceptible with increasing distance from the source.

As described in the Federal Transit Administration’s (FTA) *Transit Noise and Vibration Impact Assessment Manual*, groundborne vibration can be a serious concern for nearby neighbors of a transit system route or maintenance facility, causing buildings to shake and rumbling sounds to be heard (FTA 2018). In contrast to airborne noise, groundborne vibration is not a common environmental problem, as it is unusual for vibration from sources such as rubber-tired buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, heavy trucks traveling on rough roads, and certain construction activities, such as blasting, pile-driving, and operation of heavy earth-moving equipment (FTA 2018). Groundborne vibration generated by man-made activities (e.g., road traffic, construction operations) typically weakens with greater horizontal distance from the source of the vibration.

Several different methods are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal in inches per second (in/sec), and is most frequently used to describe vibration impacts to buildings (FTA 2018). The root mean square (RMS) amplitude is defined as the average of the squared amplitude of the signal and is most frequently used to describe the effect of vibration on the human body (FTA 2018). Decibel notation (VdB) is commonly used to express RMS vibration velocity amplitude. The relationship of PPV to RMS velocity is expressed in terms of the “crest factor,” defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a factor of 1.7 to 6 times greater than RMS vibration velocity; FTA uses a crest factor of 4 (FTA 2018). The decibel notation VdB acts to compress the range of numbers required to describe vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include buildings where vibration would interfere with operations within the building or cause damage (especially older masonry structures), locations where people sleep, and locations with vibration sensitive equipment (FTA 2018).

Groundborne noise specifically refers to the rumbling noise emanating from the motion of building room surfaces due to the vibration of floors and walls; it is perceptible only inside buildings (FTA 2018). The relationship between groundborne vibration and groundborne noise depends on the frequency of the vibration and the acoustical absorption characteristics of the receiving room. For typical buildings, groundborne vibration that causes low frequency noise (i.e., the vibration spectrum peak is less than 30 Hz) results in a groundborne noise level that is approximately 50 decibels lower than the velocity level. For groundborne vibration that causes mid-frequency noise (i.e., the vibration spectrum peak is between 30 and 60 Hz), the groundborne noise level will be approximately 35 to 37 decibels lower than the velocity level (FTA 2018). Therefore, for typical buildings, the groundborne noise decibel level is lower than the groundborne vibration velocity level at low frequencies.

Existing Conditions

Existing Topography and Land Uses

The Project site and surrounding area is characterized by rolling hills with a mix of single- and multi-family residential land uses surrounding the reservoir in all directions. The residential uses adjacent to the Silver Lake Reservoir and Ivanhoe Reservoir are at similar elevations as the reservoirs. Land uses at further distances from the reservoirs generally increase in elevation.

Noise-Sensitive Receptor Locations

Some land uses are considered more sensitive to noise than others due to the types of activities typically involved at the receptor locations and the effect that noise can have on those activities and the persons engaged in them. The City of Los Angeles 2006 L.A. CEQA Thresholds Guide (Thresholds Guide) states that residences, schools, motels and hotels, libraries, religious institutions, hospitals, nursing homes, and parks are generally more sensitive to noise than commercial and industrial land uses (City of Los Angeles 2006). Existing noise-sensitive uses, or receptors, within 500 feet of the Project site are listed in **Table 3.12-1**.

**TABLE 3.12-1
 SENSITIVE RECEPTOR LOCATIONS**

Receptor Location	Land Use Type(s)	Closest Distance to Receptor	Description
R1	Single-family residential	45 feet	Located to the north, west, and northwest of the Project site near the corner of West Silver Lake Drive and Tesla Avenue
R2	Single-family residential and educational	45 feet	Residential uses located to the north, east, and northeast of the Project site and Neighborhood Nursery School at the corner of Armstrong Avenue and Tesla Avenue.
R3	Single-family residential	60 feet	Located to the east of the Project site along Silver Lake Boulevard.
R4	Single-family residential	130 feet	Located to the southeast of the Project site along Silver Lake Boulevard.
R5	Single- and multi-family residential	675 feet	Located to the southeast of the Project site along Duane Street.
R6	Single-family residential	50 feet	Located to the south of the Project site along Silver Lake Boulevard.
R7	Single-family residential	700 feet	Located to the west of the Project site along Kenilworth Avenue.
R8	Single-family residential	60 feet	Located to the west of the Project site along West Silver Lake Drive.

SOURCE: ESA 2022

The Project site is bounded by the Silver Lake Boulevard and Armstrong Avenue to the east, Tesla Avenue to the north, West Silver Lake Drive to the west, and Van Pelt Place, West Silver Lake Drive, and Silver Lake Boulevard to the south. Receptors R5 and R7 represent sensitive receptors that are further from the site boundary but are at a higher elevation and therefore have a direct line of sight to the Project site. All other noise-sensitive uses regulated by the City are located at greater distances from the Project site and would experience lower noise levels from potential sources of noise on the Project site due to distance loss. The locations of the noise-sensitive receptors are depicted in **Figure 3.12-2**.²

Vibration-Sensitive Receptor Locations

Typically, groundborne vibration generated by man-made activities (i.e., rail and roadway traffic, operation of mechanical equipment and typical construction equipment) diminishes rapidly with distance from the vibration source. Construction activities, such as impact pile driving, would have the greatest effect on vibration-sensitive land uses. Energy is lost during the transfer of energy from one particle to another, and, as a result, vibration becomes less perceptible with increasing distance from the source. With respect to potential structural damage, structures in close proximity (adjacent) to the Project site are considered vibration-sensitive. The structural building category and construction building type (i.e., reinforced concrete, engineered concrete, non-engineered timber, and building susceptible to damage) determines the vibration damage criteria for a specific building or structure.³

² Receptor areas R1 through R8 are an approximation of areas with similar ambient noise environments that coincide with noise measurements M1 through M8.

³ Where the structural category/type of a vibration-sensitive receptor is unclear, the analysis herein utilizes a conservative assumption. For example, although structures where industrial processes take place would generally be constructed of concrete, the threshold for non-engineered timber and masonry has been applied due to the uncertainty of building construction.



SOURCE: Nearmap, 2021; ESA, 2022

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Figure 3.12-2
Noise Sensitive Receptors

With respect to human annoyance, sensitive land uses include buildings where use of vibration-sensitive equipment is used (e.g., hospitals, research, and manufacturing), residential land uses and buildings where people normally sleep, schools, churches, and doctor's offices (FTA 2018).

Existing vibration-sensitive uses are identified in **Figure 3.12-3**, and include the following:

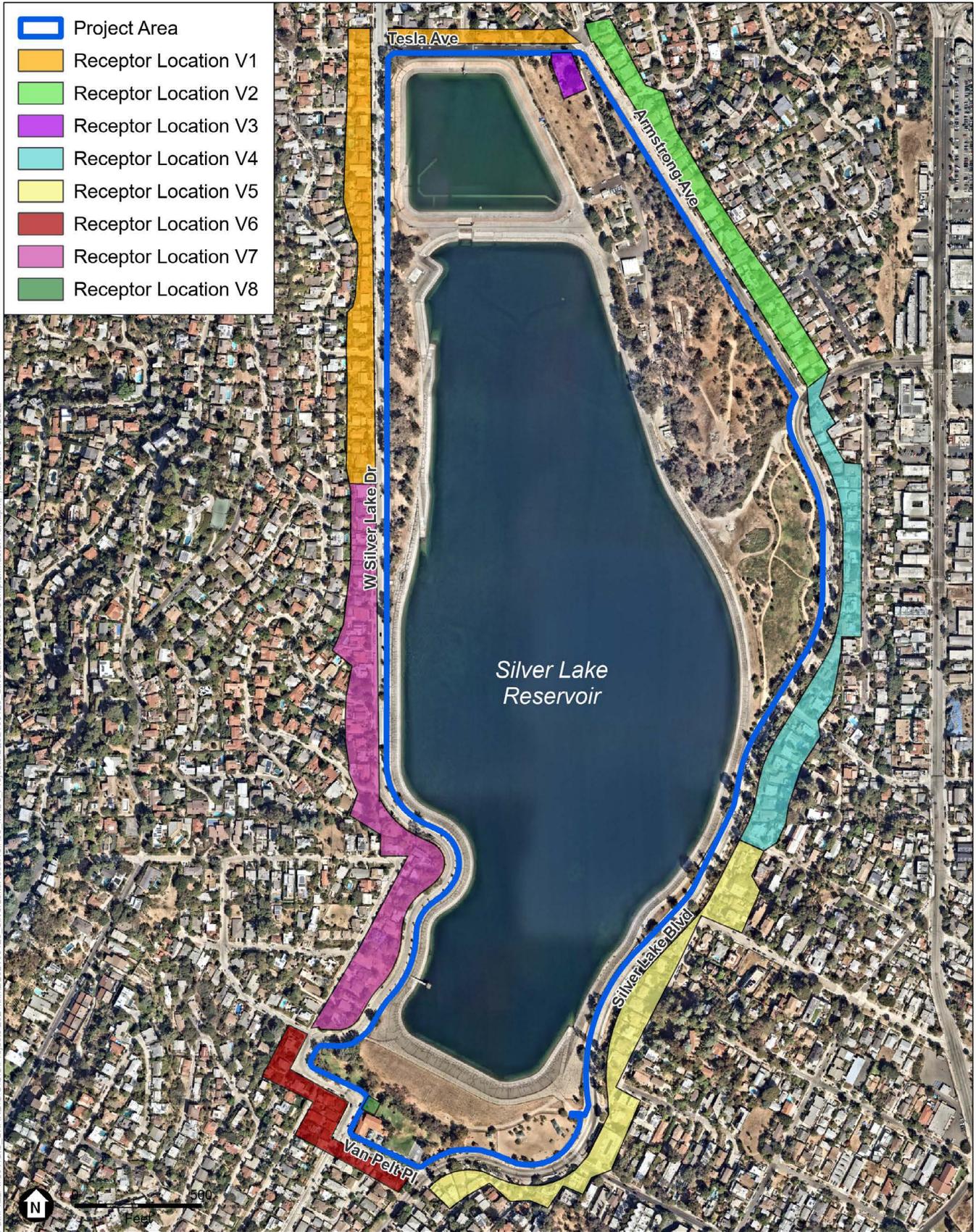
- Receptor Location V1: Single-family residential uses to the north, west, and northwest of the Project site near the corner of West Silver Lake Drive and Tesla Avenue.
- Receptor Location V2: Single-family residential uses to the north, east, and northeast of the Project site at the corner of Armstrong Avenue and Tesla Avenue.
- Receptor Location V3: Neighborhood Nursery School at the corner of Armstrong Avenue and Tesla Avenue.
- Receptor Location V4: Single-family residential uses to the east of the Project site along Silver Lake Boulevard.
- Receptor Location V5: Single-family residential uses to the southeast of the Project site along Silver Lake Boulevard.
- Receptor Location V6: Single-family residential uses to the south of the Project site along Silver Lake Boulevard.
- Receptor Location V7: Single-family residential uses to the west of the Project site along West Silver Lake Drive.
- Receptor Location V8: South Outlet Chlorination Station and Meter House north of the existing Recreation Center

Ambient Noise Levels

Noise Measurements

The predominant existing noise source near the Project site is roadway noise from Silver Lake Boulevard, West Silver Lake Drive, Armstrong Avenue, and Tesla Avenue. Other noise sources include general residential activities associated with refuse service activities. To establish baseline ambient noise levels, ambient noise measurements were conducted at eight locations corresponding to the following sensitive receptor locations in the Project vicinity:

- Measurement Location M1: Represents the noise environment at single-family residential uses to the north, west, and northwest of the Project site near the corner of West Silver Lake Drive and Tesla Avenue (Receptor Location R1).
- Measurement Location M2: Represents the noise environment at single-family residential uses to the north, east, and northeast of the Project site and Neighborhood Nursery School at the corner of Armstrong Avenue and Tesla Avenue (Receptor Location R2).
- Measurement Location M3: Represents the noise environment at single-family residential uses to the east of the Project site along Silver Lake Boulevard (Receptor Location R3).
- Measurement Location M4: Represents the noise environment at single-family residential uses to the southeast of the Project site along Silver Lake Boulevard (Receptor Location R4).



SOURCE: Nearmap, 2021; ESA, 2022

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Figure 3.12-3
Vibration Sensitive Receptors

- Measurement Location M5: Represents the noise environment at single- and multi-family residential uses to the southeast of the Project site along Duane Street (Receptor Location R5). M5 captures noise at residences that are further from the Project but at a higher elevation and have a direct line of sight to the Project site.
- Measurement Location M6: Represents the noise environment at single-family residential uses to the south of the Project site along Silver Lake Boulevard (Receptor Location R6).
- Measurement Location M7: Represents the noise environment at single-family residential uses to the west of the Project site along Kenilworth Avenue (Receptor Location R7). M7 captures noise at residences that are further from the Project but at a higher elevation and have a direct line of sight to the Project site.
- Measurement Location M8: Represents the noise environment at single-family residential uses to the west of the Project site along West Silver Lake Drive (Receptor Location R8).

Ambient noise measurements representing weekday (defined as Monday through Thursday) and weekend (defined as Friday through Sunday) daytime (between 7:00 A.M. and 10:00 P.M.) and nighttime (between 10:00 P.M. and 7:00 A.M.) periods were conducted to characterize the existing noise environment at the Project site and at representative off-site sensitive receptor locations. The City's standard for noise analysis is to compare Project-related noise levels to ambient noise measurements at representative sensitive receptor locations. Long-term noise measurements provide a larger data set from which to establish ambient conditions and would not be more or less accurate or conservative than short-term noise measurements. Where long-term noise measurements are taken, noise levels during the City's designated daytime and nighttime hours have been averaged to establish ambient daytime and nighttime noise level at that particular location. The measured noise levels are provided in **Table 3.12-2**. Noise levels representing the weekend are reported separately in order to characterize possible differences in ambient noise levels when people may be participating in after-work-week entertainment, recreational, or other activities in the vicinity. **Figure 3.12-4** shows the locations where ambient noise measurements were taken.

Roadway Noise Levels

Existing roadway CNEL noise levels were calculated for roadway segments located within the study area, as defined by the MOU with LADOT and were based on vehicular turning movement data at intersections identified for the Project's Transportation Impact Assessment (TIA) (Jano Baghdanian & Associates 2022). Turning movements at each studied intersection were used to determine traffic volumes along 14 roadway segments within the Project vicinity. The roadway segments, when compared to roadways located farther away from the Project site, would experience the greatest percentage increase in traffic generated by the Project (i.e., as distances are increased from the Project site, traffic is spread out over a greater geographic area, and its effects are reduced).

**TABLE 3.12-2
SUMMARY OF AMBIENT NOISE MEASUREMENTS**

Measurement Location		Measured Ambient Noise Levels ^a (dBA)					
		Weekday			Weekend		
		Daytime Hours (dBA L _{eq}) (7:00 A.M. – 10:00 P.M.)	Nighttime Hours (dBA L _{eq}) (10:00 P.M. – 7:00 A.M.)	24-hour Average (dBA CNEL)	Daytime Hours (dBA L _{eq}) (7:00 A.M. – 10:00 P.M.)	Nighttime Hours (dBA L _{eq}) (10:00 P.M. – 7:00 A.M.)	24-hour Average (dBA CNEL)
M1	R1	57.1	51.6	59.6	55.9	53.5	60.5
M2	R2	59.4	52.1	61.0	59.3	52.9	61.5
M3	R3	56.0	51.6	59.3	56.2	51.9	59.8
M4	R4	65.6	59.3	67.8	65.1	60.7	68.5
M5	R5	50.6	51.1	57.6	51.3	50.6	57.5
M6	R6	61.3	56.0	64.1	61.0	56.3	64.2
M7	R7	57.9	48.6	58.3	56.5	49.4	58.2
M8	R8	61.1	51.8	61.9	61.4	54.0	63.0

^a Noise levels for locations M1 through M8 were taken over 24 hours (long-term) from secured locations and are based on daytime average noise levels from 7:00 A.M. to 10:00 P.M. and nighttime average noise levels from 10:00 P.M. to 7:00 A.M. Ambient noise measurement data are provided in Appendix J.

SOURCE: ESA, 2022.



SOURCE: Nearmap, 2021; ESA, 2022

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Figure 3.12-4
Noise Measurement Locations

Existing roadway CNEL noise levels were calculated using the Federal Highway Administration’s (FHWA’s) Highway Traffic Noise Model (FHWA TNM) methodology⁴ and traffic volumes at the study intersections reported in the TIA. The TNM model methodology calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions. The noise levels along these roadway segments are presented in **Table 3.12-3**. As shown in Table 3.12-3, the ambient noise environment of the Project vicinity can be characterized by 24-hour CNEL levels attributable to existing traffic on local roadways. The calculated CNEL (at a distance of 50 feet from the roadway centerline) from actual existing traffic volumes on the analyzed roadway segments ranged from 47.7 dBA CNEL along Tesla Avenue (west of Silver Lake Drive) to 71.6 dBA CNEL along Glendale Boulevard (north of Silver Lake Boulevard).

**TABLE 3.12-3
 SUMMARY OF EXISTING ROADWAY TRAFFIC NOISE LEVELS**

Roadway Segment	Existing Land Uses Located along Roadway Segment	Calculated Traffic Noise Levels along adjacent Land Uses (dBA CNEL)
Armstrong Boulevard		
Between Lakewood Ave and Silver Lake Blvd	Residential	60.2
North of Lakewood Ave	Residential	57.7
Duane Street		
East of Silver Lake Blvd	Residential	61.1
Glendale Boulevard		
North of Silver Lake Blvd	Residential/Commercial	71.6
South of Silver Lake Blvd	Residential/Commercial	67.9
Silver Lake Boulevard		
Between Armstrong Ave and Duane St	Residential	69.4
Between Armstrong Ave and Glendale Blvd	Residential	64.9
Between Duane St and Van Pelt Pl	Residential	70.1
East of Glendale Blvd	Residential/Commercial	60.7
South of Van Pelt Pl	Residential/Commercial	70.0
Silver Lake Drive		
Between Tesla Ave and Van Pelt Pl	Residential	66.2
North of Tesla Ave	Residential	59.8
Tesla Avenue		
Between Silver Lake Dr and Armstrong Ave	Residential	54.7
West of Silver Lake Dr	Residential	47.7

NOTE: Operational traffic noise modeling worksheets are provided in Appendix J.
 SOURCE: ESA, 2022

⁴ The traffic noise model which was developed based on calculation methodologies provided in the Caltrans TeNS document and traffic data provided in the Project’s Transportation Impact Assessment. This methodology, considered an industry standard, allows for the definition of roadway configurations, barrier information (if any), and receiver locations.

Ambient Vibration Levels

Groundborne Vibration Levels

Aside from periodic construction work, field observations noted that other sources of groundborne vibration in the Project site vicinity are primarily limited to heavy-duty vehicular travel (e.g., refuse trucks, delivery trucks, etc.) on local roadways. Trucks traveling at a distance of 50 feet typically generate groundborne vibration velocity levels of 65 VdB (approximately 0.0068 in/sec PPV) (FTA 2018).

Groundborne Noise Levels

As stated earlier, groundborne noise levels would generally be 20 to 50 decibels lower than the velocity level depending on the frequency level of the source (FTA 2018). With a background groundborne vibration level in residential areas of 50 VdB or lower, groundborne noise levels would be approximately 0 to 30 dBA. A bus traveling at a distance of 50 feet would generate groundborne noise levels of approximately 23 to 38 dBA. The approximate level of human perception of groundborne noise is 25 dBA for low frequency vibration (near 30 Hz) and 40 dBA for mid-frequency vibration (near 60 Hz) (FTA 2018).

3.12.2 Regulatory Framework

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding Noise at the federal, State, regional, and local levels. As described below, these plans, guidelines, and laws include the following:

- Noise Control Act of 1972
- Federal Transportation Administration Vibration Standards
- Occupational Safety and Health Act of 1970
- Office of Planning and Research Guidelines for Noise Compatible Land Use
- Caltrans Vibration/Groundborne Noise Standards
- Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan
- City of Los Angeles Municipal Code
- City of Los Angeles General Plan Noise Element

Federal

Noise Control Act of 1972

Under the authority of the Noise Control Act of 1972, the United States Environmental Protection Agency (USEPA) established noise emission criteria and testing methods published in Parts 201 through 205 of Title 40 of the Code of Federal Regulations (CFR) that apply to some transportation equipment (e.g., interstate rail carriers, medium trucks, and heavy trucks) and construction equipment. In 1974, USEPA issued guidance levels for the protection of public health and welfare in residential areas of an outdoor L_{dn} of 55 dBA and an indoor L_{dn} of 45 dBA (USEPA 1974). These guidance levels are not standards or regulations and were developed without consideration of technical or economic feasibility. There are no federal noise standards that directly regulate environmental noise related to the construction or operation of the Project.

Moreover, the federal noise standards are not reflective of urban environments that range by land use, density, proximity to commercial or industrial centers, etc. As such, for purposes of determining acceptable sound levels to determine and evaluate intrusive noise sources and increases, this document utilizes the City of Los Angeles Noise Regulations, discussed below.

Federal Transit Administration Vibration Standards

There are no federal vibration standards or regulations adopted by any agency that are applicable to evaluating vibration impacts from land use development projects such as the Project. However, the FTA has adopted vibration criteria for use in evaluating vibration impacts from construction activities (FTA 2018). The vibration damage criteria adopted by the FTA are shown in **Table 3.12-4**.

**TABLE 3.12-4
 CONSTRUCTION VIBRATION DAMAGE CRITERIA**

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

SOURCE: FTA, Transit Noise and Vibration Impact Assessment Manual, 2018.

The FTA has also adopted standards associated with human annoyance for determining the groundborne vibration and noise impacts from ground-borne noise on the following three off-site land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional (FTA 2018). The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment but that still potentially involve activities that could be disturbed by vibration. The vibration thresholds associated with human annoyance for these three land use categories are shown in **Table 3.12-5**. No thresholds have been adopted or recommended for commercial or office uses.

Occupational Safety and Health Act of 1970

Under the Occupational Safety and Health Act of 1970 (29 United States Code [USC] Sections 1919 et seq.), the Occupational Safety and Health Administration (OSHA) has adopted regulations designed to protect workers against the effects of occupational noise exposure. These regulations list permissible noise level exposure as a function of the amount of time during which the worker is exposed. The regulations further specify a hearing conservation program that

involves monitoring noise to which workers are exposed, ensuring that workers are made aware of overexposure to noise, and periodically testing the workers’ hearing to detect any degradation (United States Department of Labor 1970).

**TABLE 3.12-5
 GROUNDBORNE VIBRATION AND GROUNDBORNE NOISE IMPACT CRITERIA FOR GENERAL ASSESSMENT**

Land Use Category	Frequent Events ^a	Occasional Events ^b	Infrequent Events ^c
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB ^d	65 VdB ^d	65 VdB ^d
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

NOTES:

- ^a “Frequent Events” is defined as more than 70 vibration events of the same source per day.
- ^b “Occasional Events” is defined as between 30 and 70 vibration events of the same source per day.
- ^c “Infrequent Events” is defined as fewer than 30 vibration events of the same kind per day.
- ^d This criterion is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes.

SOURCE: FTA, Transit Noise and Vibration Impact Assessment Manual, September 2018.

State

Office of Planning and Research Guidelines for Noise Compatible Land Use

The State of California has not adopted Statewide standards for environmental noise, but the Governor’s Office of Planning and Research (OPR) has established guidelines for evaluating the compatibility of various land uses as a function of community noise exposure, as presented in **Figure 3.12-5** (OPR 2017). The purpose of these guidelines is to maintain acceptable noise levels in a community setting for different land use types. Noise levels are divided into four general categories, which vary in range according to land use type: “normally acceptable,” “conditionally

compatibility guidelines in the Noise Element of the General Plan based in part on OPR Guidelines. acceptable,” “normally unacceptable,” and “clearly unacceptable.” The City has developed its own California Government Code Section 65302 requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, with Section 65302(f) requiring a noise element to be included in the general plan. The noise element must: (1) identify and appraise noise problems in the community; (2) recognize Office of Noise Control guidelines; and (3) analyze and quantify current and projected noise levels.

The State has also established noise insulation standards for new multi-family residential units, hotels, and motels. These requirements are collectively known as the California Noise Insulation Standards (Title 24 of the California Code of Regulations [CCR]). The noise insulation standards set forth an interior standard of 45 dBA CNEL in any habitable room. The standards require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to exterior noise levels greater than 60 dBA CNEL. Title 24 standards are typically enforced by local jurisdictions through the building permit application process.

Land Use Category	Noise Exposure (L_{dn} or CNEL, dBA)					
	55	60	65	70	75	80
Residential – Low Density Single-Family, Duplex, Mobile Home	Normal	Normal	Normal	Normal	Normal	Normal
Residential – Multiple Family	Normal	Normal	Normal	Normal	Normal	Normal
Transient Lodging – Motel, Hotel	Normal	Normal	Normal	Normal	Normal	Normal
School, Library, Church, Hospital, Nursing Home	Normal	Normal	Normal	Normal	Normal	Normal
Auditorium, Concert Hall, Amphitheater	Normal	Normal	Normal	Normal	Normal	Normal
Sports Arena, Outdoor Spectator Sports	Normal	Normal	Normal	Normal	Normal	Normal
Playground, Neighborhood Park	Normal	Normal	Normal	Normal	Normal	Normal
Golf Course, Riding Stable, Water Recreation, Cemetery	Normal	Normal	Normal	Normal	Normal	Normal
Office Building, Business Commercial and Professional	Normal	Normal	Normal	Normal	Normal	Normal
Industrial, Manufacturing, Utilities, Agriculture	Normal	Normal	Normal	Normal	Normal	Normal

-  **NORMALLY ACCEPTABLE:** Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
-  **CONDITIONALLY ACCEPTABLE:** New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.
-  **NORMALLY UNACCEPTABLE:** New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.
-  **CLEARLY UNACCEPTABLE:** New construction or development should generally not be undertaken. Construction costs to make the indoor environmental acceptable would be prohibitive and the outdoor environment would not be usable.

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SOURCE: State of California, General Plan Guidelines, Governor's Office of Planning and Research, 2003

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Figure 3.12-5
Guidelines for Noise Compatible Land Use



Caltrans Vibration/Groundborne Noise Standards

The State of California has not adopted Statewide standards or regulations for evaluating vibration or groundborne noise impacts from land use development projects, such as the Project. Although the State has not adopted any vibration standard, Caltrans in its *Transportation and Construction Vibration Guidance Manual* recommends the following vibration thresholds that are more practical than those provided by the FTA (Caltrans 2020). The Caltrans vibration thresholds are shown in **Table 3.12-6**.

**TABLE 3.12-6
 GUIDELINE VIBRATION DAMAGE POTENTIAL THRESHOLD CRITERIA**

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources ^a	Continuous/Frequent Intermittent Sources ^b
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

NOTES:

^a Transient sources create a single, isolated vibration event, such as blasting or drop balls.

^b Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

SOURCE: Caltrans, Transportation and Construction Vibration Guidance Manual, Table 19, April 2020.

Regional

Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan

In Los Angeles County, the Regional Planning Commission has the responsibility for acting as the Airport Land Use Commission and for coordinating the airport planning of public agencies within the county. The Airport Land Use Commission coordinates planning for the areas surrounding public use airports. The Comprehensive Land Use Plan provides for the orderly expansion of Los Angeles County's public use airports and the area surrounding them. It is intended to provide for the adoption of land use measures that will minimize the public's exposure to excessive noise and safety hazards. In formulating the Comprehensive Land Use Plan, the Los Angeles County Airport Land Use Commission has established provisions for safety, noise insulation, and the regulation of building height within areas adjacent to each of the public airports in the County.

Local

Los Angeles Municipal Code

The City of Los Angeles Noise Regulations are provided in Chapter XI of the Los Angeles Municipal Code (LAMC). LAMC Section 111.02 provides procedures and criteria for the measurement of the sound level of “offending” noise sources. In accordance with the LAMC, a noise source that causes a noise level increase of 5 dBA over the existing average ambient noise level as measured at an adjacent property line creates a noise violation. This standard applies to radios, television sets, air conditioning, refrigeration, heating, pumping and filtering equipment, powered equipment intended for repetitive use in residential areas, and motor vehicles driven on-site. To account for people’s increased tolerance for short-duration noise events, the Noise Regulations provide a 5-dBA allowance for a noise source that causes noise lasting more than 5 but less than 15 minutes in any one-hour period, and an additional 5-dBA allowance (for a total of 10 dBA) for a noise source that causes noise lasting 5 minutes or less in any one-hour period (Los Angeles Municipal Code, Chapter XI, Article I, Section 111.02).

The LAMC provides that, in cases where the actual ambient conditions are not known, the City’s presumed daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) minimum ambient noise levels as defined in LAMC Section 111.03 should be used. The presumed ambient noise levels for these areas, where the actual ambient conditions are not known as set forth in the LAMC Sections 111.03, are provided in **Table 3.12-7**. For example, for residential-zoned areas, the presumed ambient noise level is 50 dBA during the daytime and 40 dBA during the nighttime.

**TABLE 3.12-7
 CITY OF LOS ANGELES PRESUMED AMBIENT NOISE LEVELS**

Zone	Daytime Hours (7 a.m. to 10 p.m.) dBA (L _{eq})	Nighttime Hours (10 p.m. to 7 a.m.) dBA (L _{eq})
Residential (A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, and R5)	50	40
Commercial (P, PB, CR, C1, C1.5, C2, C4, C5, and CM)	60	55
Manufacturing (M1, MR1 and MR2)	60	55
Heavy Manufacturing (M2 and M3)	65	65

SOURCE: LAMC Section 111.03.

LAMC Section 112.02 limits increases in noise levels from air conditioning, refrigeration, heating, pumping and filtering equipment. Such equipment may not be operated in such manner as to create any noise which would cause the noise level on the premises of any other occupied property, or, if a condominium, apartment house, duplex, or attached business, within any adjoining unit, to exceed the ambient noise level by more than 5 dB.

LAMC Section 112.05 sets a maximum noise level for construction equipment of 75 dBA at a distance of 50 feet when operated within 500 feet of a residential zone. Compliance with this

standard shall not apply where compliance therewith is technically infeasible.⁵ LAMC Section 41.40 prohibits construction between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, 6:00 p.m. and 8:00 a.m. on Saturday, and at any time on Sunday (i.e., construction is allowed Monday through Friday between 7:00 a.m. to 9:00 p.m.; and Saturdays and National Holidays between 8:00 a.m. to 6:00 p.m.). In general, the City’s Department of Building and Safety enforces Noise Ordinance provisions relative to equipment, and the Los Angeles Police Department (LAPD) enforces provisions relative to noise generated by people.

LAMC Section 113.01 prohibits collecting or disposing of rubbish or garbage, operating any refuse disposal truck, or collecting, loading, picking up, transferring, unloading, dumping, discarding, or disposing of any rubbish or garbage, as such terms are defined in LAMC Section 66.00, within 200 feet of any residential building between the hours of 9:00 p.m. and 6:00 a.m. of the following day, unless a permit therefore has been duly obtained beforehand from the Board of Police Commissioners.

Section 91.1207.14.2 prohibits interior noise levels attributable to exterior sources from exceeding 45 dBA in any habitable room. The noise metric shall be either the day-night average sound level (L_{dn}) or the CNEL, consistent with the noise element of the local general plan.

City of Los Angeles General Plan Noise Element

The Noise Element of the City’s General Plan policies include the CNEL guidelines for land use compatibility as shown in **Table 3.12-8**, and includes a number of goals, objectives, and policies for land use planning purposes. The overall purpose of the Noise Element is to guide policymakers in making land use determinations and in preparing noise ordinances that would limit exposure of citizens to excessive noise levels (City of Los Angeles 1999). The following policies and objectives from the Noise Element apply to the Project.

Objective 2 (Non-airport): Reduce or eliminate non-airport related intrusive noise, especially relative to noise sensitive uses.

Policy 2.2: Enforce and/or implement applicable city, state, and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise and alleviate noise that is deemed a public nuisance.

Objective 3 (Land Use Development): Reduce or eliminate noise impact associated with proposed development of land and changes in land use.

Policy 3.1: Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts.

Exhibit I of the Noise Element also contains guidelines for noise compatible land uses (City of Los Angeles 1999). The following table summarizes these guidelines, which are based on OPR guidelines from 1990.

⁵ In accordance with the City’s Noise Ordinances, “technically feasible” means that the established noise limitations can be complied with at a project site, with the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques employed during the operation of equipment.

**TABLE 3.12-8
CITY OF LOS ANGELES LAND USE COMPATIBILITY FOR COMMUNITY NOISE**

Land Use	Community Noise Exposure CNEL (dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Single-Family, Duplex, Mobile Homes	50 to 60	55 to 70	70 to 75	Above 70
Multi-Family Homes	50 to 65	60 to 75	70 to 75	Above 70
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 to 70	60 to 75	70 to 80	Above 80
Transient Lodging – Motels, Hotels	50 to 65	60 to 70	70 to 80	Above 80
Auditoriums, Concert Halls, Amphitheaters	—	50 to 70	—	Above 65
Sports Arena, Outdoor Spectator Sports	—	50 to 75	—	Above 70
Playgrounds, Neighborhood Parks	50 to 70	—	67 to 75	Above 72
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 to 75	—	70 to 80	Above 80
Office Buildings, Business and Professional Commercial	50 to 70	67 to 77	Above 75	—
Industrial, Manufacturing, Utilities, Agriculture	50 to 75	70 to 80	Above 75	—

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

SOURCE: City of Los Angeles, 2006 L.A. CEQA Thresholds Guide, 2006.

3.12.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to noise are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would result in the:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Refer to Impact 3.12-1)
- Generation of excessive groundborne vibration or groundborne noise levels. (Refer to Impact 3.12-2)
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels. (Refer to Impact 3.12-3)

For this analysis, the Appendix G Thresholds are relied upon. The analysis utilizes factors and considerations identified in the City's 2006 L.A. CEQA Thresholds Guide and the FTA's groundborne vibration and noise criteria for assessing potential impacts relating to building damage and human annoyance were used, as appropriate, to assist in answering the Appendix G Threshold questions. The factors to evaluate noise impacts are listed below.

Construction Noise

The 2006 L.A. CEQA Thresholds Guide identifies the following criteria to evaluate construction noise:

- Construction activities lasting more than one day would exceed existing ambient exterior noise levels by 10 dBA L_{eq} or more at a noise-sensitive use;
- Construction activities lasting more than 10 days in a three-month period would exceed existing ambient exterior noise levels by 5 dBA L_{eq} or more at a noise-sensitive use; or
- Construction activities would exceed the ambient noise level by 5 dBA L_{eq} at a noise-sensitive use between the hours of 9:00 p.m. and 7:00 a.m. Monday through Friday, before 8:00 a.m. or after 6:00 p.m. on Saturday, or at any time on Sunday.

As discussed in Chapter II, *Project Description*, of this Draft EIR, in order to analyze the most conservative scenario during proposed Project construction, the analysis within this EIR assumes a 2-phased approach as outlined above with the shortest construction duration occurring within a 5-year period. Therefore, since construction activities would occur over a period longer than 10 days for all phases, the corresponding criteria used in the construction noise analysis presented in this section of the Draft EIR is an increase in the ambient exterior noise levels of 5 dBA L_{eq} or more at a noise-sensitive use.

Operational Noise

The Project's on-site operational noise sources are based on the City's Noise Regulations (i.e., any increase to the ambient noise levels by 5 dBA). The City Noise Regulations; however, do not apply to off-site traffic traveling on public roads. Therefore, the significance threshold for off-site traffic noise is based on the criteria provided in the *L.A. CEQA Threshold Guide*. Thus, the Project would have a significant noise impact if any of the following events were to occur:

- Off-site traffic from the Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 3 dBA in CNEL to or within the "normally unacceptable" or "clearly unacceptable" category; or
- Off-site traffic from the Project causes the ambient noise levels measured at the property line of affected noise-sensitive uses to increase by 5 dBA in CNEL or greater; or
- The Project on-site operational (i.e., non-roadway) noise sources, such as, outdoor mechanical equipment, parking facilities, loading, and outdoor activities, increase the ambient noise level (hourly L_{eq}) at noise-sensitive uses by 5 dBA.

The significance criteria used in the noise analysis for on-site operations presented below is an increase in the ambient noise level of 5 dBA (hourly L_{eq}) at the noise-sensitive uses, in accordance with the LAMC. The LAMC does not apply to off-site traffic (i.e., vehicles traveling

on public roadways). Therefore, based on the *L.A. CEQA Thresholds Guide*, the significance criteria for off-site traffic noise associated with Project operations is an increase in the ambient noise level by 3 dBA or 5 dBA in CNEL (depending on the land use category) at noise-sensitive uses. In addition, the significance for composite noise levels (on-site and off-site sources) is also based on the *L.A. CEQA Thresholds Guide*, which is an increase in the ambient noise level of 3 dBA or 5 dBA in CNEL (depending on the land use category) for the Project's composite noise (both Project-related on-site and off-site sources) at noise-sensitive uses.

Groundborne Vibration

The City has not adopted criteria to assess vibration impacts during construction or operations. Thus, for this Project, the City has determined that the use of FTA's criteria for structural damage and human annoyance, as described in Tables 3.12-4 and 3.12-5, respectively, is appropriate to evaluate potential impacts related to Project construction and operation. The structures in the vicinity of the Project site are Category I (reinforced-concrete, steel, or timber [no plaster]), Category II (engineered concrete and masonry [no plaster]), and Category III (non-engineered timber and masonry buildings).

- Potential Building Damage – Project construction activities that cause groundborne vibration levels to exceed the potential structural damage threshold of 0.5 in/sec PPV at the nearest off-site buildings or structures of Building Category I, Reinforced-concrete, steel, or timber (no plaster).
- Potential Building Damage – Project construction activities that cause groundborne vibration levels to exceed the potential structural damage threshold of 0.3 in/sec PPV at the nearest off-site buildings of Building Category II, Engineered concrete and masonry (no plaster).
- Potential Building Damage – Project construction activities that cause groundborne vibration levels to exceed the potential structural damage threshold of 0.2 in/sec PPV at the nearest off-site buildings of Building Category III, Non-engineered timber and masonry buildings.
- Potential Building Damage – Project construction activities that cause groundborne vibration levels to exceed the potential structural damage threshold of 0.12 in/sec PPV at the nearest off-site buildings of Building Category IV, Buildings extremely susceptible to building damage.

Based on FTA guidelines, construction and operational vibration impacts associated with human annoyance would be significant if the following were to occur (applicable to frequent events; 70 or more vibration events per day):

- Project construction and operational activities cause groundborne vibration levels to exceed 72 VdB at off-site sensitive uses, including residential and hotel uses.

Methodology

On-Site Construction Noise

On-site construction noise impacts were evaluated by determining the noise levels generated by the different types of construction activity anticipated, calculating the construction-related noise level generated by the mix of equipment assumed for all construction activities at nearby sensitive

receptor locations, and comparing these construction-related noise levels to existing ambient noise levels (i.e., noise levels without construction noise) at those receptors.

Project construction includes activities in seven different park zones which include The Meadow, The Knoll, Ivanhoe Overlook,⁶ The Eucalyptus Grove, The East and West Narrows, The South Valley, and the Habitat Islands. The following construction phases could occur at any of the proposed park zones: (1) demolition; (2) site grubbing; (3) grading/excavation; (4) drainage/utilities/ trenching; (5) foundation concrete pour; (5) building construction; (6) asphalt paving; (7) landscaping; (8) waterside pile installation; (9) waterside landscaping; and (10) off-site improvements which include: restriping West Silver Lake Drive, restriping Silver Lake Boulevard and sidewalk construction along Silver Lake Boulevard. Since construction of the Project as a whole would last more than 10 days, based on the criteria provided in the 2006 L.A. CEQA Thresholds Guide, the construction noise significance threshold used in this analysis is an increase in the ambient exterior noise level of 5 dBA L_{eq} or more at a noise-sensitive use.

It should also be noted that the 2006 L.A. CEQA Thresholds Guide contains screening criteria, including (1) whether construction activities occur within 500 feet of a noise sensitive use; and (2) whether construction occurs between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, before 8:00 A.M. or after 6:00 P.M. on Saturday, or anytime on Sunday. A “no” response to these questions indicates that construction would not occur between these hours and there would normally be no significant construction noise impacts from the project. The Project would occur within 500 feet of a noise sensitive use but would not include construction activity between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, before 8:00 A.M. and after 6:00 P.M. on Saturday, or on Sunday. Construction noise levels have been compared against the lowest ambient noise level for a weekday.

Off-Site Roadway Noise (Construction / Operation)

Roadway noise impacts were evaluated using the FHWA TNM based on the roadway traffic volume data provided in the TIA prepared for the Project and included in Appendix K of the Project’s Draft EIR (Jano Baghdanian & Associates 2022). This method allows for the definition of roadway configurations, barrier information (if any), and receiver locations. Roadway noise attributable to Project development was calculated and compared to baseline noise levels that would occur under the “Without Project” condition. With respect to operational traffic noise, impacts are evaluated for the existing year and the earliest buildout year of 2030.

On-Site Stationary Point-Source Noise (Operation)

Operational noise sources for the proposed Project include active and passive recreational activities and informal gatherings, outdoor education classroom activities, special events with amplified sound, fixed mechanical equipment, refuse collection and grounds/landscaping maintenance activities, and on-site parking. Stationary noise impacts were evaluated by identifying the noise levels generated by outdoor stationary noise sources, such as open spaces, outdoor activities, rooftop mechanical equipment, and loading area activity, calculating the hourly

⁶ The Ivanhoe Overlook includes the Ivanhoe Spillway and Promenade. For modeling purposes, the Ivanhoe Spillway and Promenade is analyzed as a separate zone.

L_{eq} noise level from each noise source at sensitive receptor property lines, and comparing such noise levels to existing ambient noise levels.

On-site operational noise was modeled using CadnaA noise propagation Project. CadnaA is a Windows-based software Project that predicts and assesses noise levels in the vicinity of noise sources based on International Organization for Standardization 9613-2 algorithms for noise propagation calculations. CadnaA considers environmental factors, such as topography, intervening structures, and distance (both horizontally and vertically) from a noise source. This is particularly relevant for projects containing outdoor meeting, performance, and gathering areas at varying elevations that would have amplified sound and could potentially affect surrounding land uses and receptors. Since the Project has various open-air areas that create a relatively complex soundscape, the CadnaA model was used to estimate the various noise sources and their effects on the ambient noise environment. The CadnaA modeling accounted for 14 receptor points surrounding the Project site and are labeled modeling points A through N in the analysis below. Operational noise from the Project was evaluated at each modeling point and compared to the closest ambient noise levels measured at R1 through R8 for each respective modeling point.

For operational stationary noise, the operational stationary noise significance threshold used in this analysis is whether the project causes the ambient noise level measured at the property line of affected uses to increase by 5 dBA in accordance with Los Angeles Municipal Code (LAMC), Chapter XI, Section 112.02.

Stationary noise impacts were evaluated by identifying the noise levels generated by outdoor stationary noise sources, such as open spaces, outdoor activities, rooftop mechanical equipment, parking facilities, and loading area activity, calculating the hourly L_{eq} noise level from each noise source at sensitive receptor property lines, and comparing such noise levels to existing ambient noise levels. Open spaces and outdoor activities may generate noise from people conversing/talking while engaging in activities such as picnicking, exercising, recreational sports (e.g., catch, frisbee, etc.) or other similar recreational activities. In addition, within the Meadow park zone, park users may apply for special events permits, such as for outdoor concerts, movie nights, or luncheons, that could potentially be held within the Meadow outdoor open spaces and could utilize amplified speakers. The combined noise levels from each operational noise source were estimated to evaluate composite noise level impacts at the nearest sensitive receptor.

Assumptions for park zone attendance are consistent with the Project's Transportation Assessment, which estimates peak occupancy based on peak vehicle trips to/from the various park zones and are presented in **Table 3.12-9, Silver Lake Reservoir Complex Estimated Potential Weekend Vehicle Trips Generated by Each Park Use**. The vehicle occupancy rates were applied to the peak vehicle trips per park zone to calculate the increase in attendance. See Tables 2-7 through 2-9 of Chapter 2, *Project Description*, of the Draft EIR for a detailed account of the increases in park attendance by park zone.

**TABLE 3.12-9
 SILVER LAKE RESERVOIR COMPLEX ESTIMATED POTENTIAL WEEKEND VEHICLE TRIPS GENERATED
 BY EACH PARK USE**

Park Zone	Increase in Park Attendance
The Meadow	130 people
The Knoll	25 people
Ivanhoe Overlook	n/a
Eucalyptus Grove	20 people
The East Narrows	30 people
The West Narrows	15 people
The South Valley	85 people
Silver Lake Perimeter	85 People

SOURCE: JBA 2022 (Appendix K)

Noise from female adults, male adults, and children talking at a raised voice level is approximately 63 dBA, 65 dBA, and 65 dBA, respectively, at a distance of 3 feet (American Journal of Audiology 1998). It is assumed that each outdoor space would be at full capacity and that half of the visitors would be adults (half male and half female) and half would be children. Of the adults and children, half would be talking simultaneously (assuming approximately half of the occupants talking and the other half listening).

The Meadow, once completed, would feature two lawn areas that could host local events such as concerts and outdoor movie screenings; ornamental gardens; a picnic grove; wetland habitat terraces with walkways; floating wetland islands; and an observational platform. As such, The Meadow may include the use of an amplified sound system for purposes of this noise assessment, an amplified sound system is included as a noise source in The Meadow generating a sound level of up to 91 dBA L_{eq} at 25 feet from the sound system (University of Michigan Department of Environmental Health Science 2016).

Composite Noise (Operation)

Combined noise levels from each operational noise source were estimated by logarithmically adding together the noise levels from all the operational noise sources at the maximum impacted noise-sensitive receptor locations, assuming simultaneous contribution of noise from each source. As discussed previously, the dBA scale is based on logarithms, where a doubling of sound energy corresponds to a 3-dBA increase (e.g., if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA). Composite noise sources include off-site roadway noise and on-site stationary point-source noise, as listed above.

Groundborne Vibration (Construction / Operation)

Groundborne vibration impacts were evaluated by identifying potential vibration sources, measuring the distance between vibration sources and surrounding structure locations, and making a determination based on the significance criteria described in the Vibration Impacts section.

The City currently does not have significance criteria to assess vibration impacts during construction. Thus, FTA guidelines set forth in their 2018 Transit Noise and Vibration Assessment are used to evaluate potential impacts related to construction vibration for both potential building damage and human annoyance (FTA 2018). The FTA guidelines regarding construction vibration are the most current guidelines and are commonly used in evaluating vibration impacts. Based on the FTA guidance, groundborne vibration could result in building damage if any of the following were to occur:

- Project construction activities cause groundborne vibration levels to exceed 0.5 in/sec PPV at the nearest off-site reinforced-concrete, steel, or timber building.
- Project construction activities cause groundborne vibration levels to exceed 0.3 in/sec PPV at the nearest off-site engineered concrete and masonry building.
- Project construction activities cause groundborne vibration levels to exceed 0.2 in/sec PPV at the nearest off-site non-engineered timber building.
- Project construction activities cause groundborne vibration levels to exceed 0.12 in/sec PPV at buildings extremely susceptible to vibration damage, such as historic buildings.

Based on FTA guidance, construction vibration could be perceived as annoying to humans if any of the following were to occur:

- Project construction activities cause groundborne vibration levels to exceed 72 VdB for frequent events (more than 70 events per day); 75 VdB for occasional events (30 to 70 events per day); or 80 VdB for infrequent events (fewer than 30 events per day) at the nearest residential buildings when people normally sleep.

The FTA guidance classifies the vibration levels above based on whether the vibration-producing events are frequent, occasional, or infrequent. “Frequent Events” is defined as more than 70 vibration events of the same source per day. “Occasional Events” is defined as between 30 and 70 vibration events of the same source per day. “Infrequent Events” is defined as fewer than 30 vibration events of the same kind per day. The values listed above are applicable to “Frequent Events.” For purposes of conservative analysis, the vibration analysis provided herein for potential human annoyance compares the estimated vibration levels generated during construction and operation of the Project to the 72 VdB significance threshold for off-site residential uses for “Frequent Event.” The vibration analysis for the Project conservatively used the closest distance to construction activity and the construction phase with the equipment mix that would result in the greatest potential vibration.

Groundborne Noise

According to the FTA, airborne noise levels would be higher than groundborne noise levels (FTA 2018). Unless indoor receptors have substantial sound insulation (e.g., recording studio) and would be exposed to vibration velocities great enough to cause substantial levels of groundborne noise, groundborne noise does not need to be assessed. There are no substantially insulated indoor receptors located within the area surrounding the Project site; therefore, the effects of airborne noise would still be higher than groundborne noise levels. Accordingly, impacts related to groundborne noise have not been analyzed herein.

3.12.4 Project Design Features

The following PDFs would be implemented as part of the proposed Project.

PDF-NOISE-1: Haul Route. Prior to commencement of construction and operational maintenance activities, the City shall establish approved truck haul routes that avoid or minimize, to the extent feasible, unnecessary truck travel on local roadways through residential neighborhoods or adjacent to schools, and prioritize travel on collector and arterial streets.

PDF-NOISE-2: Construction Noticing and Community Liaison. Prior to commencement of construction activities, the City shall notify in writing adjacent residents and businesses along the Project route or worksite of proposed construction activities and the tentative schedule. The City shall require the construction contractor to designate a community liaison to respond to any issues and/or concerns related to construction activities, including any noise or vibration complaints. The community liaison shall maintain a log of communications and resolutions of issues or concerns and share the log with the City. Notices and construction signs will include a hotline and website address which will be updated quarterly and will include project-related information.

3.12.5 Impacts and Mitigation Measures

Noise Standards

Impact 3.12-1: Would the project result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction

On-Site Construction Noise

Construction of the Project is anticipated to begin in the first quarter of 2025, pending Project consideration and approval, and is estimated to be completed in the third quarter of 2030. All construction staging of materials and equipment and worker parking would be confined to the Project site.

Project construction activities would be required to comply with the City's Ordinance Nos. 144,331 and 161,574, which prohibit the emission or creation of noise beyond 75 dBA at 50 feet from the equipment, unless technically infeasible.⁷ In addition, the Project would be subject to LAMC Section 91.106.4.8 (Construction Site Notice, City's Ordinance 178,048), which requires a construction site notice to be provided that includes the following information: job site address, permit number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported (PDF-NOISE-2).

⁷ As provided in LAMC Section 112.05, technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques during the operation of the equipment.

On-site construction noise impacts were evaluated by 1) determining the noise levels generated by the different types of construction activity anticipated, 2) calculating the construction-related noise level generated by the mix of equipment assumed for all construction activities at nearby sensitive receptor locations, and 3) comparing these construction-related noise levels to the applicable thresholds of each jurisdiction in which Project construction would occur.

Construction of the various park zones include 1) demolition, (2) site grubbing, (3) grading/excavation, (4) drainage/ utilities/ trenching, (5) foundation concrete pour, (5) building construction, (6) asphalt paving, (7) landscaping, (8) waterside pile installation, (9) waterside landscaping, and (10) off-site improvements which include: restriping West Silver Lake Drive, restriping Silver Lake Boulevard, and sidewalk construction along Silver Lake Boulevard.

Project construction consists of seven park zones which include The Meadow, The Knoll, Ivanhoe Overlook,⁸ The Eucalyptus Grove, The East and West Narrows, The South Valley, and the Habitat Islands. Project construction would also include off-site improvements for restriping West Silver Lake Drive, restriping Silver Lake Boulevard, and sidewalk construction along Silver Lake Boulevard.

Construction of the proposed park zones may occur simultaneously or sequentially. Since construction sequence is currently unknown, for purposes of this environmental analysis, it is assumed that construction of certain park zones would need to occur before other park zones to maximize usage of the proposed Project site during construction. For example, the Ivanhoe Overlook and Eucalyptus Grove would need to be constructed before The East and West Narrows to avoid potential damage to any of the new facilities (e.g., new pathways). For the purposes of the environmental analysis, the following park zones are assumed to be constructed simultaneously within two groupings, where the second grouping would be construction sequentially after the first:

1. Ivanhoe Overlook, The Eucalyptus Grove, Habitat Islands, the Knoll, the Meadow (1st half)
2. The East and West Narrows, the South Valley, Ivanhoe Spillway and Promenade, the Meadow (2nd half), and off-site improvements.

Construction noise levels on the Project site and at noise-sensitive receptors would fluctuate depending on the particular type, number, and duration of use of the various pieces of construction equipment. **Table 3.12-10** summarizes noise levels from individual pieces of heavy-duty construction equipment that would be expected to be used for construction of the Project. As shown, the individual pieces of heavy-duty construction equipment would produce maximum noise levels ranging from 74 to 90 dBA L_{max} at a reference distance of 50 feet from the noise source, when operating at full power. Equipment do not operate continuously at full power. The estimated usage factor for the equipment are also shown in Table 3.12-10, which accounts for fluctuating equipment power and noise levels.

⁸ The Ivanhoe Overlook includes the Ivanhoe Spillway and Promenade. For modeling purposes, the Ivanhoe Spillway and Promenade is analyzed as a separate zone.

**TABLE 3.12-10
 CONSTRUCTION EQUIPMENT NOISE LEVELS**

Construction Equipment	Noise Level (dBA L_{max}) at 50 Feet	Estimated Usage Factor, %
Bore/Drill Rig	79	20
Cement and Mortar Mixers	79	40
Compactor (ground)	83	20
Concrete Saw	90	20
Cranes	81	16
Dump/Haul Trucks	76	40
Excavator	81	40
Forklift	75	10
Generator Sets	81	50
Other Equipment	85	50
Paver	77	50
Roller	80	20
Tractor/Loader/Backhoe	80	40
Water Trucks	80	10
Welders	74	40

SOURCE: FHWA, 2006.

Over the course of a construction day, the highest noise levels would be generated when multiple pieces of construction equipment are being operated concurrently. The Project’s estimated construction noise levels were calculated for a scenario in which all pieces of construction equipment would operate simultaneously with the loudest type of equipment located at the construction area nearest to the affected receptors to present a conservative impact analysis. The remaining equipment was assumed to be located at the center of the Project site. The estimated noise levels at the off-site sensitive receptors were calculated using equipment source noise levels identified in the FHWA’s RCNM, and were based on a maximum concurrent operation of equipment, which is considered a worst-case evaluation because the Project would typically use less overall equipment on a daily basis, and as such would generate lower noise levels. In addition, the noise levels were estimated including the assumption that there would be some construction phase overlap. **Table 3.12-11**, and **Table 3.12-12**, show the estimated construction noise levels that would occur at the nearest off-site sensitive uses during a peak day of construction activity at the Project site. As shown in Table 3.12-11 and Table 3.12-12, construction noise levels would exceed the threshold of 5 dBA over ambient noise levels at R1 through R5, R7, and R8 for the first park zone grouping and at R1 through R8 for the second park zone grouping. Based on the modeled worst-case construction scenario presented in Table 5 and Table 6 above, the proposed Project could potentially exceed applicable thresholds and impacts would be potentially significant. Therefore, mitigation measures are required.

Off-Site Construction Traffic Noise

Vehicle trips attributed to Project construction activities would increase average daily traffic (“ADT”) volumes along the major thoroughfares within the project vicinity. Typically, with everything else being the same, a doubling of traffic volumes increases the hourly equivalent sound level by 3 dBA (FTA 2018). The haul routes for outbound trips from the Project site would be Silver Lake Boulevard; north on Glendale Boulevard; and northeast on Fletcher Drive towards the on-ramp to Interstate 5 (northbound) or State Route 2 (northbound), or northeast on Fletcher Drive, left on Riverside Drive towards the on-ramp to State Route 2 (southbound), or northeast on Fletcher Drive, left on Riverside Drive onto Stadium Way towards the on-ramp to Interstate 5 (southbound). The haul routes for inbound trips towards the Project site generally follow the same routes as the outbound trips.

Project construction activities would generate a maximum of up to 335 worker trips per day, and a maximum of up to 494 truck trips per day. These worker and truck trips would be distributed throughout the Project area at up to a maximum estimated 5 work sites assumed. It is anticipated that these trips would occur primarily on collector and arterial streets as well as freeways throughout the Project area and would constitute a small fraction of the existing daily vehicle and truck trips that already occur on the collector and arterial streets and freeways. As shown in **Table 3.12-13**, noise levels resulting from Project off-site construction would result in a maximum increase of 2.4 dBA L_{eq} along Silver Lake Boulevard between Armstrong Avenue and Glendale Boulevard. Therefore, with implementation of PDF-NOISE-1, the proposed Project would not increase the roadway noise level sound level by 3 dBA CNEL.

**TABLE 3.12-11
 ESTIMATE OF CONSTRUCTION NOISE LEVELS (L_{EQ}) WITHOUT MITIGATION AT EXISTING OFF-SITE SENSITIVE RECEIVER LOCATIONS
 (FIRST PARK ZONE GROUPING)**

Park Zone	Construction Noise Level (dBA L _{eq})/Distance from Park Zone							
	R1	R2	R3	R4	R5	R6	R7	R8
Eucalyptus Grove and Ivanhoe Overlook	88.5 (45 ft)	88.5 (45 ft)	61.5 (1,600 ft)	61.5 (1,600 ft)	59.7 (2,500 ft)	60.0 (2,300 ft)	65.0 (900 ft)	86.2 (60 ft)
Habitat Islands	71.4 (220 ft)	68.0 (350 ft)	63.8 (575 ft)	70.7 (250 ft)	58.0 (1,200 ft)	53.5 (1,000 ft)	54.4 (800 ft)	64.4 (200 ft)
The Knoll and The Meadow (1 st Half)	65.8 (800 ft)	86.8 (60 ft)	86.8 (60 ft)	69.6 (750 ft)	58.3 (2,000 ft)	58.8 (2,000 ft)	58.6 (2,300 ft)	63.4 (1,400 ft)
Maximum Noise Level	88.5	88.5	86.8	70.7	59.7	60.0	65.0	86.2
Ambient Daytime Noise Level	57.1	59.4	56.2	65.6	50.6	61.3	57.9	61.1
Threshold (Ambient + 5 dbA)	62.1	64.4	61.2	70.6	55.6	66.3	62.9	66.1
Exceeds Threshold?	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

NOTE: **Bold values** denote an exceedance of the significance threshold. Construction noise modeling worksheets are provided in Appendix J.

SOURCE: ESA 2022

**TABLE 3.12-12
ESTIMATE OF CONSTRUCTION NOISE LEVELS (L_{eq}) WITHOUT MITIGATION AT EXISTING OFF-SITE SENSITIVE RECEIVER LOCATIONS
(SECOND PARK ZONE GROUPING)**

Park Zone	Construction Noise Level (dBA L_{eq})/Distance from Park Zone							
	R1	R2	R3	R4	R5	R6	R7	R8
East and West Narrows	56.5 (2,200 ft)	55.8 (2,700 ft)	64.7 (730 ft)	78.5 (130 ft)	62.8 (1,000 ft)	65.0 (700 ft)	65.1 (700 ft)	84.6 (60 ft)
Ivanhoe Spillway	85.2 (50 ft)	85.2 (50 ft)	59.3 (1,300 ft)	54.3 (2,500 ft)	50.3 (4,000 ft)	51.5 (3,500 ft)	56.1 (2,000 ft)	62.5 (900 ft)
South Valley	51.2 (3,900 ft)	50.9 (4,100 ft)	55.7 (2,300 ft)	62.0 (1,000 ft)	65.5 (675 ft)	84.9 (50 ft)	60.3 (1,300 ft)	56.9 (2,000 ft)
The Meadow (2 nd Half)	58.2 (2,200 ft)	60.9 (1,600 ft)	86.9 (60 ft)	69.8 (500 ft)	58.6 (2,000 ft)	59.1 (2,000 ft)	58.9 (2,000 ft)	63.0 (1,200 ft)
Off-site Improvements – Combined	55.4	57.5	87.9	87.9	65.3	89.0	56.2	57.0
Restriping West Silver Lake Drive	40.6 (3,900 ft)	39.9 (4,200 ft)	43.3 (2,850 ft)	48.2 (1,600 ft)	48.2 (1,600 ft)	82.3 (25 ft)	48.9 (1,475 ft)	45.1 (2,300 ft)
Restriping Silver Lake Boulevard	46.1 (2,050 ft)	48.3 (1,600 ft)	82.7 (25 ft)	82.7 (25 ft)	56.3 (625 ft)	82.7 (25 ft)	46.1 (2,050 ft)	47.6 (1,725 ft)
Sidewalk Construction along Silver Lake Boulevard	54.7 (2,050 ft)	56.8 (1,600 ft)	86.3 (25 ft)	86.3 (25 ft)	64.6 (625 ft)	86.3 (25 ft)	54.7 (2,050 ft)	56.2 (1,725 ft)
Maximum Noise Level	85.2	85.2	87.9	87.9	65.5	89.0	65.1	84.6
Ambient Daytime Noise Level	57.1	59.4	56.2	65.6	50.6	61.3	57.9	61.1
Threshold (Ambient + 5 dbA)	62.1	64.4	61.2	70.6	55.6	66.3	62.9	66.1
Exceeds Threshold?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

NOTE: **Bold values** denote an exceedance of the significance threshold. Construction noise modeling worksheets are provided in Appendix J.

SOURCE: ESA 2022

**TABLE 3.12-13
 OFF-SITE CONSTRUCTION TRAFFIC NOISE IMPACTS**

Roadway Segment	Existing Land Uses Located along Roadway Segment	Calculated Traffic Noise Levels along adjacent Land Uses (dBA CNEL)				
		Existing (A)	Existing with Project Construction (B)	Project Increment (B-A)	Threshold	Exceed Threshold?
Glendale Boulevard						
North of Silver Lake Blvd	Residential/Commercial	71.6	72.3	0.7	3	No
Silver Lake Boulevard						
Between Armstrong Ave and Duane St	Residential	69.4	70.4	1.0	3	No
Between Armstrong Ave and Glendale Blvd	Residential	64.9	67.3	2.4	3	No
Between Duane St and Van Pelt Pl	Residential	70.1	71.0	0.9	3	No

NOTE: Construction traffic noise modeling worksheets are provided in Appendix J.

SOURCE: ESA, 2022

Mitigation Measures:

NOISE-1: Equipment Controls. Noise and vibration construction equipment whose specific location on the Project site may be flexible (e.g., compressors and generators) shall be located away from the nearest off-site noise-sensitive land uses (at least 100 feet away) if sufficient distance on the implementing Project site is available. If 100 feet is not feasible, the equipment shall have natural and/or manmade barriers (e.g., berms, intervening construction trailers, etc.) or a noise enclosure around the specific equipment location that screens the receptor from propagation of noise from such equipment. The barrier and/or enclosure shall block the line-of-site from the construction equipment to any similarly elevated noise-sensitive receptors. Noise enclosures shall provide sufficient space and gate access as needed for the safe operation of equipment, construction activities, material deliveries, and equipment access by construction personnel. A noise enclosure is not required if it would pose a safety risk or unreasonably prevent access to the construction equipment as deemed by the on-site construction manager such as in areas that have limited equipment maneuvering space or access. The contractor shall provide documentation verifying compliance with this measure.

NOISE-2: Mobile Noise Barriers. For construction areas within 500 feet of a residential land use or other sensitive receptor, the contractor shall install temporary noise barriers between the active construction area and the off-site noise-sensitive receptors. The mobile noise barriers shall achieve sound level reductions of a minimum of 10 dBA between the Project construction sites and the sensitive receptor location. These temporary noise barriers shall be used to block the line-of-sight between the construction equipment and similarly elevated ground-level noise-sensitive receptors. The barriers should allow for repositioning in order to block the noise at the sensitive receptor as construction activities move along the Project boundary. A noise barrier is not required if it would pose a safety risk or unreasonably prevent access to the construction area as deemed by the on-site construction manager such as in areas that have limited equipment maneuvering space or access. Any barrier capable of a reduction greater than 10 dBA would require greater height and heavier noise insulation which would make mobility of

the barrier infeasible and cause safety concerns related to barrier stability. Further, noise barriers would only be effective if they block the line-of-sight to sensitive receptors. The elevation of the surrounding area increases quickly and receptors within the vicinity of all identified sensitive receptors may still have a direct line-of-sight to the Project site and may not benefit from the use of a mobile noise barrier. The contractor shall provide documentation verifying compliance with this measure.

NOISE-3: Construction Equipment Noise Shielding and Muffling Devices.

Contractors shall ensure that all construction equipment, fixed or mobile, are equipped with properly operating and maintained noise shielding and muffling devices, consistent with manufacturers' standards. Prior to the issuance of demolition permits, certification of muffler installation shall be submitted to the applicable City for review. The construction contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturers' specifications. The primary source of noise from construction equipment originates from the intake and exhaust portions of the engine cycle. According to FHWA, use of adequate mufflers systems can achieve reductions in noise levels of up to 10 dBA.⁹ The contractor shall use muffler systems that provide a minimum reduction of 10 dBA compared to the same equipment without an installed muffler system, reducing maximum construction noise levels. Contractors shall include the muffler requirements in contract specifications. The contractor shall also keep documentation on-site prepared by a noise consultant verifying compliance with this measure. Mufflers providing a noise reduction greater than 10 dBA would be technically infeasible or cost prohibitive given the current best available technologies. Further, mufflers are only effective on equipment with internal combustion engines and would not result in noise reductions for hand tools and other light-duty construction equipment. Therefore, NOISE-3 incorporates muffling devices to the maximum extent feasible.

Significance Determination:

Significant and Unavoidable

While implementation of mitigation measures would reduce noise level and associated impacts at noise-sensitive receptors, noise levels could still exceed local jurisdiction significance thresholds when taking into account the potential worst-case overlap of the various construction phases as shown in Table 3.12-11 and Table 3.12-12, above. **Table 3.12-14** and **Table 3.12-15** show the construction noise levels at each receptor after the implementation of mitigation measures NOISE-1. All receptors would experience a 10 dBA noise level reduction from implementation of muffling devices under mitigation measure NOISE-3. Noise barriers are assumed to reduce noise levels by 10 dBA at receptors where a noise barrier would block the line-of-sight between the receptor and the Project site (e.g., R1 through R4, R6, and R8). However, the elevation of the surrounding residential areas increases moving away from the Project site and elevated receptors may still have a direct line-of-sight to the Project site and may not benefit from the installation of a noise barrier. Noise barriers are not capable of blocking noise at noise-sensitive receptors that are elevated above a construction work site, such as residential units that are above grade of the Project site. It is not feasible to install noise barriers with height sufficient block the line-of-sight

⁹ FHWA, *Special Report – Measurement, Prediction, and Mitigation*, Chapter 4 Mitigation, https://www.fhwa.dot.gov/Environment/noise/construction_noise/special_report/hcn04.cfm. Accessed July 16, 2021.

for all noise-sensitive receptors located at higher elevation residential units due to barrier foundation and wind load restrictions. Because there could be receptors elevated above the construction work sites throughout the Project area within the upper levels of a noise-sensitive receptor building (receptor locations R1 through R8), construction noise would represent a temporary noise increase in excess of standards for receptors R1, R2, R3, R4, R6, and R8 and would be a significant and unavoidable impact.

TABLE 3.12-14
ESTIMATE OF CONSTRUCTION NOISE LEVELS (L_{Eq}) WITH MITIGATION AT EXISTING OFF-SITE SENSITIVE RECEIVER LOCATIONS (FIRST PARK ZONE GROUPING)

Park Zone	Construction Noise Level (dBA L _{Eq})/Distance from Park Zone							
	R1	R2	R3	R4	R5	R6	R7	R8
Eucalyptus Grove and Ivanhoe Overlook	78.5 (45 ft)	78.5 (45 ft)	51.5 (1,600 ft)	51.5 (1,600 ft)	49.7 (2,500 ft)	50.0 (2,300 ft)	55.0 (900 ft)	76.2 (60 ft)
Habitat Islands	61.4 (220 ft)	58.0 (350 ft)	53.8 (575 ft)	60.7 (250 ft)	48.0 (1,200 ft)	43.5 (1,000 ft)	44.4 (800 ft)	54.4 (200 ft)
The Knoll and The Meadow (1 st Half)	55.8 (800 ft)	76.8 (60 ft)	76.8 (60 ft)	59.6 (750 ft)	48.3 (2,000 ft)	48.8 (2,000 ft)	48.6 (2,300 ft)	53.4 (1,400 ft)
Maximum Noise Level	78.5	78.5	76.8	60.7	49.7	50.0	55.0	76.2
Ambient Daytime Noise Level	57.1	59.4	56.2	65.6	50.6	61.3	57.9	61.1
Threshold (Ambient + 5 dbA)	62.1	64.4	61.2	70.6	55.6	66.3	62.9	66.1
Exceeds Threshold?	Yes	Yes	Yes	No	No	No	No	Yes

NOTE: **Bold values** denote an exceedance of the significance threshold. Construction noise modeling worksheets are provided in Appendix J.
 SOURCE: ESA 2022

TABLE 3.12-15
ESTIMATE OF CONSTRUCTION NOISE LEVELS (L_{Eq}) WITHOUT MITIGATION AT EXISTING OFF-SITE SENSITIVE RECEIVER LOCATIONS (SECOND PARK ZONE GROUPING)

Park Zone	Construction Noise Level (dBA L _{Eq})/Distance from Park Zone							
	R1	R2	R3	R4	R5	R6	R7	R8
East and West Narrows	46.5 (2,200 ft)	45.8 (2,700 ft)	54.7 (730 ft)	68.5 (130 ft)	52.8 (1,000 ft)	55.0 (700 ft)	55.1 (700 ft)	74.6 (60 ft)
Ivanhoe Spillway	75.2 (50 ft)	75.2 (50 ft)	49.3 (1,300 ft)	44.3 (2,500 ft)	40.3 (4,000 ft)	41.5 (3,500 ft)	46.1 (2,000 ft)	52.5 (900 ft)
South Valley	41.2 (3,900 ft)	40.9 (4,100 ft)	45.7 (2,300 ft)	2.0 (1,000 ft)	55.5 (675 ft)	74.9 (50 ft)	50.3 (1,300 ft)	46.9 (2,000 ft)
The Meadow (2 nd Half)	48.2 (2,200 ft)	50.9 (1,600 ft)	76.9 (60 ft)	59.8 (500 ft)	48.8 (2,000 ft)	49.1 (2,000 ft)	48.9 (2,000 ft)	53.0 (1,200 ft)
Off-site Improvements - Combined	45.4	47.5	77.9	77.9	55.3	79.0	46.2	47.0
Restriping West Silver Lake Drive	30.6 (3,900 ft)	29.9 (4,200 ft)	33.3 (2,850 ft)	38.2 (1,600 ft)	38.2 (1,600 ft)	72.3 (25 ft)	38.9 (1,475 ft)	35.1 (2,300 ft)
Restriping Silver Lake Boulevard	36.1 (2,050 ft)	38.3 (1,600 ft)	72.7 (25 ft)	72.7 (25 ft)	46.3 (625 ft)	72.7 (25 ft)	36.1 (2,050 ft)	37.6 (1,725 ft)

Park Zone	Construction Noise Level (dBA L _{eq})/Distance from Park Zone							
	R1	R2	R3	R4	R5	R6	R7	R8
Sidewalk Construction along Silver Lake Boulevard	44.7 (2,050 ft)	46.8 (1,600 ft)	76.3 (25 ft)	76.3 (25 ft)	54.6 (625 ft)	76.3 (25 ft)	44.7 (2,050 ft)	46.2 (1,725 ft)
Maximum Noise Level	75.2	75.2	77.9	77.9	55.5	79.0	55.1	74.6
Ambient Daytime Noise Level	57.1	59.4	56.2	65.6	50.6	61.3	57.9	61.1
Threshold (Ambient + 5 dbA)	62.1	64.4	61.2	70.6	55.6	66.3	62.9	66.1
Exceeds Threshold?	Yes	Yes	Yes	Yes	No	Yes	No	Yes

NOTE: **Bold values** denote an exceedance of the significance threshold. Construction noise modeling worksheets are provided in Appendix J.

SOURCE: ESA 2022

Operation

Operational Traffic Noise Compared to Existing Traffic Baseline Conditions

Existing roadway noise levels were calculated along various arterial segments adjacent to the Project site. Roadway noise attributable to Project development was calculated using the traffic noise model previously described and was compared to baseline noise levels that would occur under the “No Project” condition.

Project impacts are shown in **Table 3.12-16**. As indicated, the maximum increase in Project-related traffic noise levels over existing traffic noise levels would be 0.3 dBA CNEL, which would occur along Silver Lake Drive, north of Tesla Avenue. This increase in sound level would be below the 3 dBA increase threshold, and the increase in sound level would be lower at the remaining roadway segments analyzed. The Project-related traffic noise increases would be less than significant, and no mitigation measures are required.

Operational Traffic Noise Compared to Future (2030) Traffic Conditions

Future roadway noise levels were also calculated along various arterial segments adjacent to the Project as compared to 2021 baseline traffic noise levels that would occur with implementation of the Project. Project impacts are shown in **Table 3.12-17**. As indicated, the maximum increase in Project-related traffic noise levels over existing traffic noise levels would be 0.3 dBA CNEL, which would occur along Silver Lake Drive, north of Tesla Avenue. This increase in sound level would be below the 3 dBA increase threshold, and the increase in sound level would be lower at the remaining roadway segments analyzed. The Project-related traffic noise increases would be less than significant, and no mitigation measures are required.

**TABLE 3.12-16
 OFF-SITE TRAFFIC NOISE IMPACTS – EXISTING WITH PROJECT CONDITIONS**

Roadway Segment	Existing Land Uses Located along Roadway Segment	Calculated Traffic Noise Levels along adjacent Land Uses (dBA CNEL)				
		Existing (A)	Existing with Project (B)	Project Increment (B-A)	Threshold	Exceed Threshold?
Armstrong Boulevard						
Between Lakewood Ave and Silver Lake Blvd	Residential	60.2	60.2	0.1	3	No
North of Lakewood Ave	Residential	57.7	57.7	0.0	3	No
Duane Street						
East of Silver Lake Blvd	Residential	61.1	61.1	0.0	3	No
Glendale Boulevard						
North of Silver Lake Blvd	Residential/Commercial	71.6	71.7	0.1	3	No
South of Silver Lake Blvd	Residential/Commercial	67.9	68.0	0.1	3	No
Silver Lake Boulevard						
Between Armstrong Ave and Duane St	Residential	69.4	69.4	0.1	3	No
Between Armstrong Ave and Glendale Blvd	Residential	64.9	64.9	0.1	3	No
Between Duane St and Van Pelt Pl	Residential	70.1	70.1	0.0	3	No
East of Glendale Blvd	Residential/Commercial	60.7	60.7	0.0	3	No
South of Van Pelt Pl	Residential/Commercial	70.0	70.0	0.0	3	No
Silver Lake Drive						
Between Tesla Ave and Van Pelt Pl	Residential	66.2	66.3	0.1	3	No
North of Tesla Ave	Residential	59.8	60.0	0.3	3	No
Tesla Avenue						
Between Silver Lake Dr and Armstrong Ave	Residential	54.7	54.9	0.2	3	No
West of Silver Lake Dr	Residential	47.7	47.7	0.0	3	No

NOTE: Operational traffic noise modeling worksheets are provided in Exhibit C.

SOURCE: ESA, 2022

**TABLE 3.12-17
OFF-SITE TRAFFIC NOISE IMPACTS – FUTURE (2030) WITH PROJECT CONDITIONS**

Roadway Segment	Existing Land Uses Located along Roadway Segment	Calculated Traffic Noise Levels along adjacent Land Uses (dBA CNEL)				
		Future (2030) (A)	Future (2030) with Project (B)	Project Increment (B-A)	Threshold	Exceed Threshold?
Armstrong Boulevard						
Between Lakewood Ave and Silver Lake Blvd	Residential	60.3	60.4	0.1	3	No
North of Lakewood Ave	Residential	57.9	57.9	0.0	3	No
Duane Street						
East of Silver Lake Blvd	Residential	61.3	61.3	0.0	3	No
Glendale Boulevard						
North of Silver Lake Blvd	Residential/Commercial	71.7	71.8	0.1	3	No
South of Silver Lake Blvd	Residential/Commercial	68.0	68.1	0.1	3	No
Silver Lake Boulevard						
Between Armstrong Ave and Duane St	Residential	69.5	69.6	0.1	77.9	No
Between Armstrong Ave and Glendale Blvd	Residential	65.0	65.0	0.1	73.8	No
Between Duane St and Van Pelt PI	Residential	70.2	70.2	0.0	78.5	No
East of Glendale Blvd	Residential/Commercial	60.8	60.8	0.0	69.2	No
South of Van Pelt PI	Residential/Commercial	70.1	70.1	0.0	78.5	No
Silver Lake Drive						
Between Tesla Ave and Van Pelt PI	Residential	66.3	66.4	0.1	3	No
North of Tesla Ave	Residential	59.9	60.2	0.3	3	No
Tesla Avenue						
Between Silver Lake Dr and Armstrong Ave	Residential	54.9	55.1	0.2	3	No
West of Silver Lake Dr	Residential	48.2	48.2	0.0	3	No

NOTE: Operational traffic noise modeling worksheets are provided in Appendix J.

SOURCE: ESA, 2022

Fixed Mechanical Equipment

The operation of mechanical equipment typical of developments like the Project, such as air conditioners, fans, and related equipment, may generate audible noise levels. The Project’s mechanical equipment would be located on rooftops or within buildings and would be shielded from nearby land uses to attenuate the noise they would generate and avoid conflicts with adjacent uses. Specifically, mechanical equipment would be located at the Multi-Purpose Facility and Recreation Center in the South Valley and at the Education Center in the Knoll. In addition, all mechanical equipment would be designed with appropriate noise control devices, such as sound attenuators, acoustics louvers, sound enclosures, and/or sound screen/parapet walls, to comply with the noise limitation requirements provided in Section 112.02 of the LAMC, which prohibits the noise from such equipment from causing an increase in the ambient noise level by more than five decibels. **Table 3.12-18** shows the noise levels from HVAC equipment combined

with ambient noise levels. As presented, HVAC equipment would not contribute to existing noise levels at any of the sensitive receptor locations, would not exceed the City’s thresholds of significance, and impacts would be less than significant.

**TABLE 3.12-18
 ON-SITE FIXED MECHANICAL EQUIPMENT NOISE LEVELS**

Modeled Receptor	Corresponding Sensitive Receptor	Noise Level (dBA L _{eq})			
		Fixed Mechanical Equipment	Ambient	Combined	Difference
A	R1	3.2	55.9	55.9	0.0
B	R2	3.4	59.3	59.3	0.0
C	R3	0.8	56.2	56.2	0.0
D	R3	6.2	56.2	56.2	0.0
E	R3	7.3	56.2	56.2	0.0
F	R3	9.0	56.2	56.2	0.0
G	R4	10.8	65.1	65.1	0.0
H	R4	15.4	65.1	65.1	0.0
I	R5	21.5	51.3	51.3	0.0
J	R6	33.0	61.0	61.0	0.0
K	R8	18.9	61.4	61.4	0.0
L	R8	-0.3	61.4	61.4	0.0
M	R7	-0.5	56.5	56.5	0.0
N	R8	2.8	61.4	61.4	0.0

SOURCE: ESA, 2022.

Loading Activities and Refuse Service Areas Noise

The Project require typical weekly refuse collection services with refuse trucks accessing the Project site from Armstrong Avenue at the northeast of the Project site boundary. The Project would not include an exterior loading dock. Loading activities would be minimal given the relatively small scale of the Project’s land uses; thus, a dedicated loading dock is not needed. Delivery truck idling that may periodically occur from loading would be restricted to no more than 5 consecutive minutes in the loading area pursuant to State regulation (Title 13 California Code of Regulations [CCR], Section 2485). Pursuant to Title 13 California Code of Regulations [CCR], Section 2485, signs would be posted in delivery loading areas specifying this idling restriction. Any periodic loading and refuse collection would occur at the Multi-Purpose Facility and Recreation Center in the South Valley. Refuse collection would be similar to activities already occurring at the existing recreation center and would occur in the same location as the existing collection. Therefore, refuse collection would not cause an increase in noise levels over existing conditions and impacts would be less than significant.

Parking Noise

The proposed Project would include the addition of parking along 2 different areas surrounding the SLRC. One area would include the addition of a parking lane on the west side of Silver Lake

Boulevard, adjacent to the SLRC between Armstrong Avenue and Duane Street for a length of approximately 3,000 feet. The proposed parking lane would provide approximately 135 additional on-street parking spaces. In addition, the proposed Project would include the addition of 90-degree parking along the north side of West Silver Lake Drive, east of Redesdale Avenue along the park's grassy area. Currently, there are 10 parallel parking spaces along this segment of West Silver Lake Drive. By converting to 90-degree parking, a total of approximately 25 parking spaces would be added, resulting in a net increase in parking of 15 spaces at this location. Two of the new parking spaces would be dedicated to electric vehicle (EV) parking. Additionally, offsite improvements would occur along Silver Lake Boulevard, between Armstrong Avenue and Duane Street for a length of approximately 3,000 feet. Currently, there is only parking along the eastern side of Silver Lake Boulevard and the proposed design would add approximately 135 new parking spaces to the western side of the road.

Noise from vehicles utilizing the new on-street parking is included within the operational traffic noise assessments discussed above and provided in Table 3.12-16 and Table 3.12-17. A separate analysis is not required.

Increased Occupancy in Outdoor Spaces

As discussed in Chapter II, *Project Description*, of the Draft EIR, the Project would incorporate publicly accessible open space and amenities, available to the general public. Special events, including outdoor concerts, movie nights, or luncheons could potentially be held at the outdoor open spaces and could require amplified sound.¹⁰

Listed below are the Project's proposed outdoor uses and the assumptions applied to the analysis. The potential for each space to be used during nighttime hours (between the hours of 10:00 P.M. and 7:00 A.M.) has been noted below. In addition to the active uses for specified spaces described below, these outdoor areas would support a variety of passive activities. **Table 3.12-19** shows the noise contribution from increased occupancy at each park zone to ambient noise levels at each sensitive receptor. As shown, the increased occupancy at the park zones would contribute a maximum of 0.1 dBA L_{eq} to sensitive receptors, would not exceed the City's thresholds of significance, and impacts would be less than significant.

The Meadow

The Meadow, which is a publicly accessible open space with lawn and shade trees. It is anticipated that most use of this area will be during the hours of 5:00 A.M. to 10:00 P.M. It is not anticipated that any people would congregate in the area during nighttime hours. The Meadow would be closest to sensitive receptor location R3. The area is approximately 7.5 acres, and completion of the Project would accommodate an increase of an estimated 130 people. Amplified noise would be permitted only during special events and is discussed in further detail below.

¹⁰ Under the Project, special events would occur within the outdoor spaces analyzed based on occupancy herein. Therefore, noise levels from special events under the Project have been encompassed in the analysis of individual open space areas.

**TABLE 3.12-19
 INCREASED OCCUPANCY NOISE LEVELS**

Modeled Receptor	Corresponding Sensitive Receptor	Noise Level (dBA L _{eq})									
		The Knoll	The Meadow	The East Narrows	The West Narrows	The South Valley	The Eucalyptus Grove	Silverlake Perimeter	Ambient Noise Level	Combined Noise Level	Difference
A	R1	11.8	14.0	9.6	12.5	1.9	18.6	21.5	55.9	55.9	0.0
B	R2	11.4	12.4	6.2	17.1	3.3	20.0	22.4	59.3	59.3	0.0
C	R3	29.0	30.6	15.2	12.2	3.0	-0.8	16.4	56.2	56.2	0.0
D	R3	29.7	31.4	15.5	13.3	5.8	-0.8	17.1	56.2	56.2	0.0
E	R3	25.9	36.6	12.9	15.7	7.3	1.2	17.6	56.2	56.3	0.1
F	R3	12.9	39.9	18.8	20.8	9.2	14.6	22.4	56.2	56.3	0.1
G	R4	10.6	39.0	29.9	24.7	11.1	16.9	28.0	65.1	65.1	0.0
H	R4	7.4	27.2	39.9	28.9	14.8	16.1	37.7	65.1	65.1	0.0
I	R5	-2.9	10.7	19.6	24.0	25.8	9.6	20.5	51.3	51.3	0.0
J	R6	-3.2	6.6	18.0	19.5	40.2	0.5	16.8	61.0	61.0	0.0
K	R8	7.1	26.5	24.1	43.1	16.0	15.0	34.9	61.4	61.5	0.1
L	R8	10.0	25.9	19.8	40.8	6.1	20.0	34.4	61.4	61.4	0.0
M	R7	6.7	21.3	14.7	26.8	1.0	15.0	23.2	56.5	56.5	0.0
N	R8	11.0	26.2	18.5	38.9	7.7	30.3	34.0	61.4	61.4	0.0

SOURCE: ESA, 2022.

The Knoll

The Knoll would include nature trails connecting to the Meadow, Armstrong Avenue, and an approximately 1,200-square-foot shade pavilion and seating area that are integrated into the topography of the Knoll and oriented toward the water. The shade pavilion/seating area would be available to be used for educational purposes to host small groups of students. The Knoll would also include the Education Center, which would have small indoor and outdoor teaching and assembly spaces. It is anticipated that most use of this area will be during the hours of 5:00 A.M. to 10:00 P.M. The area is approximately 7.4 acres, and completion of the Project would accommodate an increase of an estimated 25 people. No amplified noise will be permitted in this area.

Ivanhoe Overlook

Ivanhoe Overlook would consist of the existing Ivanhoe Reservoir, dam, and proposed walking paths. The proposed design of the Ivanhoe Overlook zone would be focused along the northwestern corner of the reservoir and would include a new observation deck extending out over the new wetland terraces. The proposed Project would implement small footpaths through the proposed wetland terraces to observational platforms that would be used for ongoing monitoring and testing of habitat.

An approximately 1,200-square-foot shade pavilion would be added to the northwestern perimeter of the reservoir and protrude over the existing reservoir edge to provide a sheltered space for outdoor education or community gathering. The shade pavilion/outdoor education classroom would include signage to educate visitors about the operations of the wetlands. It is anticipated that most use of this area will be during the hours of 5:00 A.M. to 10:00 P.M. The area is approximately 5.7 acres, and completion of the Project would not result in an increase in people. No amplified noise will be permitted in this area.

The Eucalyptus Grove

The Eucalyptus Grove includes plans replant this zone over time to enhance and restore its upland habitat value. This area would include walkways throughout the Eucalyptus Grove, which would incorporate low-lying habitat fencing to protect habitat areas. The Eucalyptus Grove would implement a large overlook that extends out over the habitat terraces with posted educational signage. It is anticipated that most use of this area will be during the hours of 5:00 A.M. to 10:00 P.M. The area is approximately 7.3 acres, and completion of the Project would accommodate an increase of an estimated 20 people. No amplified noise will be permitted in this area.

East and West Narrows

The proposed East and West Narrows zone would run along the south edges of the Silver Lake Reservoir embankment. The primary feature proposed for these linear corridors would be the implementation of additional promenades, which would include overlooks and seating terraces. Where the promenade widens along the East Narrows, a fitness circuit would be implemented. In addition, the proposed Project would include an elevated overlook bridge. The West Narrows would include seating terraces embedded into the embankment. It is anticipated that most use of this area will be during the hours of 5:00 A.M. to 10:00 P.M. The area is approximately 6.4 acres,

and completion of the Project would accommodate an increase of an estimated 45 people. No amplified noise will be permitted in this area.

The South Valley

The South Valley would include a new Multi-Purpose Facility and would update the existing Recreation Center on the corner of Van Pelt Place and Silver Lake Boulevard. Minor reconfiguration improvements to the interior of the existing Recreation Center would be implemented to include a mezzanine, to provide additional office and storage space, and other improvements to create a more useable space. The existing dog play area would be expanded and renovated to include two separate spaces for both small and large dogs and would encompass approximately 56,400 sf of space. It is anticipated that most use of this area will be during the hours of 5:00 A.M. to 10:00 P.M. The area is approximately 4.2 acres, and completion of the Project would accommodate an increase of an estimated 85 people. No amplified noise will be permitted in this area.

Habitat Islands

Two floating habitat islands would be added to the Ivanhoe Reservoir, just southeast of the proposed wetland terraces and footpaths. Up to ten floating islands would be added to the Silver Lake Reservoir near the Eucalyptus Grove and the Meadow. Floating islands would vary in size and would add shallow wading areas to provide habitat for waterfowl. Habitat Islands would not be accessible to visitors and are not analyzed as a contributor to open space noise for the Project.

Special Events

Special events such as outdoor concerts, movie nights, or luncheons could potentially be held at the outdoor open spaces and could require amplified sound. Under the proposed Project, special events would occur within The Meadow analyzed above based on provided maximum occupancy levels of 600 people. Noise levels from special events under the proposed Project have been encompassed in the analyses of the individual open space areas and are shown in **Table 3.12-20**. **Figure 3.12-6** shows the modeled speaker locations.¹¹

Composite Noise Level Impacts from Project Operations

As shown in **Table 3.12-21**, the combined noise levels from mechanical equipment, loading activities and refuse, and open spaces without amplified music would not exceed the significance threshold of 5 dBA over ambient noise levels at any of the receptor locations. As shown in **Table 3.12-22**, the combined noise levels from mechanical equipment, loading activities and refuse, and open spaces with amplified music from special events would exceed the significance threshold of 5 dBA over ambient noise levels at receptor locations R3 and R4. Therefore, impacts from on-site operational noise would be less than significant without amplified music and would be potentially significant with amplified music from special events.

¹¹ Receptor areas R1 through R8 are an approximation of areas with similar ambient noise environments that coincide with noise measurements M1 through M8.

**TABLE 3.12-20
SPECIAL EVENT NOISE LEVELS**

Modeled Receptor	Corresponding Sensitive Receptor	Ambient Noise Level (dBA L _{eq})	Combined Noise Level (dBA L _{eq})							
			Amplified Speaker, on bluff facing east	Amplified Speaker, on bluff facing west	Amplified Speaker, on bluff facing south	Amplified Speaker, on bluff facing north	Amplified Speaker in east Meadows facing west	Amplified Speaker in west Meadows facing east	Amplified Speaker in south Meadows facing north	Amplified Speaker in north Meadows facing south
A	R1	55.9	56.1	57.0	56.0	58.9	56.1	55.9	56.3	55.9
B	R2	59.3	59.3	59.3	59.3	59.8	59.3	59.3	59.6	59.3
C	R3	56.2	58.0	56.9	57.1	65.6	58.1	56.3	63.4	58.3
D	R3	56.2	59.5	57.2	57.7	66.6	58.2	57.3	59.5	61.2
E	R3	56.2	58.8	56.9	56.6	63.4	58.5	60.8	60.3	67.4
F	R3	56.2	72.5	60.4	62.8	59.2	64.8	63.0	64.4	68.7
G	R4	65.1	66.6	65.4	70.6	65.4	65.6	65.3	68.9	68.3
H	R4	65.1	65.2	65.3	67.6	65.2	65.3	65.2	65.1	66.3
I	R5	51.3	51.3	51.3	52.4	51.3	51.4	51.4	51.3	52.2
J	R6	61.0	61.0	61.0	61.1	61.0	61.0	61.0	61.0	61.1
K	R8	61.4	61.6	63.0	62.8	61.5	62.7	61.6	61.6	62.4
L	R8	61.4	61.6	64.8	61.9	61.7	63.7	61.6	61.6	61.5
M	R7	56.5	56.7	60.0	56.9	56.8	59.1	56.7	56.7	56.6
N	R8	61.4	61.5	65.3	61.6	61.9	64.1	61.6	61.7	61.4

NOTE: **Bold** values and shaded cells indicate an increase of 5 dBA or greater over ambient noise levels.

SOURCE: ESA, 2022.



SOURCE: Nearmap, 2021; ESA, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 3.12-6
Special Event Speaker Locations

**TABLE 3.12-21
 OPERATIONAL ON-SITE NOISE LEVELS WITHOUT AMPLIFIED SPEAKERS**

Modeled Receptor	Corresponding Sensitive Receptor	Daytime Ambient Noise Levels (dBA Leq)	Noise Source (dBA L _{eq})								Total Composite Noise (dBA Leq)	Total Sound Level Increase (Composite – Ambient)	Significant Impact?
			Park Zone Occupancy Increase										
			HVAC	The Knoll	The Meadow	East Narrows	West Narrows	The South Valley	The Eucalyptus Grove	Silver Lake Perimeter			
A	R1	55.9	3.2	11.8	14.0	9.6	12.5	1.9	18.6	21.5	55.9	0.0	No
B	R2	59.3	3.4	11.4	12.4	6.2	17.1	3.3	20.0	22.4	59.3	0.0	No
C	R3	56.2	0.8	29.0	30.6	15.2	12.2	3.0	-0.8	16.4	56.2	0.0	No
D	R3	56.2	6.2	29.7	31.4	15.5	13.3	5.8	-0.8	17.1	56.2	0.0	No
E	R3	56.2	7.3	25.9	36.6	12.9	15.7	7.3	1.2	17.6	56.3	0.1	No
F	R3	56.2	9.0	12.9	39.9	18.8	20.8	9.2	14.6	22.4	56.3	0.1	No
G	R4	65.1	10.8	10.6	39.0	29.9	24.7	11.1	16.9	28.0	65.1	0.0	No
H	R4	65.1	15.4	7.4	27.2	39.9	28.9	14.8	16.1	37.7	65.1	0.0	No
I	R5	51.3	21.5	-2.9	10.7	19.6	24.0	25.8	9.6	20.5	51.3	0.0	No
J	R6	61.0	33.0	-3.2	6.6	18.0	19.5	40.2	0.5	16.8	61.0	0.0	No
K	R8	61.4	18.9	7.1	26.5	24.1	43.1	16.0	15.0	34.9	61.5	0.1	No
L	R8	61.4	-0.3	10.0	25.9	19.8	40.8	6.1	20.0	34.4	61.4	0.0	No
M	R7	56.5	-0.5	6.7	21.3	14.7	26.8	1.0	15.0	23.2	56.5	0.0	No
N	R8	61.4	2.8	11.0	26.2	18.5	38.9	7.7	30.3	34.0	61.4	0.0	No

NOTE: On-site operational noise modeling worksheets are provided in Appendix J.

SOURCE: ESA, 2022.

**TABLE 3.12-22
 OPERATIONAL ON-SITE NOISE LEVELS WITH AMPLIFIED SPEAKERS**

Modeled Receptor	Corresponding Sensitive Receptor	Daytime Ambient Noise Levels (dBA Leq)	Noise Source (dBA L _{eq})									Total Composite Noise (dBA Leq)	Total Sound Level Increase (Composite + Ambient – Ambient)	Significant Impact?
			HVAC	Amplified Speakers ^a	Park Zone Occupancy Increase									
					The Knoll	The Meadow	East Narrows	West Narrows	The South Valley	The Eucalyptus Grove	Silver Lake Perimeter			
A	R1	55.9	3.2	55.9	11.8	14	9.6	12.5	1.9	18.6	21.5	58.9	3.0	No
B	R2	59.3	3.4	49.8	11.4	12.4	6.2	17.1	3.3	20	22.4	59.8	0.5	No
C	R3	56.2	0.8	65.1	29	30.6	15.2	12.2	3	-0.8	16.4	65.6	9.4	Yes
D	R3	56.2	6.2	66.2	29.7	31.4	15.5	13.3	5.8	-0.8	17.1	66.6	10.4	Yes
E	R3	56.2	7.3	67.1	25.9	36.6	12.9	15.7	7.3	1.2	17.6	67.4	11.2	Yes
F	R3	56.2	9.0	72.4	12.9	39.9	18.8	20.8	9.2	14.6	22.4	72.5	16.3	Yes
G	R4	65.1	10.8	69.2	10.6	39	29.9	24.7	11.1	16.9	28	70.6	5.5	Yes
H	R4	65.1	15.4	63.9	7.4	27.2	39.9	28.9	14.8	16.1	37.7	67.6	2.5	No
I	R5	51.3	21.5	45.9	-2.9	10.7	19.6	24	25.8	9.6	20.5	52.4	1.1	No
J	R6	61.0	33.0	44.5	-3.2	6.6	18	19.5	40.2	0.5	16.8	61.1	0.1	No
K	R8	61.4	18.9	58	7.1	26.5	24.1	43.1	16	15	34.9	63.1	1.7	No
L	R8	61.4	-0.3	62.1	10	25.9	19.8	40.8	6.1	20	34.4	64.8	3.4	No
M	R7	56.5	-0.5	57.4	6.7	21.3	14.7	26.8	1	15	23.2	60.0	3.5	No
N	R8	61.4	2.8	63.1	11	26.2	18.5	38.9	7.7	30.3	34	65.4	4.0	No

NOTE: Bold values and shaded cells indicate an increase of 5 dBA or greater over ambient noise levels. On-site operational noise modeling worksheets are provided in Appendix J.

^a Amplified speaker noise levels presented are the maximum noise level from each scenario at each receptor location

SOURCE: ESA, 2022.

Mitigation Measures:

NOISE-4: Special Event Permit - Amplified Speaker System. The use of an amplified speaker system in the Meadow shall avoid facing north or south to limit noise impacts at the nearby sensitive receptors, as feasible. Special event permits shall be issued prior to any special event with provisions related to speaker directionality, hours of operations, and noise level restrictions. Further, temporary noise barriers, blankets, or baffles may be required on either side of and behind speakers to limit the amount of excess noise reaching nearby sensitive receptors.

Significance Determination:

Significant and Unavoidable

While Mitigation Measure NOISE-4, Special Event Permit – Amplified Sound would require a special event permit and establish guidelines for speaker placement and directionality, operating hours, and the use of temporary noise barriers, blankets, or baffles may be required on either side of and behind speakers to limit the amount of excess noise reaching nearby sensitive receptors, noise from the amplified speaker system for special events may still temporarily exceed the significance threshold at sensitive receptors near to the amplified speaker system at location R3. Because special events may include outdoor concerts, movie nights, luncheons, or other similar types of events that draw members of the community, it may not be feasible to reduce the volume of the amplified speaker system to a level below the significance threshold while still retaining a sufficient volume level for people in the Meadow park zone to adequately hear and enjoy the special event. Therefore, while Mitigation Measure NOISE-4 would minimize sound from the amplified speaker systems for special events to the extent feasible, noise impacts would be significant and unavoidable even after mitigation is applied.

Groundborne Vibration

Impact 3.12-2: Would the project result in generation of excessive groundborne vibration or groundborne noise?

Construction

Structural Damage – On-Site Equipment

Construction activities at the Project site have the potential to generate relatively low levels of groundborne vibration, as the operation of heavy equipment (e.g., vibratory pile driver, backhoe, dozer, excavators, drill rig, loader, scraper, and haul trucks) generates vibrations that propagate through the ground and diminish in intensity with distance from the source. Installation of piles for shoring and foundation would utilize drilling methods to minimize vibration generation.

Project construction would generate varying degrees of ground vibration, depending on the construction procedures and the construction equipment used. The PPV vibration velocities for several types of construction equipment measured at increasing distances are identified in **Table 3.12-23**. Table 3.12-23 provides the estimated vibration velocity levels at the nearest off-site structures to the Project site, which include V1 (Single-family residential uses to the north, west, and northwest of the Project site near the corner of West Silver Lake Drive and Tesla Avenue), V2 (Single-family residential uses to the north, east, and northeast of the Project site at the corner of Armstrong Avenue and Tesla Avenue), V3 (Neighborhood Nursery School at the

corner of Armstrong Avenue and Tesla Avenue), V4 (Single-family residential uses to the east of the Project site along Silver Lake Boulevard, including the Neutra House), V5 (Single-family residential uses to the southeast of the Project site along Silver Lake Boulevard), V6 (Single-family residential uses to the south of the Project site along Silver Lake Boulevard), V7 (Single-family residential uses to the west of the Project site along West Silver Lake Drive), and V8 (South Outlet Chlorination Station and Meter House north of the existing Recreation Center). Note that receptors V1, V2, V5, V7, and V8 are conservatively assumed to be historic resources and use a significance threshold of 0.12 in/sec PPV. These receptors are assumed to be located within the Neutra Residential Historic District (V5), the Silver Lake Residential Historic District (V1, V2, and V7), or are historic resources located within the Project site's South Valley (V8) (FTA 2018). All other buildings in the area would be located at greater distances to the Project site and would experience lower vibration velocities from on-site construction activity.

**TABLE 3.12-23
 CONSTRUCTION VIBRATION IMPACTS – BUILDING DAMAGE**

Off-Site Structure ^a	Distance to Source	Estimated Vibration Velocity Levels at the Nearest Off-Site Structures from the Source of Vibration (in/sec PPV) ^b					Significance Threshold ^c	Exceed Significance Thresholds?
		Off-Road Construction Equipment						
		Large Bulldozer	Drill Rig	Loaded Trucks	Jack-hammer	Small Bulldozer		
<i>FTA Reference Vibration Levels</i>	25 feet	0.089	0.089	0.076	0.035	0.003	—	—
V1	60 feet	0.024	0.024	0.020	0.009	0.001	0.12	No
V2	45 feet	0.037	0.037	0.031	0.014	0.001	0.12	No
V3	100 feet	0.011	0.011	0.010	0.004	0.0004	0.2	No
V4	60 feet	0.024	0.024	0.020	0.009	0.001	0.2	No
V5	60 feet	0.024	0.024	0.020	0.009	0.001	0.12	No
V6	60 feet	0.024	0.024	0.020	0.009	0.001	0.2	No
V7	60 feet	0.024	0.024	0.020	0.009	0.001	0.12	No
V8	15 feet	0.191	0.191	0.164	0.075	0.006	0.12	Yes

NOTE(S):

^a Represents off-site building structures located nearest to the Project site to the north, south, east, and west.

^b Vibration level calculated based on FTA reference vibration level at 25-foot reference distance.

^c FTA criteria for historic structures (0.12 in/sec PPV) and non-engineered timber building structures (0.2 in/sec PPV)

SOURCE(S): FTA, Transit Noise and Vibration Impact Assessment; ESA, 2022. Groundborne vibration modeling worksheets are provided in Exhibit D of this Technical Report.

As indicated in Table 3.12-23, the estimated vibration velocity levels from construction equipment would not exceed the significance thresholds of 0.12 in/sec PPV and 0.2 in/sec PPV at any of the sensitive receptors. Further, the existing South Outlet Chlorination Station and Meter House located on the southern edge of the Project site are considered historic resources and Category IV building (buildings extremely susceptible to vibration damage) for potential

structural damage impacts. South Valley construction activities, including construction of the new multi-purpose building, would occur in the vicinity of the historic resources. Potential vibration-generating equipment are shown in Table 3.12-23. Vibratory rollers would not be used in the immediate vicinity of the historic resources. However, other equipment, such as dozers or loaded trucks, may be used within approximately 15 feet of the buildings and vibration levels would be up to approximately 0.191 inches per second PPV, which would exceed the significance threshold of 0.12 inches per second PPV. Therefore, vibration impacts associated with structural damage from on-site construction activities would be potentially significant at receptor V8 prior to implementation of mitigation measures.

Structural Damage – Off-Site Vehicles

On-road rubber-tired construction trucks would travel to and from the Project site along the local roadway network. According to the FTA's *Transit Noise and Vibration Impact Assessment*, haul truck trips on roadways rarely create vibration levels that exceed 70 VdB, which would be equivalent to 0.012 in/sec PPV, would not exceed the significance threshold for building damage of 0.50 in/sec PPV (FTA 2018). Additionally, unusually uneven and rough road conditions could increase vibration levels by approximately 5 VdB (FTA 2018). There is no substantial evidence that roadways in the Project vicinity are unusually uneven or rough to the point that vibrations from a typical heavy-duty truck would reach 75 VdB. Therefore, construction trucks would not exceed threshold of 0.20 in/sec PPV. Therefore, the potential vibration impacts for building damage due to off-site haul trucks would be less than significant, and no mitigation measures would be required.

Human Annoyance – On-Site Equipment

With respect to human annoyance, the FTA's *Transit Noise and Vibration Impact Assessment* identifies residential buildings as sensitive receptors. As discussed above, per FTA guidance, the significance criteria for human annoyance is 72 VdB for sensitive uses, including residential uses, assuming a minimum of 70 vibration events occurring during a typical construction day.

Table 3.12-24 provides the estimated vibration levels at the off-site sensitive uses due to construction equipment operation and compares the estimated vibration levels to the specified significance criteria for human annoyance. As indicated in Table 3.12-24, the estimated groundborne vibration levels from off-road construction equipment would exceed the significance criteria for human annoyance at the adjacent sensitive receptor locations V1, V2, and V4 through V7. Therefore, potential vibration impacts with respect to human annoyance that would result from temporary vibration from off-road construction equipment would be significant prior to the implementation of mitigation measures at sensitive receptor location V1, V2, and V4 through V7.

**TABLE 3.12-24
 CONSTRUCTION VIBRATION IMPACTS – HUMAN ANNOYANCE**

Estimated Vibration Velocity Levels at the Nearest Off-Site Structures from the Project Construction Equipment (VdB) ^b								
Off-Road Construction Equipment								
Off-Site Structures	Distance to Source	Large Bulldozer	Drill Rig	Loaded Trucks	Jack-hammer	Small Bulldozer	Significance Threshold	Exceed Significance Thresholds?
<i>FTA Reference Vibration Levels</i>	25	86.9	86.9	85.6	78.8	57.5	—	—
V1	60 feet	75.5	68.9	74.2	67.4	46.1	72	Yes
V2	45 feet	79.3	68.9	77.9	71.2	49.8	72	Yes
V4	60 feet	75.5	68.9	74.2	67.4	46.1	72	Yes
V5	60 feet	75.5	68.9	74.2	67.4	46.1	72	Yes
V6	60 feet	75.5	68.9	74.2	67.4	46.1	72	Yes
V7	60 feet	75.5	68.9	74.2	67.4	46.1	72	Yes

NOTE(S): **Bold values** indicate exceedance of standards.

^a Represents off-site building structures located nearest to the Project site to the north, south, east, and west (V1, V2, and V4 through V7 represent residential uses). V3 is not a receptor where people would normally sleep and is not analyzed for human annoyance.

^b Vibration level calculated based on FTA reference vibration level at 25-foot reference distance.

^c Drill rigs used for piles would be used ear the edge of the reservoir boundary and further from sensitive receptors. Drill rigs are assumed to be at a distance of 100 feet from each receptor.

^d FTA criteria for residences or buildings where people normally sleep (72 VdB).

^e V3 was not analyzed because it does not represent a sensitive use for human annoyance under FTA criteria.

SOURCE(S): FTA, *Transit Noise and Vibration Impact Assessment*, 2018; ESA, 2022. Groundborne vibration modeling worksheets are provided in Exhibit D of this Technical Report.

Human Annoyance – Off-Site Vehicles

As described above, construction trucks would travel along the local roadway network. The vibration generated by a typical heavy-duty truck would be up to approximately 70 VdB or 75 VdB assuming unusually uneven and rough road conditions. There is no substantial evidence that roadways in the Project vicinity are unusually uneven or rough to the point that vibrations from a typical heavy-duty truck would reach 75 VdB. Therefore, heavy-duty construction trucks would not expose vibration sensitive uses to groundborne vibration above the 72 VdB human annoyance significance criteria. Additionally, it is noted that each individual haul truck would pass vibration sensitive receptors along the haul routes and generate vibrations for only a few seconds at a receptor location. Therefore, potential vibration impacts with respect to human annoyance that would result from temporary and intermittent off-site vibration from construction trucks traveling along the local roadway network would be less than significant for residential uses.

Mitigation Measures:

NOISE-5: Equipment Setbacks. The operation of construction equipment that generates high levels of vibration during any phase of construction occurring in the South Valley will be limited to setback distances from receptor V8. Receptor V8 includes the South Outlet Chlorination Station and Meter House. Setback distances apply in all directions

surrounding the two buildings identified as V8. The following equipment shall be prohibited from operating within their respective setback distances:

- Large bulldozers shall be prohibited within 21 feet of receptor V8
- Loaded Trucks shall be prohibited within 19 feet of receptor V8
- Jackhammers shall be prohibited within 12 feet of receptor V8
- Small bulldozer shall be prohibited within 3 feet of receptor V8

The contractor(s) shall require and document compliance with the minimum allowable setbacks in a construction vibration management plan, which shall be provided to the City prior to issuance of a demolition permit. The construction vibration management plan shall detail the types of equipment to be used during demolition, grading, and building construction, estimated vibration velocities, and distance to vibration receptor V8. Equipment and or alternative construction techniques to be used within the required setbacks for large bulldozers, loaded trucks, jackhammers, and small bulldozers shall be identified to ensure that vibration velocities will not exceed thresholds for potential structural damage.

Significance Determination (groundborne vibration-structural damage):

Less than Significant with Mitigation Incorporated for impacts related to groundborne vibration associated with structural damage during construction.

With implementation of Mitigation Measure NOISE- 5, potential structural vibration impacts on receptor V8 would be mitigated to less than significant. **Table 3.12-25** shows the estimated vibration levels at V8 with implementation of NOISE-5.

**TABLE 3.12-25
MITIGATED CONSTRUCTION VIBRATION IMPACTS – STRUCTURAL DAMAGE**

Off-Road Construction Equipment ^a	FTA Reference Level at 25 feet (in/sec PPV)	Mitigated Distance (feet)	Estimated Vibration Velocity Levels at the Mitigated Distance (in/sec PPV) ^b	Significance Threshold ^c	Exceed Significance Thresholds?
V8					
Large Bulldozer	0.089	21	0.116	0.12	No
Loaded Trucks	0.076	19	0.115		No
Jackhammer	0.035	12	0.105		No
Small Bulldozer	0.003	3	0.072		No

NOTE(S):

- ^a Represents off-site building structures with unmitigated impacts (see Table 3.12-24).
- ^b Vibration level calculated based on FTA reference vibration level at 25-foot reference distance.
- ^c FTA criteria for buildings susceptible to vibration damage (0.12 in/sec PPV).

SOURCE(S): FTA, *Transit Noise and Vibration Impact Assessment*; ESA, 2022.

Significance Determination (groundborne vibration-human annoyance):

Significant and Unavoidable Impact related to groundborne vibration impacts associated with human annoyance during construction.

The Project could potentially exceed applicable thresholds for human annoyance. Vibration impacts regarding human annoyance at nearby sensitive receptors could exceed the significance thresholds (72 VdB at residential uses). Potential mitigation measures to reduce vibration impacts from on-site construction activities with respect to human annoyance include the installation of a wave barrier, which is typically a trench or a thin wall made of sheet piles installed in the ground (essentially a subterranean sound barrier to reduce noise). However, wave barriers must be very deep and long to be effective and are not considered feasible for temporary applications, such as Project construction (Caltrans 2020). Per the Caltrans Transportation and Construction Vibration Guidance Manual, the wave barrier would need to be at least two-thirds of the seismic wavelength and the length of the barrier must be at least one wavelength (typical wavelength can be up to 500 feet). In addition, constructing a wave barrier to reduce the Project's construction-related vibration impacts would, in and of itself, generate groundborne vibration from the excavation equipment. In addition, it is not possible to prohibit the use of construction equipment within certain distances of sensitive receptors as such equipment would be required to be used to construct the various Project components at the proposed locations. Thus, it is concluded that there are no feasible mitigation measures that could be implemented to reduce the temporary vibration impacts from on-site construction associated with human annoyance at the vibration-sensitive receptors. Therefore, Project vibration impacts from construction activities with respect to human annoyance would be significant and unavoidable.

Operation

The Project's day-to-day operations would include typical commercial-grade stationary mechanical and electrical equipment, such as air handling units, condenser units, and exhaust fans, which would produce vibration at low levels that would not cause damage or annoyance impacts to the Project buildings or on-site occupants and would not cause vibration impacts to the off-site environment. In addition, the primary sources of transient vibration would include passenger vehicle circulation within the proposed parking area. According to American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), pumps or compressor would generate groundborne vibration levels of 0.5 in/sec PPV at 1 foot (ASHRAE 1999). It is anticipated that Project mechanical equipment, including air handling units, condenser units, and exhaust fans, would be located on building rooftops. Therefore, groundborne vibration from the operation of such mechanical equipment would not impact any of the off-site sensitive receptors. Therefore, vibration impacts from the Project operation would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Airport Noise

Impact 3.12-3: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Construction / Operation

The nearest airport is the Burbank Bob Hope Airport located approximately 8.3 miles northwest of the Project site. Therefore, the Project would not expose people residing or working in the Project site to excessive noise levels for a project within the vicinity of a public use airport or private airstrip, and no impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Cumulative Impact

Impact 3.12-4: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to noise?

Construction/Operation - Noise

Table 3-2 lists thirteen related projects that are planned or are under construction within the Project area. The Project, together with the related projects, would contribute to cumulative noise impacts. The potential for cumulative noise impacts to occur is specific to the distance between each related project and their stationary noise sources, as well as the cumulative traffic that these related projects would add to the surrounding roadway network. There are nine related projects identified in the vicinity of the Project site.

Noise from the construction of development projects is typically localized and has the potential to affect noise-sensitive uses within 500 feet from the construction site, based on the *L.A. CEQA Thresholds Guide* screening criteria. Thus, noise from construction activities for two projects within 1,000 feet of each other can contribute to a cumulative noise impact for receptors located midway between the two construction sites.

Related Projects No. 4, No. 12, and No. 13 are located within 1,000 feet of the Project site. Related Project No. 4, the 2280 North Glendale Boulevard related project, would consist of 6 condominium units across 3 lots and is located approximately 800 feet to the east of the Project site. It is conservatively assumed that construction of this related project could occur at the same time as the Project. Residences located at the corner of Tesla Avenue and Armstrong Avenue Drive and residential receptors along Armstrong Avenue and Silver Lake Boulevard are located between the Project site and the related project and could be exposed to construction noise from both the Project and the related project. The estimated Project construction noise levels could exceed the 5-dBA significance threshold and contribute to cumulative noise impacts if

constructed simultaneously with the related project at 2280 North Glendale Boulevard. Related Project No. 12 is a City infrastructure project that is currently in progress and is expected to be completed before the commencement of construction of the Project and, therefore, would not contribute to cumulative noise or vibration impacts. Related Project No. 13 is also a city infrastructure project that is not currently underway, but would occupy the same or similar construction and staging areas as the Project. It would be infeasible for both the related project and the Project to occur at the same time given their close proximity and the related project would likely occur before or after Project implementation and, therefore, would not contribute to cumulative noise or vibration impacts.

However, construction-related noise levels from the related projects would be intermittent and temporary, and it is anticipated that, as with the Project, the related projects would comply with the construction hours and other relevant provisions set forth in the LAMC. In addition, noise associated with cumulative construction activities would be reduced to the degree reasonably and technically feasible through proposed mitigation measures for each individual related project and compliance with locally adopted and enforced noise ordinances. Implementation of **Mitigation Measures NOISE-1** through **NOISE-3** would reduce temporary on-site construction noise at the Project site. However, there is potential for cumulative construction noise impacts even with mitigation measures. As such, cumulative noise impacts from construction would be significant and unavoidable.

If construction of the related projects would overlap with Project construction and construction trucks would utilize the same roadway network as the Project, cumulative off-site construction noise level increases could occur in the Project area. The exact construction scheduling and timing of construction truck trips for these projects are not known. For the purposes of this analysis, the number of construction trucks from related projects that would be needed to exceed the significance threshold is estimated to determine the potential for impacts.

As shown in Table 3.12-13, the Project would not result in any significant off-site construction noise impacts due to construction trips. The roadway in the vicinity of the Project site that would have off-site construction noise levels from Project construction trucks closest to the significance threshold would be Silver Lake Boulevard between Armstrong Avenue and Glendale Boulevard, which would have a maximum of up to 36 truck trips per hour, generating a noise level of approximately 63.6 dBA L_{eq} and would result in a 2.4 dBA increase over ambient noise levels. Related projects contributing an additional 68 truck trips per hour on the same roadway segment at the same time as the Project would generate a noise level of approximately 66.4 dBA L_{eq} . When adding the noise levels together, along with the ambient noise level of 64.9 dBA L_{eq} , the cumulative noise level would be approximately 69.9 dBA L_{eq} ,¹² which is equal to the significance threshold of 5 dBA over ambient noise levels. Therefore, related projects contributing more than 68 truck trips would result in a cumulatively considerable contribution to off-site construction noise and impacts would be significant. This is not likely to happen as the related projects individually have grading and excavation areas smaller than the Project. Nonetheless, it is

¹² Calculated as ambient noise level (64.6 dBA L_{eq}), plus Project (64.0 dBA L_{eq}), plus related projects (65.8 dBA L_{eq}) contributing off-site construction noise along the same roadway (Whitsett in the vicinity of the Project site): $64.6 + 64.0 + 65.8 = 69.6$ dBA L_{eq} .

conservatively assumed that truck traffic from multiple related projects could potentially overlap on some days and generate noise in excess of the significance threshold. Therefore, given that it is possible that the Project and related projects could contribute to cumulative off-site construction traffic noise levels and could exceed a significance threshold with sufficiently high cumulative traffic levels, cumulative off-site construction traffic noise impacts would be temporarily significant and unavoidable.

The Project site and surrounding area have been developed with uses that have previously generated, and will continue to generate, noise from a number of community noise sources, including mechanical equipment (e.g., HVAC systems), outdoor activity areas, and vehicular travel. Similar to the Project, each of the related projects that have been identified in the vicinity of the Project site would also generate stationary-source and mobile-source noise due to ongoing day-to-day operations.

Due to provisions set forth in the LAMC that limit stationary source noise from items, such as rooftop mechanical equipment and amplified sound, noise levels would be less than significant at the property line for each related project. As analyzed above, noise impacts associated with the Project on-site operations would be less than significant, with the exception of amplified speaker systems during special events, which would be significant and unavoidable for the Project. The nearest related project with an operational component¹³ is Related Project No. 4, which would consist of 6 condominium units across 3 lots and is located approximately 800 feet to the east of the Project site. Noise from the Related Project's on-site sources would be limited to areas in the immediate vicinity of each related project. Although each related project could potentially impact an adjacent sensitive use, that potential impact would be localized to that specific area and would not contribute to cumulative noise conditions at or adjacent to the Project site. Nonetheless, because the Project would have a significant and unavoidable impact from the use of amplified speaker systems during special events, operational on-site noise from the Related Project could combine with the operational on-site noise from the Project (i.e., amplified speaker systems during special events). Therefore, the Project's contribution to operational noise would be cumulatively considerable, and cumulative impacts from on-site noise associated with operation of the Project and related projects would be significant and unavoidable.

The Project and related projects in the area would produce off-site traffic volumes that would generate roadway noise. Cumulative noise impacts due to off-site traffic were analyzed by comparing the projected increase in traffic noise levels from "existing" conditions to "future plus project" conditions to the applicable significance criteria. The "future plus project" conditions include traffic volumes from future ambient growth, related projects, and the Project. Table 3.12-17 provides a summary of the cumulative off-site traffic noise analysis under the "future (2030) plus project" condition. As indicated in Table 3.12-17, cumulative traffic noise would result in a maximum increase of 0.6 dBA along Silver Lake Drive (west of Tesla Avenue). Cumulative traffic noise increase at all other analyzed roadway segments would be less than 0.6 dBA. The estimated cumulative noise increases would be below the 5-dBA significance threshold. Therefore, the Project's contribution to off-site traffic noise would not be cumulatively

¹³ Related Projects No. 12 and No. 13 are also within 1,000 feet of the Project site; however, these related projects are City infrastructure projects that upon completion would not generate any operational noise or vibration.

considerable, and off-site cumulative traffic noise impacts associated with the Project would be less than significant.

Mitigation Measures:

Implementation of **Mitigation Measure NOISE-1** through **NOISE-4** would reduce temporary on-site construction noise and operational noise at the Project site. However, the noise levels would remain significant and unavoidable and, therefore, could contribute to a significant cumulative construction and operational (amplified speaker systems during special events) noise impact.

Significance Determination:

Significant and Unavoidable Impact during construction and operations (amplified speaker systems during special events)

Construction/Operation - Groundborne Vibration

Due to rapid attenuation characteristics of groundborne vibration, only related projects located adjacent to the same sensitive receptors would result in cumulatively considerable vibration impacts. However, there are no structures adjacent to both the Project and any related project that could be impacted by potential cumulative vibration from overlapping construction. Vibration attenuates at high rates with distance. Therefore, construction vibration would only affect sensitive uses located directly adjacent to the Proposed Project and another related project. Therefore, due to the rapid attenuation of vibration, should construction of a related project overlap with Project construction, it would not contribute to the Project's construction vibration impacts and no cumulative impacts associated with related projects would occur.

Due to the rapid attenuation characteristics of groundborne vibration and distance from each of the related projects to the Project site, there is no potential for cumulative operational impacts with respect to groundborne vibration. Therefore, operation of the Project, considered together with related projects, would not result in a significant cumulative impact.

Mitigation Measures:

Implementation of **Mitigation Measure NOISE-5**.

Significance Determination:

Less than Significant with Mitigation

3.12.6 Summary of Impacts

Table 3.12-26 summarizes the impact significance determinations and lists mitigation measures related to noise.

**TABLE 3.12-26
 SUMMARY OF PROPOSED PROJECT IMPACTS TO NOISE**

Impact	Mitigation Measure	Significance
3.12-1: Noise Standards		
Construction	Mitigation Measures NOISE-1 through NOISE-3	SU
Operations	Mitigation Measure NOISE-4	SU
3.12-2: Groundborne Vibration		
Construction Structural Damage	Mitigation Measure NOISE-5	LTSM
Construction Human Annoyance	None Feasible	SU
Operations	None Required	LTS
3.12-3: Airport Noise	None Required	NI
3.12-4: Cumulative	Mitigation Measures NOISE-1 through NOISE-5	SU

NOTES:

NI = No Impact, no mitigation proposed
 LTS = Less than Significant, no mitigation proposed
 LTSM = Less than Significant Impact with Mitigation Incorporated
 SU = Significant and Unavoidable

3.12.7 References

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3.13 Population and Housing

This section addresses the potential impacts to population and housing associated with implementation of the proposed Project. This section includes a description of the existing population, housing, and employment conditions in the proposed Project area; a summary of applicable regulations related to population and housing; and an evaluation of the potential impacts of the proposed Project related to population and housing. Impacts to population and housing are less than significant, and no mitigation is required.

3.13.1 Environmental Setting

The Silver Lake Reservoir Complex (SLRC) is a 127-acre site and includes both Ivanhoe and Silver Lake Reservoirs, dams, buildings, water and stormwater infrastructure, interior roads, and public recreational facilities operated and maintained by both the Los Angeles Department of Water and Power (LADWP) and City of Los Angeles Recreation and Parks Department (RAP) (refer to Figure 2-2). The entirety of the proposed Project area is zoned as Open Space (OS) (City of Los Angeles 2022). No residential uses or associated existing population reside on the proposed Project area under existing conditions.

Population

City of Los Angeles

The City of Los Angeles had a total population of 4,059,665 with a population density of 8,645 persons per square mile in 2018. Between 2000 and 2018, the total population of the city increased by 364,923 to 4,059,665. During this 18-year period, the City's population growth rate of 9.9 percent was higher than the Los Angeles County rate of eight percent. The City makes up 39.5 percent of the total population of the County (SCAG 2019).

The City of Los Angeles is expected to undergo an increase in 25,500 people between 2020 and 2035 (the City had approximately 4,017,000 people in 2020 and is expected to have approximately 4,442,500 people in 2035). By 2040, SCAG estimates that the City will have an additional 166,900 people for a total of 4,609,400 people within the City (SCAG 2016).

Housing

City of Los Angeles

There are approximately 1,493,108 housing units in the City of Los Angeles, with an average household size of 3.06 for owner-occupied units and 2.65 for renter-occupied units. As for housing tenure, 36.8 percent of City units are owner-occupied, and 63.2 percent are renter-occupied units. The City homeowner vacancy rate is 1.1 percent, and the rental vacancy rate is 3.7 percent (U.S. Census Bureau 2022). Between 2000 and 2018, the total number of households in the City increased by 107,610 units, or 8.4 percent. During this 18-year period, the City's household growth rate of 8.4 percent was higher than the County growth rate of 6.5 percent. Households in the City made up approximately 41.4 percent of the City's total number of households in 2018 (SCAG 2019).

Employment

City of Los Angeles

According to the SCAG Profile for the City of Los Angeles, total jobs in 2017 in the City of Los Angeles numbered 1,858,972, which was an increase of 2.9 percent from 2007. Approximately 54.2 percent of City residents work in the City, while 45.8 percent commute to other places (SCAG 2019).

The City of Los Angeles is expected to undergo an increase in 204,600 employed people between 2020 and 2035 (the County had approximately 1,899,500 people employed in 2020 and is expected to have approximately 2,104,100 people employed in 2035). By 2040, SCAG estimates that the City will employ 2,169,100 people (SCAG 2016).

3.13.2 Regulatory Framework

Regional

Southern California Association of Governments

SCAG is the responsible agency for developing and adopting regional housing, population, and employment growth forecasts for local governments from Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura Counties. The proposed Project area is located within the City of Los Angeles Subregion, 1 of 15 Subregional Organizations in the SCAG Region. SCAG's demographic data is developed to enable the proper planning of infrastructure and facilities to adequately meet the needs of the anticipated growth. SCAG's Transportation Program/ Sustainable Communities Strategy (RTP/SCS) presents the transportation and land use vision for the SCAG region and provides a long-term investment framework for addressing the region's transportation and related challenges. In 2020, SCAG adopted Connect SoCal, the 2020-2045 RTP/SCS, which provides updated forecasts and modeling. Growth forecasts contained in the RTP/SCS for the City are used as the basis of analysis for housing and population forecasts in this section.

Regional Comprehensive Plan

The 2008 Regional Comprehensive Plan (RCP) was prepared in response to SCAG's Regional Council directive in its 2002 Strategic Plan to define solutions to housing, traffic, water, air quality, and other regional challenges. The 2008 RCP is an advisory document that describes future conditions under current trends, defines a vision for a healthier region, and recommends an Action Plan with a target year of 2035. The RCP addresses land use and housing, transportation, air quality, energy, open space and habitat, water, solid waste, economy, security, and emergency preparedness. The RCP provides a series of recommended near-term policies that developers and stakeholders can consider for implementation, as well as potential policies for consideration by local jurisdictions and agencies when conducting project review.

The Land Use and Housing chapter of the RCP promotes sustainable planning for land use and housing in Southern California through maximizing the efficiency of the existing and planned transportation network, providing the necessary amount and mix of housing for a growing population, and enabling a diverse and growing economy and protecting important natural resources.

Local

City of Los Angeles General Plan

The City of Los Angeles General Plan was prepared pursuant to State law to guide future development and to identify the City's environmental, social, and economic goals. The City's General Plan sets forth goals, objectives, and programs to provide a guideline for day-to-day land use policies and to meet the existing and future needs and desires of the City, while at the same time integrating a range of State-mandated elements including Transportation, Noise, Safety, Housing, and Open Space/Conservation. The General Plan also includes the General Plan Framework Element, discussed below, and a series of community plans, which guide land use at the community level for the area surrounding the proposed Project area. As discussed in more detail below, the proposed Project area would be located in the Silver Lake-Echo Park-Elysian Valley Community Plan area.

Housing Element

The Housing Element of the City's General Plan identifies the City's existing housing conditions and needs; establishes goals, objectives, and policies for the City's housing and growth strategy; and describes programs that the City intends to implement to meet the diverse housing needs throughout the City (City of Los Angeles, 2021).

The Housing Element includes goals, objectives, and policies for providing an adequate supply of housing, expanding opportunities and resources for affordable housing, and providing housing and services to meet the needs of the homeless or people at risk of homelessness. The Housing Element also discusses development trends and future growth in the City, identifying opportunities for infill development and redevelopment.

Silver Lake-Echo Park-Elysian Valley Community Plan

The Silver Lake-Echo Park-Elysian Valley Community Plan incorporates 2010 geographic projections that were included in the Framework Element of the City of Los Angeles General Plan. While the Community Plan includes data for population, housing, and employment, the Community Plan does not provide growth projections beyond 2010 and does not reflect the more current regional planning documents.

Comprehensive Homeless Strategy

The City developed and adopted the *Comprehensive Homeless Strategy* in 2016 to address homelessness over the next ten years as a joint effort between the City, County, and the Los Angeles Homeless Services Authority (LAHSA). The report provides over 60 recommendations for decision makers with regards to prioritizing and allocating funding, including preventive strategies, case management, and housing services (City of Los Angeles, 2016). The key areas of the report include the following:

- **No Wrong Door:** Allows homeless people to access housing services through any City agency (e.g., Los Angeles Police Department, Los Angeles Fire Department, and the Public Library System). Each department will receive customized training to engage homeless people and connect them with services.

- **Coordinated Entry System:** Streamlines the process for finding permanent housing with more targeted and cost-effective strategies.
- **Housing:** Includes policies to streamline the planning and zoning process for permanent supportive housing projects, and to increase the investment and use of housing subsidies and vouchers. Suggests the conversion of public and private shelters into bridge and permanent housing options and the expansion of emergency shelters into 24-hour operations.
- **Assistance for the Homeless – El Niño:** Funding provided for inclement weather shelters and other costs associated with El Niño to avoid injury and loss of life.

Related homeless programs in the Los Angeles area include:

1. Executive Directive 16

Executive Directive 16 provides City staff with the resources needed to implement the City’s *Comprehensive Homeless Strategy* (Los Angeles Mayor, 2016). The Directive implements a “No Wrong Door” strategy that allows homeless people to have access to City services, regardless of which City Department they seek help from. A budget of \$138 million has been allocated to addressing the City’s homelessness crisis, with 22% of funding dedicated to expanding services for the homeless provided by LAHSA.

2. Measure H

Measure H is a County measure that is expected to generate \$355 million annually through 2027 for services to combat homelessness (Los Angeles County, n.d.). Services include programs related to homelessness prevention, foster care and youth, health and mental illness, outreach and case management, re-entry from justice system, and unemployment.

3. Proposition HHH

The Proposition HHH Permanent Supportive Housing Loan Program is a program that was developed to provide permanent supportive housing for homeless individuals and those at risk of homelessness throughout the City (Los Angeles Housing + Community Investment Department, 2021). The program aims to reduce homelessness by creating safe and affordable housing units and increasing the accessibility of services and treatment programs.

Homelessness is an existing condition extending throughout the City, region, and State, and that various local and State agencies and non-governmental entities have and continue to provide as many resources as possible to address homelessness. CEQA is limited to analysis of a project’s effect on existing conditions, and information concerning homelessness and the resources that are being provided to address homelessness are provided for information purposes. For purposes of CEQA, homelessness itself is not a physical impact on the environment but rather is a socioeconomic impact that does not require analysis. In addition, the City has not identified any supported evidence that homelessness creates indirect physical impacts, such as public safety (which itself is not a physical impact). Furthermore, homelessness is an existing condition that the City and other governmental entities have committed substantial resources in attempting to address. However, the City is providing information on homelessness resources and programs for context. **Table 3.13-1** and **Table 3.13-2** below identify homelessness resources near the proposed

Project, including homelessness prevention activities, outreach and assessment, emergency shelter, transitional housing, permanent supportive housing, and supportive services.

**TABLE 3.13-1
BOE HOMELESS FACILITIES NEAR PROJECT SITE**

Council District	Type	Project Title	Address	Beds	Date	Distance (miles)
4	Permanent Facility (HHH) Supportive Housing	Gardner St Women's Bridge Housing	1403 N Gardner St	32	October 2019	6.8
4	A Bridge Home (Sprung Structure)	Riverside Dr Bridge Home	3428 Riverside Dr	100	July 2020	1.4
13	Safe Sleep	Madison Ave	317 N Madison Ave	73	April 2021	2.5
13	Tiny Home Village (THV)	Alvarado THV	1455 N Alvarado St	74	May 2021	1.3
14	Tiny Home Village	Arroyo Seco THV	5945 Arroyo Dr	224	November 2021	6.3
13	Tiny Home Village	Westlake THV	2301 W 3 rd St	107	January 2022	3.3
14	Tiny Home Village	Eagle Rock THV	7570 N Figueroa St	93	March 2022	8

SOURCE: Los Angeles Housing Services Authority, 2022

**TABLE 3.13-2
BOE HOMELESS FACILITIES/SERVICES NEAR PROJECT SITE**

Type	Project Title	Address	Distance (miles)
Free shelter and rehab programs for troubled youths of the inner city.	Hope for Homeless Youth	2406 Kent Street	1.9
40 Bed shelter for single adults and families	Ascencia – Shelter and Services	437 Fernando Court	2.8
Transitional housing residence.	Good Shepherd Center for Homeless Women	267 Belmont Ave	3 M
Temporary Shelter for homeless, runaway, and at-risk youth ages 10-17.	Angel's Flight Youth Shelter	357 S Westlake Ave	3.2
Permanent supportive housing for homeless families	Salvation Army Glendale Chester Village For Homeless Families	320 W Windsor Rd, Glendale	3.5
Emergency housing for homeless individuals in LA County "Interim Housing"	Path Hollywood	5627 Fernwood Ave	3.8 M
Shelter and stabilization services for homeless teens ages 12-17.	Los Angeles Youth Network	1754 Taft Avenue	3.9 M
Runaway services for youth 12-17 years	Salvation Army The Way In Drop In Shelter For Youth	5939 Hollywood Blvd	4.4 M
Emergency shelter for families in downtown LA.	Zahn Memorial Center	832 W James M. Wood Blvd	5.2 M

SOURCE: Los Angeles Housing Services Authority, 2022

3.13.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to population and housing are based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). (Refer to Impact 3.13-1)
- Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. (Refer to Impact 3.13-2)

In addition, an evaluation was conducted using the screening criteria included in the City's 2006 *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (L.A. CEQA Thresholds Guide). The evaluation concluded that none of the thresholds related to Population and Housing were triggered by the proposed Project. As a result, further analysis using the 2006 L.A. CEQA Thresholds Guide thresholds is not required for this topic.

3.13.4 Project Design Features

No specific project design features are proposed with regard to population and housing.

3.13.5 Impacts and Mitigation Measures

Unplanned Population Growth

Impact 3.13-1: Would the proposed Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Construction

Construction of the proposed Project would not directly or indirectly induce substantial population growth in the proposed Project area through the construction of new homes and businesses, and would not include a net loss of housing units. No new homes or businesses would be constructed as part of the proposed Project. The proposed Project would not include a General Plan amendment or induce substantial growth on the proposed Project site or surrounding area. The proposed Project would enhance existing recreational areas with the construction of more public recreational facilities and opportunities within the SLRC boundary. Proposed Project components would include landscaping, replanting, throughout the SLRC; the implementation of floating habitat wetlands, the addition of pathways and trails that provide passive and active recreational opportunities; and built structures and buildings including proposed shade pavilions, seated terraces, picnic groves, reservoir overlooks and docs, the proposed Education Center, Silver Lake Recreation Center upgrades, expanded Dog Park, and proposed new Multi-Purpose Facility and offsite improvements. Although the proposed Project would enhance the facility for use by the local community including providing additional parking, it would not be expected to result in a new desirable destination or neighborhood feature that would attract a local housing

boom. The SLRC is already an anchor destination for the local community. The proposed Project would be constructed within the existing SLRC and would not accelerate development in an undeveloped area exceeding projected or planned levels during proposed Project buildout and would not introduce unplanned infrastructure. The proposed Project development would be consistent with goals and policies of the community plan.

The proposed Project would require construction workers, which would generate a temporary increase in employment within the proposed Project area. At the peak of construction activities when the construction of several proposed park zones could overlap, approximately 335 workers would be distributed across the proposed Project area for construction of facilities. However, construction employment within the proposed Project area would not be anticipated to generate population growth within the region, as the need for workers would be accommodated within the existing and future labor market in the County of Los Angeles, which is highly dense and supports a diversity of construction firms and construction workers. Therefore, construction employment associated with the proposed Project would not induce substantial population growth in the area, and impacts related to construction would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

The proposed project would not directly induce substantial population growth through developing new housing, nor would it indirectly induce substantial population growth through the extension of roads or other infrastructure to new areas. The operation of the proposed Project would not include construction of new homes or businesses and would not result in a net loss of housing. The existing area surrounding the SLRC is developed with residential neighborhood and the proposed Project site is an existing park. The proposed Project would re-design the existing SLRC into seven park zones connected by a 2.5-mile, tree-lined promenade to create additional recreational uses within the area. Enhancement and expansion of park facilities within the existing SLRC would result in the need for or facilitate additional housing within the area. Currently, the existing Recreation Center on the proposed Project area employs approximately 5 year-round staff and 12 seasonal staff who visit the area daily and are associated with overall operation and maintenance activities. Operations associated with the proposed Project are expected to result in an increase in staffing of approximately five full-time employees for proposed park operation and maintenance activities.

The expected number of new jobs that would be generated by the proposed Project would be minimal and well within employment growth projections for the County and City, as calculated by SCAG and detailed above in Section 3.13.1, *Environmental Setting*. Because the proposed Project would be located in the densely populated Los Angeles area, it is anticipated that these jobs would be filled by City or County residents. In the unlikely event that new employees were to relocate to the County or City upon obtaining a job, the potential population growth would be

very minor and would not exceed population projections for the proposed Project area. The addition of five employees under operation of the proposed Project would not have significant impacts on population or housing, induce substantial population growth, or exceed the growth projections in any adopted plans.

The proposed Project would occur in a developed area and would not result in growth (i.e., new housing or employment generators) or accelerate development in an undeveloped area that exceeds projected/ planned levels that would result in an adverse physical change in the environment. As noted above, although the proposed Project would enhance the facility for use by the local community including providing additional parking, it would not be expected to result in a new desirable destination or neighborhood feature that would attract a local housing boom. The SLRC is already an anchor destination for the local community. Furthermore, the proposed Project would not introduce unplanned infrastructure that was not previously evaluated in the adopted Silver Lake-Echo Park-Elysian Valley Community Plan or General Plan. The proposed Project involves the enhancement and addition of public park amenities within the SLRC. The proposed Project would not induce new residential development or result in population growth in the service area. The proposed Project is not intended to facilitate growth, but instead serve the recreational needs of the surrounding communities. Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Displace People or Housing

Impact 3.13-2: Would the proposed Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Construction / Operation

No new homes or businesses would be constructed as part of the proposed Project and no residential uses or associated existing population reside on/within the proposed Project area. The proposed Project would redesign portions of the existing SLRC into seven park zones for additional recreational uses (Figure 2-4). Construction and operational activities of the proposed Project would occur within the existing SLRC boundary and would not displace people or existing housing necessitating the construction of replacement housing elsewhere. No impact would occur.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Cumulative Impact

Impact 3.13-3: Would the proposed Project’s construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to population and housing?

A significant cumulative impact on population and housing would result if the project would contribute to cumulative impacts that would induce substantial unplanned population growth or displace substantial numbers of existing people or housing. The proposed Project would not create permanent residential structures on the project site. As the site is currently zoned as Open Space (OS), the use of the project site as a park with five new full-time staff would not induce substantial unplanned population growth. The project would also not extend infrastructure such that it would indirectly induce substantial unplanned population growth. In addition, the proposed Project would not displace people or housing. Table 3-2 identifies thirteen related projects that are planned or are under construction within the Project area. Because many of the proposed development projects listed in Table 3-2 include residential units there is potential for direct growth to occur within the Project area. However, the Project area is already densely developed, and opportunities for development would be primarily limited to infill development. Proposed developments would be evaluated on a case-by-case basis to determine their potential contributions to growth in the surrounding area. In addition, proposed developments would be evaluated based on their consistency with the City’s General Plan and other local and regional plans and policies. Therefore, the proposed Project would not contribute considerably to a cumulative impact related to population and housing. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.13.6 Summary of Impacts

Table 3.13-3 summarizes the impact significance determinations and lists mitigation measures related to population and housing.

**TABLE 3.13-3
 SUMMARY OF PROJECT IMPACTS TO POPULATION AND HOUSING**

Impact	Mitigation Measure	Significance
3.13-1: Unplanned Population Growth	None Required	LTS
3.13-2: Displacement of Housing	None Required	NI
3.13-3: Cumulative	None Required	LTS

NOTES:

NI = No Impact, no mitigation proposed
 LTS = Less than Significant, no mitigation proposed
 LTSM = Less than Significant Impact with Mitigation Incorporated
 SU = Significant and Unavoidable

3.13.7 References

- City of Los Angeles. 2016. Comprehensive Homeless Strategy. Available online at: <https://www.lacity.org/residents/popular-information/comprehensive-homeless-strategy-implementation#:~:text=The%20City%20of%20LA%27s%20Comprehensive%20Homeless%20Strategy%20adopted,Los%20Angeles%2C%20homeless%20service%20providers%20and%20the%20public.,> accessed June 2022.
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3.14 Public Services

This section addresses the potential impacts to public services, including fire protection services, law enforcement services, schools, and hospitals, associated with implementation of the proposed Project. Parks are covered in Section 3.15, *Recreation*. This section includes: a description of the existing public services related to the proposed Project; a summary of applicable regulations; and an evaluation of the potential impacts of the proposed Project related to public services. Project design features related to public services include **PDF-PS-1: Construction Security Measures**, **PDF-PS-2: Operational Security Measures** and **PDF-TRA-1: Construction Traffic Management Plan**. Impacts to public services are less than significant, and no mitigation is required.

3.14.1 Environmental Setting

Fire Protection Services

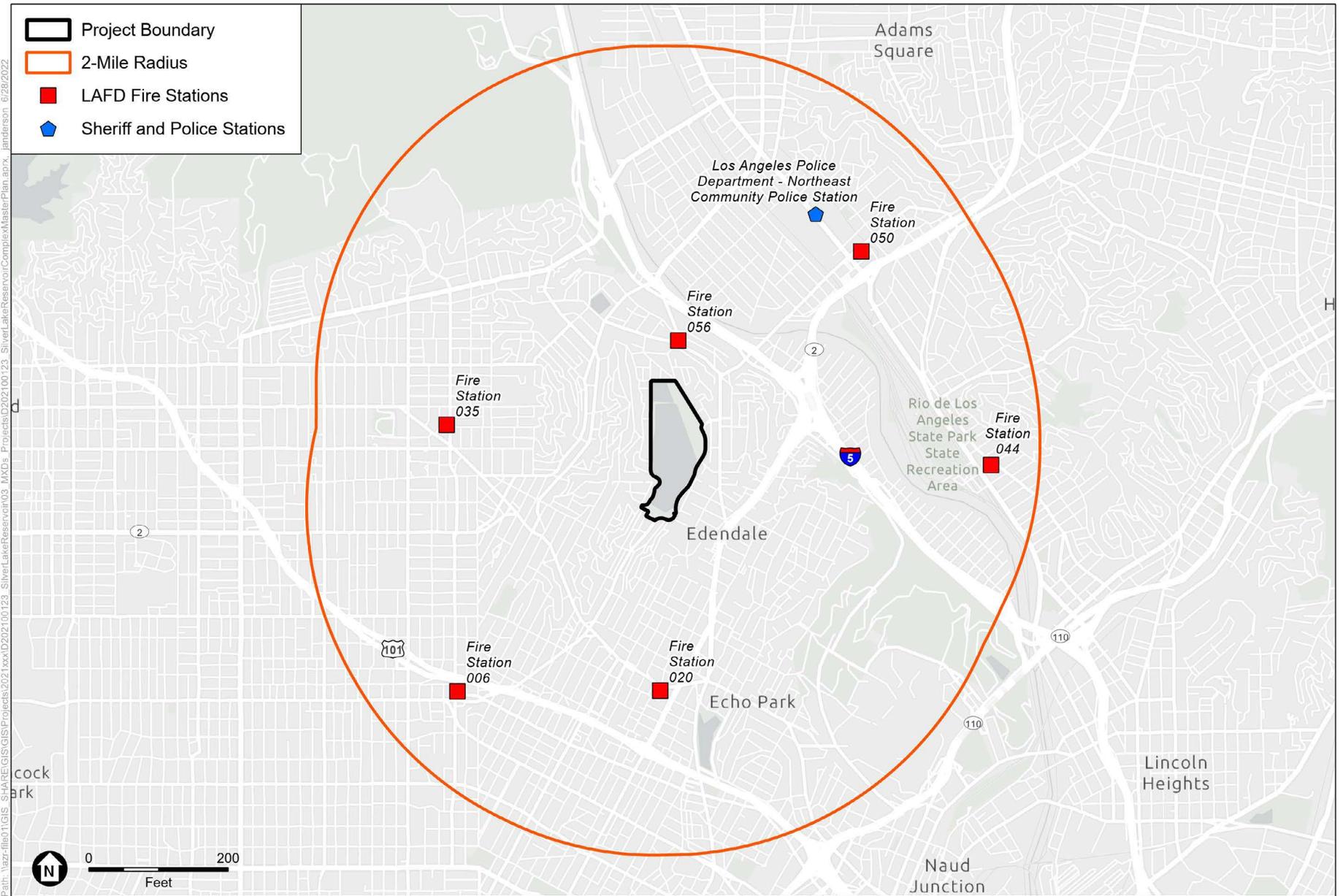
The City of Los Angeles Fire Department (LAFD) provides fire protection services for the proposed Project area. LAFD is divided into four bureaus, which hosts 14 battalions and 106 fire stations. The proposed Project area is located within the southeastern portion of the West Bureau, which is comprised of Battalions 4, 5 and 9. The nearest fire station is LAFD Station 56 located at 2759 Rowena Avenue, approximately 0.25 miles north of the proposed Project area near Tesla Avenue (LAFD 2021), as shown in **Figure 3.14-1**.

According to the LAFD 2018-2020 Strategic Plan, LAFD employed a total of 3,216 sworn fire personnel and 379 civilian fire personnel in 2017. In addition, LAFD resources included 94 type 1 engines, 42 trucks/light forces, 93 paramedic ambulances, 41 basic life support ambulances, 4 hazardous materials squads, 28 assessment truck/light forces, 15 brush patrols, 6 USAR companies, 6 airport units, 4 swift water rescue teams, 6 helicopters, 5 dozers/loaders, 1 heavy rescue, 5 fire boats, and 4 foam tenders (LAFD 2020). LAFD fire stations that would provide initial response to the proposed Project area are provided in **Table 3.14-1**.

**TABLE 3.14-1
LAFD STATIONS NEAR THE PROPOSED PROJECT AREA**

Distance	Fire Station	Services And Equipment	Staff
0.25	Fire Station No. 56 2759 Rowena Ave	ALS Engine, Paramedic Rescue Ambulance	6
1.2	Fire Station No. 20 2144 w Sunset Blvd.	BLS Light Force, ALS Engine, Paramedic Rescue Ambulance	12
1.2	Fire Station No. 35 1601 N Hillhurst	ALS Light Force, BLS Engine, Paramedic Rescue Ambulance, EMT Rescue Ambulance, Brush Patrol	14
1.6	Fire Station No. 6 326 N Virgil Ave	BLS Engine, Paramedic Rescue Ambulance, EMT Rescue Ambulance	8
1.4	Fire Station No. 50 3036 Fletcher Drive	ALS Engine, Paramedic Rescue Ambulance, EMT Rescue Ambulance	8

SOURCE: LAFD PERS COMM, 2022



SOURCE: ESRI, 2022; County of Los Angeles, 2022; City of LA, 2022; ESA, 2022.

Silver Lake Reservoir Complex Master Plan Project

Figure 3.14-1
Emergency Services

LAFD response times for the Silver Lake Community in 2021 are provided in **Table 3.14-2**.

**TABLE 3.14-2
 AVERAGE SILVER LAKE LAFD RESPONSE TIMES AROUND THE PROPOSED PROJECT AREA**

	EMS	Non-EMS	Critical ALS	Structure Fire ¹
Average LAFD Turnout Time (mins:secs)	00:55	00:53	NA	NA
Average LAFD Travel Time (mins:secs)	05:17	5:32	NA	NA
Operational Response Time (mins:secs)	07:28	07:41	07:14	05:56

NOTES:

¹ Structure Fire: The call type is specifically reserved when the LAFD receives a report of a building or structure that is actively burning. Due to the low frequency, these metrics will be reported on a quarterly basis.

SOURCE: LAFD 2022

The SLRC is currently used as a source of water for firefighting operations. Under an agreement with LADWP, both the City and County of Los Angeles Fire Departments may use reservoir water storage for firefighting purposes, and both departments have used the water in the past. The SLRC would continue to be available for use by City and County Fire Departments.

Police Protection Services

The City of Los Angeles Police Department (LAPD) is one of the largest law enforcement agencies in the world. It is responsible for providing police service to an area encompassing 468 square miles and 21 community areas, representing approximately over 4 million residents as of 2016. There are over 9,500 sworn personnel (LAPD 2022a). The nearest police station is LAPD Northeast Community Police Station located at 3353 San Fernando Road, approximately 1.3 miles northeast of the proposed Project area near Tesla Avenue, as shown in Figure 3.14-1. The Northeast Community Police Station serves the communities of Atwater, Cypress Park, Eagle Rock, East Hollywood, Echo Park, Elysian Park, Elysian Valley, Glassell Park, Griffith Park, Highland Park, Los Feliz, Mt. Washington, and Silverlake Northeast Area, which is roughly 29 square miles and has a population of about 250,000 people under the jurisdiction of Central Bureau (LAPD 2022b). Northeast Community Police Station consists of 63 Reporting Districts and has approximately 282 sworn personnel and 11 civilian support staff. Northeast Division is a culturally diverse community with a residential population of approximately 210,541 people. The officer to resident ratio is 1 officer to every 747 residents (LAPD comm. 2022). LAPD city-wide public contacts as of November 30, 2021, are provided in **Table 3.14-3**.

**TABLE 3.14-3
 AVERAGE CITY-WIDE PUBLIC CONTACTS SNAPSHOT**

Public Contacts	YTD 2021 (Thru 11/30)	YTD 2020 (Thru 11/30)	Difference	% Change
Stops	406,411	488,455	-82,044	-16.8%
Calls for Service*	828,047	852,250	-24,203	-2.8%
# of Public Contacts (Stops and Calls)	1,234,458	1,340,705	-106,247	-7.9%
Arrests (All – LAPD Only)	56,364	56,926	-562	-1.0%
Total UOF (Excl. UD/Dog)	2,150	2,052	98	4.8%
% UOF vs Contacts	0.17%	0.15%	N/A	N/A
% UOF vs Arrests	3.81%	3.60%	N/A	N/A

NOTES: Data is preliminary and subject to change

* Radio Calls exclude officer-initiation activities such as help call, assistance call, back-up call, traffic stops and Code 6.

UOF – “Use of Force”

YTD – “Year to Date”

SOURCE: LAPD 2021

Schools

City of Los Angeles

The proposed Project area is primarily served by the Los Angeles Unified School District (LAUSD), which is the largest public school district in the County, with a service area of over 710 square miles and includes the City of Los Angeles, and 25 smaller municipalities and unincorporated areas. LAUSD has 1,424 schools and 574,570 students (LAUSD 2022). There are several other private, charter, and special curriculum schools within the proposed Project vicinity. Within a 2-mile radius of the proposed Project area, there are: 28 private and charter schools; 18 public elementary schools; 14 early childhood education and Head Start Schools; 3 public high schools; 3 public middle schools; and 3 special curriculum schools and programs; totaling 69 school facilities. The Neighborhood Nursery School is located at 2700 Tesla Avenue, within the northeast boundary of the SLRC.

Other Public Services

Hospitals

Within Los Angeles County, there are over 3,812 licensed healthcare facilities, including but not limited to general acute care hospitals, long-term care facilities, primary care clinics, hospice care centers, specialized medical centers, and ambulatory surgery centers (CHHS 2022). “Acute Care” hospitals, or more specifically, “Short-Term Acute Care,” are those that provide short-term and usually immediate medical care. These are to be distinguished from “Long-Term Acute Care” hospitals that provide transitional or longer-term care for patients who must be hospitalized for medical reasons.

The nearest hospitals to the proposed Project area are the Hollywood Presbyterian Medical Center and a Kaiser Permanente Hospital located at 1300 N. Vermont Avenue and 4733 Subset

Boulevard, respectively. These hospitals are located approximately 1.3 miles west of the proposed Project area.

Libraries

The Los Angeles County Library operates 84 libraries county-wide, four cultural resources centers, and three book mobiles. The Los Angeles County Library provides library service to over 3.4 million residents living in unincorporated areas and to residents of 49 of the 88 incorporated cities of Los Angeles County (Los Angeles County Library 2022). The nearest County-operated library to the proposed Project area is the City Terrace Library located at 4025 East City Terrace Drive approximately 5.5 miles southeast of the proposed Project area.

The City of Los Angeles Public Library operates additional City-branch libraries throughout the city (City of Los Angeles Public Library 2022). The nearest library to the proposed Project area is the Silver Lake Branch Library located at 2411 Glendale Boulevard approximately 0.1-mile east of the proposed Project area off silver Lake Boulevard.

3.14.2 Regulatory Framework

State

California Vehicle Code, Section 21806

Section 21806 of the California Vehicle Code (CVC) pertains to emergency vehicles responding to Code 3 incident/calls.[1] This section of the CVC states the following:

Upon the immediate approach of an authorized emergency vehicle which is sounding a siren and which has at least one lighted lamp exhibiting red light that is visible, under normal atmospheric conditions, from a distance of 1,000 feet to the front of the vehicle, the surrounding traffic shall, except as otherwise directed by a traffic officer, do the following: (a)(1) Except as required under paragraph (2), the driver of every other vehicle shall yield the right-of-way and shall immediately drive to the right-hand edge or curb of the highway, clear of any intersection, and thereupon shall stop and remain stopped until the authorized emergency vehicle has passed. (2) A person driving a vehicle in an exclusive or preferential use lane shall exit that lane immediately upon determining that the exit can be accomplished with reasonable safety....(c) All pedestrians upon the highway shall proceed to the nearest curb or place of safety and remain there until the authorized emergency vehicle has passed.

California Constitution Article XIII, Section 35

Section 35 of Article XIII of the California Constitution was adopted by the voters in 1993 under Proposition 172. Proposition 172 directed the proceeds of a 0.50-percent sales tax to be expended exclusively for local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include police protection. Section 30056 provides that cities are not allowed to spend less of their own financial resources on their combined public safety services in any given year compared to the 1992-93 fiscal year. Therefore, an agency is required to use Proposition 172 to supplement its local funds used on police protection, as well as other public safety services. Section 35 at subdivision (a)(2)

provides: “The protection of public safety is the first responsibility of local government and local officials have an obligation to give priority to the provision of adequate public safety services.” In *City of Hayward v. Board of Trustees of California State University* (2015) 242 Cal. App. 4th 833, the court found that Section 35 of Article XIII of the California Constitution requires local agencies to provide public safety services, including fire and police protection, and that it is reasonable to conclude that the city will comply with that provision to ensure that public safety services are provided.

California Penal Code

All law enforcement agencies in California are organized and operated in accordance with the applicable provisions of the California Penal Code. This code sets forth the authority, rules of conduct, and training for peace officers. Under state law, all sworn municipal and county officers are state peace officers.

California Governor’s Office of Emergency Services (Cal OES)

In 2009, the State of California passed legislation creating the Cal OES and authorized it to prepare a Standard Emergency Management System (SEMS) program (Gov. Code Section 8607; Title 19 CCR Section 2401 et seq.), which sets forth measures by which a jurisdiction should handle emergency disasters. In California, SEMS provides the mechanism by which local government requests assistance. Non-compliance with SEMS could result in the state withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster. Cal OES coordinates the state’s preparation for, prevention of, and response to major disasters, such as fires, floods, earthquakes and terrorist attacks. During an emergency, Cal OES serves as the lead state agency for emergency management in the state. It also serves as the lead agency for mobilizing the state’s resources and obtaining federal resources. Cal OES coordinates the state response to major emergencies in support of local government. The primary responsibility for emergency management resides with local government. Local jurisdictions first use their own resources and, as they are exhausted, obtain more from neighboring cities and special districts, the county in which they are located, and other counties throughout the state through the statewide mutual aid system (see discussion of Mutual Aid Agreements, below). California Emergency Management Agency (Cal-EMA) maintains oversight of the state’s mutual aid system.

Local

City of Los Angeles General Plan Framework Element

The City of Los Angeles General Plan Framework Element (General Plan Framework), originally adopted in December 1996 and re-adopted in August 2001, provides a comprehensive vision for long-term growth within the City and guides subsequent amendments of the City’s Community Plans Specific Plans, zoning ordinances, and other local planning programs. Chapter 9 of the General Plan Framework addresses Infrastructure and Public Services. Goals 9I and 9J are related to public services and are listed below.

Goal 9I: Every neighborhood in the City has the necessary police services, facilities, equipment, and manpower required to provide for the public safety needs of that neighborhood.

Objective 9.13: Monitor and forecast demand for existing and projected police service and facilities.

Policy 9.13.1: Monitor and report police statistics, as appropriate, and population projections for the purpose of evaluating police service based on existing and future needs.

Objective 9.14: Protect the public and provide adequate police services, facilities, equipment and personnel to meet existing and future needs.

Objective 9.15: Provide for adequate public safety in emergency situations.

Goal 9J: Every neighborhood has the necessary level of fire protection service, emergency medical service (EMS) and infrastructure.

Objective 9.16: Monitor and forecast demand for existing and projected fire facilities and service.

City of Los Angeles General Plan Safety Element

The City of Los Angeles General Plan Safety Element (Safety Element), adopted on November 26, 1996, includes policies related to the City's response to hazards and natural disasters, including fires. In particular, the Safety Element sets forth requirements, procedures, and standards to facilitate effective fire suppression and emergency response capabilities. In addition, the City's Safety Element designates disaster routes. Goal 2 of the Safety Element is relevant to the proposed Project and is listed below.

Goal 2: A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage and disruption of the social and economic life of the City and its immediate environs.

Objective 2.1: Develop and implement comprehensive emergency response plans and programs that are integrated with each other and with the City's comprehensive hazard mitigation and recovery plans and programs.

Policy 2.1.5: Response: Develop, implement, and continue to improve the City's ability to respond to emergency events. [All EOO emergency response programs and all hazard mitigation and disaster recovery programs related to protecting and reestablishing communications and other infrastructure, service and governmental operations systems implement this policy.]

Silver Lake-Echo Park-Elysian Valley Community Plan

The goal of the Silver Lake-Echo Park-Elysian Valley Community Plan (Community Plan) is to promote an arrangement of land uses, streets, and services which will encourage and contribute to the economic, social and physical health, safety, welfare, and conveniences of the people who live and work in the community (City of Los Angeles 2004). Part of this plan includes providing

adequate public services to the community. Relevant goals of the Community Plan related to public services include:

Goal 8: A community with adequate police facilities and services to protect the community's residents from criminal activity, reduce the incidence of crime and provide other necessary law enforcement services.

Goal 9: Protect the community through a comprehensive fire and life safety program.

Los Angeles Municipal Code

The Los Angeles Fire Code (LAMC Chapter V, Article 7) incorporates by reference portions of the California Fire Code and the International Fire Code. The City's Fire Code sets forth regulatory requirements pertaining to the prevention of fires; the investigation of fires and life safety hazards; the elimination of fire and life safety hazards in any building or structure (including buildings under construction); the maintenance of fire protection equipment and systems; and the storage, use, and handling of hazardous materials. Specific regulations regarding fire prevention and protection are discussed below.

Section 57.503.1.4 requires an approved, posted fire lane whenever any portion of an exterior wall is more than 150 feet from the edge of a roadway.

Section 57.503.1.6 requires fire lanes shall be designated and maintained as follows:

1. Fire lanes shall have a minimum clear roadway width of 20 feet (6096 mm) when no parking is allowed on either side.
2. Those portions of a fire lane that must accommodate the operation of Fire Department aerial ladder apparatus shall have a minimum clear roadway width of 28 feet (8534 mm) when no parking is allowed on either side.
3. Those portions of a fire lane 30 feet (9144 mm) on either side of a private fire hydrant shall have a minimum clear roadway width of 28 feet (8534 mm). No parking shall be permitted within those portions of the roadway that are within 30 feet (9144 mm) of and on the same side of the roadway as a private fire hydrant.
4. Where parking is allowed on only one side of a required fire lane, parking shall be on the same side of the roadway as the hydrants.
5. Where parallel parking is allowed on either side of a fire lane, the roadway width shall be increased 8 feet (238 mm) for each parking lane.
6. Where access requires accommodation of Fire Department apparatus, overhead clearance shall not be less than 14 feet (4267 mm).
7. Dead-end fire lanes shall terminate in cul-de-sacs or other approved turning areas consistent with the Department of Public Works Standard Street Dimension Plan D-22549.
8. Fire lanes shall be paved to the City Engineer's standards for public alleys.

Section 57.507.3.1 establishes fire water flow standards, which vary from 2,000 gallons per minute (gpm) in low-density residential areas to 12,000 gpm in high-density commercial or industrial areas (where local conditions indicate that consideration must be given to simultaneous fires, and additional 2,000 to 8,000 gpm will be required), with a minimum residual water

pressure of 20 pounds per square inch (psi) remaining in the water system. Site-specific fire flow requirements are determined by the LAFD based on land use, life hazard, occupancy, and fire hazard level.

Section 57.507.3.2 addresses land use-based requirements for fire hydrant spacing and type. Regardless of land use, every first story of a residential, commercial, or industrial building must be within 300 feet of an approved hydrant. The site-specific number and location of hydrants would be determined as part of LAFD's fire/life safety plan review for each development.

Los Angeles Fire Department Strategic Plan 2018–2020

The Los Angeles Fire Department Strategic Plan 2018–2020, A Safer City 2.0, is a collaborative effort between LAFD staff, city leaders, and community members to accomplish the LAFD's organizational vision. The Strategic Plan 2018–2020 builds upon the progress of the first Strategic Plan from 2015–2017, which resulted in the achievement of 70 percent of its goals. As provided in the Strategic Plan 2018–2020, five goals will guide the LAFD for the next three years: (1) Provide exceptional public safety and emergency service; (2) Embrace a healthy, safe and productive work environment; (3) Implement and capitalize on advanced technology; (4) Enhance LAFD sustainability and community resiliency; and (5) Increase opportunities for personal growth and professional development.

Los Angeles Public Library Strategic Plan 2015–2020

The Los Angeles Public Library Strategic Plan 2015–2020 (Strategic Plan) sets forth LAPL's goals and objectives focused on providing library services within existing library facilities. The goals and objectives discussed in the Strategic Plan focus on community development and program expansion in an effort to increase the number of people who use the library services, increase the number of library card holders, and increase residents' overall engagement with the library. Through Measure L, approved in March 2011, LAPL would also be able to expand its services, collections and technology. The LAPL Strategic Plan 2015-2020 is a five-year plan to detail expanded programs and services, referred to as Key Activities within the Plan, offered by LAPL (Los Angeles Public Library 2015).

3.14.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to public services are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:
 - Fire protection (Refer to Impact 3.14-1)
 - Police protection (Refer to Impact 3.14-1)
 - Schools (Refer to Impact 3.14-2)

- Parks (Refer to Section 3.15, *Recreation*)
- Other public facilities (Refer to Impact 3.14-2)

In addition, an evaluation was conducted using screening criteria included in the City's 2006 *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (L.A. CEQA Thresholds Guide). The evaluation concluded that none of the thresholds related to Public Services were triggered by the proposed Project. As a result, further analysis using the 2006 L.A. CEQA Thresholds Guide thresholds is not required for this topic.

3.14.4 Project Design Features

Refer to Project Design Feature PDF-TRA-1: Construction Traffic Management Plan in Section 3.15, *Transportation*, of this Draft EIR.

In addition, the following Project Design Feature related to public services will be implemented as part of the proposed Project:

PDF-PS-1: Construction Security Measures. During construction, on-site security measures will include security lighting and a construction security fence with gated and locked entry around active construction areas.

PDF-PS-2: Operational Security Measures. For Special Events that occur during the nighttime hours, security lighting will be provided.

3.14.5 Impacts and Mitigation Measures

Public Services: Fire and Police Protection

Impact 3.14-1: Would the proposed Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire or police protection?

Construction

The environmental analysis in this section was conducted in consultation with the City of Los Angeles Fire Department and City of Los Angeles Police Department (Personal communication 2022). The proposed Project would not include construction of any new or physically altered fire or police facilities. Construction activities for the proposed Project and offsite improvements would involve a maximum of approximately 335 construction workers spread throughout the proposed park zones. Employment opportunities associated with the construction activities are assumed to be filled by the local workforce and would not result in increased housing demand, which would in turn not result in the need for new public services. Police and fire protection services, and emergency response services (including ambulance services) would be met with existing facilities and staff levels. All construction activities would comply with standard fire safety precautions and adequate emergency access during proposed Project demolition activities and construction. Project areas, including the proposed buildings would be equipped with a fire protection system. The firewater supply and pumping system would provide the code-required

quantity of firefighting water to yard hydrants, hose stations, and water spray and sprinkler systems. Refer to discussion in Section 3.18, *Utilities*. During demolition, LAFD access to the Project site would remain clear and unobstructed. Implementation of PDF-TRA-1 would require the preparation of a Construction Traffic Management Plan and would ensure that adequate circulation, including for emergency vehicles, is maintained during proposed Project construction, including off-site improvements. In addition, implementation of PDF-PS-1 during construction would include on-site security measures, including security lighting and a construction security fence in order to ensure safety features. The proposed Project would adhere to all local and state regulations described above. Proposed Project construction would not adversely affect service ratios, response times, or other performance objectives and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

The nearest fire station to the proposed Project area would be LAFD Station 56 located approximately 0.25 miles to the north near Tesla Avenue. The proposed Project would enhance existing recreational areas with the construction of more public recreational facilities and opportunities within the SLRC boundary. During operation, the proposed Project would be required to comply with applicable regulations such as the Los Angeles Fire Code to ensure adequate fire protection services and accessibility. proposed Project operations would not require additional fire or hazard services. LAFD would be able to serve the proposed Project and would not result in the need for new or altered fire facilities (LAFD Pers comm 2022). LAPD would be responsible for crime prevention, law enforcement, and apprehension of suspected violators in the proposed Project area. The closest station to the proposed Project area would be LAPD Northeast Community Police Station located approximately 1.3 miles to the northeast, near Tesla Avenue. The Northeast Community Police Station would be able to serve the proposed Project and would not result in the need for new or altered police facilities (LAPD Pers comm 2022). During operation, the proposed Project would incorporate an Operations and Maintenance Plan, which would include security considerations, to address the safety of park visitors. Staff would have a daily presence within the proposed Project area to provide oversight of the proposed Project area. The proposed Project assumes that five full-time staff would be required daily at the proposed Project area. Once constructed, it is estimated that the proposed Project would allow for an increase in visitorship of approximately 390 park visitors daily as shown on Tables 2-7 and 2-8. This increase assumes that the majority of park visitors would be coming from the residential neighborhood surrounding the SLRC and would be less likely to drive to the site (approximately 70 percent of total visitors are expected to be local visitors). Although there would be an increase in visitorship, operation of the proposed Project area would not greatly differ from existing conditions along the South Valley and the Meadow, and additional recreational facilities would be added to the other proposed park zones along the Knoll, the Ivanhoe Reservoir, the Eucalyptus Grove, and the East and West Narrows. These activities would not result in a substantial increase

to fire or police services required within the proposed Project area. Furthermore, for additional security, new lighting would be added to the proposed Project area to allow the public to use certain areas after dark and for safety (see Figure 2-8), and signage delineating safety information would be added around the two reservoirs to indicate that no swimming is allowed. In addition, implementation of PDF-PS-2 during operation would include security lighting for special events that would occur during the nighttime hours. Accordingly, new or altered government fire and police facilities would not be needed for the operation of the proposed Project, and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Public Services: Schools, Other Facilities

Impact 3.14-2: Would the proposed Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for schools, parks, or other facilities?

Construction

As discussed in Section 3.14.1 *Environmental Setting*, there are multiple school districts, parks, hospitals, libraries, and government facilities which serve the proposed Project area. The proposed Project would require a maximum of approximately 335 construction workers during some phases of the proposed Project and offsite improvements construction. As discussed in Section 3.13, *Population and Housing*, construction of the proposed Project would not create substantial numbers of jobs that would have a noticeable effect on population. In addition, each phase of construction would require a varied and intermittent labor force, with each phase considered temporary. As such, there would be no need for additional school services or park facilities that would otherwise be required to accommodate an increase in local population during the construction phase. As a result, construction of new or expanded school facilities, libraries, or other public facilities would not occur and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

The proposed Project would enhance existing recreational areas with the construction of additional public recreational facilities and opportunities within the SLRC boundary. The proposed Project would not include additional housing. As further addressed in Section 3.13,

Population and Housing, the proposed Project would not substantially increase the local residential population or induce growth. Approximately five new full-time employees would be required to maintain and operate the proposed Project daily. This number of staff would be minimal and would not present a substantial increase in workers to the proposed Project area.

An increase in visitorship of approximately 390 park visitors daily is anticipated. However, these visitors and the new proposed full-time employees would not reside in or permanently occupy the project site and service demands per person within the area would not increase. These daily increases within the proposed Project area would not directly increase demand for school facilities, parks, library services, or other public facilities such as hospitals within the proposed Project area and region. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

No Impact

Cumulative Impact

Impact 3.14-3: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to public services?

Cumulative impacts on public services could result when past, present, and reasonably foreseeable future projects combine to increase demand on public services such that additional facilities must be constructed to maintain acceptable levels of service, and the construction of such facilities would result in a physical impact on the environment. Table 3-2 in Chapter 3 identifies thirteen related projects that are planned or are under construction within the Project area which include mixed-use developments, a childcare facility, residential, and commercial uses. Proposed development projects include residential units, commercial spaces (i.e., office and retail), and a hotel. These proposed development projects could result in an increase in permanent residents and visitors to the Project area, and therefore an increase in the demand for police and fire protection services within the Project area. Higher demand for police and fire protection services could contribute to adverse impacts related to Public Services (i.e., a reduction in acceptable service ratios, response times, or other performance objectives that would require the need for new or physically altered governmental facilities). However, proposed development projects would be required to meet the City's response distance, emergency access, fire flow, and other safety standards and requirements in the Los Angeles Fire Code and Building Code. Proposed development projects would also be subject to review by LADOT, LAPD, and LAFD to minimize any potential impacts. In addition, proposed developments would be evaluated based on whether they are consistent with the City's General Plan and Municipal Code. Currently, there are no fire or police stations that are proposed for development within the Project area. An increase in residential units could also increase the usage of demand for school facilities, parks, library services, or other public facilities such as hospitals within the proposed Project area and region. However, the proposed Project does not have a permanent residential component and, therefore,

would not add an incremental contribution to cumulative public services impacts due to increased demand for school facilities, parks, library services, or other public facilities such as hospitals. Therefore, the Project's contribution to cumulative impacts associated with the provision of new or physically altered public services facilities would not be cumulatively considerable. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.14.6 Summary of Impacts

Table 3.14-4 summarizes the impact significance determinations and lists mitigation measures related to public services.

**TABLE 3.14-4
 SUMMARY OF PROPOSED PROJECT IMPACTS TO PUBLIC SERVICES**

Impact	Mitigation Measure	Significance
3.14-1: Public Services: Fire and Police Protection Services	None Required	LTS
3.14-2: Public Services: Schools, Parks, Other Facilities	None Required	LTS
3.14-3: Cumulative Impact	None Required	LTS

NOTES:
 NI = No Impact, no mitigation proposed
 LTS = Less than Significant, no mitigation proposed
 LTSM = Less than Significant Impact with Mitigation Incorporated
 SU = Significant and Unavoidable

3.14.7 References

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3.15 Recreation and Parks

This section addresses the potential impacts to recreation associated with implementation of the proposed Project. This section includes: a description of the existing parks and recreational facilities in the proposed Project area; a summary of applicable regulations related to parks and recreation; and an evaluation of the potential impacts of the proposed Project related to recreational facilities in and around the proposed Project area. Impacts to recreation and parks are significant and unavoidable, even with implementation of mitigation measures for construction related noise and operational noise during special events. Nevertheless, all mitigation measures included in the Draft EIR would be implemented.

3.15.1 Environmental Setting

Project Area Setting

The proposed Project would be located within the 127-acre Silver Lake Reservoir Complex (SLRC). Approximately 3 acres of SLRC land, known as the Meadow, is operated and maintained by the City of Los Angeles Recreation and Parks Department (RAP). The current Meadow is an open grassy area along the eastern side of the SLRC that is open to public access from dawn till dusk. In addition, RAP operates the existing Silver Lake Recreation Center and dog park, located along the southern side of the SLRC. The Silver Lake Recreation Center includes a recreation center, playground, and basketball courts. The existing dog park is located along the southern side of the SLRC to the east of the Silver Lake Recreation Center. Currently, there are two pathways shared with the public on the west side of Ivanhoe Reservoir and along the top of Silver Lake Dam. Approximately 4 acres of existing paved surfaces around the reservoirs' perimeters are available for shared public use with LADWP. The entire SLRC is enclosed by a perimeter chain-link fence varying in height from 6 to 12 feet. Outside of the proposed impact area, along the northern side of the SLRC, is a nursery school and the Tesla Pocket Park. Refer to Figure 2-2 for the location of existing recreational facilities within the proposed Project area.

Parks and Recreation Facilities

Los Angeles County

The County of Los Angeles Department of Parks and Recreation (LADPR) owns, operates, and maintains nearly 182 parks and recreational facilities. The County's parks and recreation system includes 73,214 acres of parks, lakes, trails, natural areas, and gardens and the world's largest public golf course system. The County park system includes 9 regional parks (greater than 100 acres), 19 community regional parks (20 to 100 acres), 20 community parks 10 to 20 acres in size), 39 neighborhood parks (3 to 10 acres in size), 20 pocket parks (less than 3 acres in size)/park nodes (small pieces of open space that provide breaks to the urban landscape), 233 miles of horse and hiking trails, 20 golf courses, and 36 swimming pools (LADPR 2021).

The County parks system includes community parks, neighborhood parks, pocket parks, and park nodes. Local parks serve neighborhoods within a maximum of a 2-mile radius of any one park. The regional park system includes regional parks, community regional parks, and special-use facilities (single-use facilities serving greater recreational or cultural needs). The parks in the

regional park system provide service for areas within a 20- to 25-mile radius. Other recreational facilities available to County residents include trails, multi-benefit parks, school sites, city parks and facilities, private recreational facilities, and greenways (County of Los Angeles 2015).

The County goal for the provision of parkland is 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County (County of Los Angeles 2015). Section 21.24.340 of the County Code has a standard of 3 acres of local and 5 acres of regional parkland per 1,000 residents (County of Los Angeles 2018).

City of Los Angeles

RAP stewards to over 16,000 acres of parkland, offering extensive recreational, social and cultural programs at 444 park sites in every Los Angeles neighborhood. The RAP maintains and operates hundreds of athletic fields, 422 playgrounds, 321 tennis courts, 184 recreation centers, 72 fitness areas, 62 swimming pools and aquatic centers, 30 senior centers, 26 skate parks, 13 golf courses, 12 museums, 9 dog parks, and 187 summer youth camps and helps support the Summer Night Lights gang reduction and community intervention program. The RAP employs 1,400 full time employees, 5,000 part-time/seasonal employees, and 35,000 volunteers and park partners (RAP 2022).

Within a 2-mile radius of the proposed Project area, there are a total of 50 recreational facilities primarily operated by either LADPR or RAP: 43 parks and open space areas; and 7 recreation centers. Three noteworthy recreational assets within the City near the proposed Project area are discussed in more detail below.

Griffith Park

Griffith Park, one of the largest municipal parks in the County is located one mile northwest of the proposed Project area and offers over 4,000 acres of green open space, as well as various activities including but not limited to hiking trails, two golf courses, horseback riding trails, soccer fields, baseball fields, children's playgrounds, a merry-go-round, a zoo and a planetarium. Additionally, a large soccer field, public pool and a newly refurbished playground are located between the Silver Lake Reservoir Complex (SLRC) and Griffith Park on Riverside Drive (Chee Salette 2019).

Elysian and Echo Park

Elysian Park, another major natural park, is located 1.5 miles southwest of the proposed Project area. Elysian Park which is approximately 765 acres and offers extensive hiking trails and houses the Los Angeles Dodgers Stadium. Echo Park, a smaller urban park with a large water feature used for recreation and habitat is located 1.5 miles to the south of the proposed Project area (Chee Salette 2019).

Los Angeles River

Approximately 0.5 mile north of the proposed Project area, the Los Angeles River provides opportunities for recreation and exercise in the form of a path along its western bank, where people run, bike, walk and observe wildlife in the Glendale Narrows area of the Los Angeles River (Chee Salette 2019).

Silver Lake-Echo Park-Elysian Valley Community

Nearly 35 percent of the Silver Lake-Echo Park-Elysian Valley Community Plan Area's acreage is dedicated to parkland. In total, the Community Plan area has eight neighborhood parks and two community parks. Additionally, the Community Plan area contains the City's oldest park, Elysian Park. The Community Plan details that the Community Plan area provides an opportunity to increase the area's parkland to offer greenbelts and trail systems to connect and expand recreational facilities City-wide (City of Los Angeles 2004).

Existing Silver Lake Reservoir Complex

The existing SLRC is surrounded by recreational opportunities including a path that loops around the SLRC for strolling, walking pets, and jogging/running. Approximately three acres of SLRC-land is operated by RAP to maintain the existing Meadow and approximately four acres of the SLRC are owned and operated by RAP for the existing Silver Lake Recreation Center (Recreation Center) and Dog Park (Figure 2-2).

The Meadow

The existing 2.5-acre Meadow was envisioned by the *2000 Master Plan* and was created in 2011. Prior to this time, there was a fence surrounding the SLRC which was relocated to open this area to the public. The existing Meadow is an unstructured green open space used for picnicking, walking, running, exercising, and lawn games. The northern edge of the existing Meadow features a native plant garden which is maintained by volunteers (Chee Salette 2019).

Dog Park

The existing 1.5-acre Dog Park is located within the southern portion of the proposed Project area and consists mainly of a sloped dirt field with minimal vegetation and shade. It has separate areas for small dogs and large dogs, and it is a popular amenity within the community (Chee Salette 2019).

Silver Lake Recreation Center

The existing Silver Lake Recreation Center (Recreation Center) is located within the southern portion of the proposed Project area adjacent to the existing Dog Park. The existing Recreation Center offers a wide range of activities throughout the year, including day camps in the summer and includes a polling place for most elections.

The existing Recreation Center contains a building facility with a small gymnasium, a children's playground, and an outdoor basketball court located in a green park, which is partially enclosed by a fence.

3.15.2 Regulatory Framework

State

Public Park Preservation Act

The primary instrument for protecting and preserving parkland in California is the state Public Park Preservation Act. Under the California Public Resources Code, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation

or land, or both, is provided to replace the parkland acquired. This provides no net loss of parkland and facilities.

Local

The City of Los Angeles Charter

The City Charter established the RAP to construct, maintain, operate, and control all parks, recreational facilities, museums, observatories, municipal auditoriums, sports centers and all lands, waters, facilities or equipment set aside or dedicated for recreational purposes and public enjoyment within the City. The Board of Recreation and Parks Commissioners oversees the RAP.

With regard to control and management of recreation and park lands, Section 594(c) of the City Charter provides that all lands set apart or dedicated as a public park shall forever remain for the use of the public inviolate. However, the Board of Recreation and Parks Commissioners may authorize the use of those lands for any park purpose and for other specified purposes.

City of Los Angeles General Plan

Framework Element

The City's General Plan Framework Element (adopted in December 1996 and readopted in August 2001) (Framework Element) includes park and open space policies for the provision, management, and conservation of Los Angeles' open space resources while addressing the outdoor recreation needs of the City's residents, and is intended to guide the amendment of the General Plan's Open Space and Conservation Elements.

Chapter 6, Open Space and Conservation, of the Framework Element, contain policies and objectives that address the provision of parks within the City. The applicable policies to the proposed Project are as follows:

Goal 6A: An Integrated Citywide/regional public and private open space system that serves and is accessible by the City's population and is unthreatened by encroachment from other land uses.

Objective 6.1: Protect the City's natural settings from the encroachment of urban development, allowing for the development, use, management, and maintenance of each component of the City's natural resources to contribute to the sustainability of the region.

Policy 6.1.2: Coordinate City operations and development policies for the protection and conservation of open space resources, by:

Encouraging City departments to take the lead in utilizing water re-use technology, including graywater and reclaimed water for public landscape maintenance purposes and such other purposes as may be feasible;

Preserving habitat linkages, where feasible, to provide wildlife corridors and to protect natural animal ranges; and

Preserving natural viewsheds, whenever possible, in hillside and coastal areas.

Open Space Element

The City's Open Space Element (Open Space Element) was prepared in June 1973 to provide an official guide to the City Planning Commission, the City Council, the Mayor, and other governmental agencies and interested citizens for the identification, preservation, conservation, and acquisition of open space in the City. This document distinguishes open space areas as privately- or publicly-owned, and includes goals, objectives, policies, and programs directed towards the regulation of privately-owned lands both for the benefit of the public as a whole and for protection of individuals from the misuses of these lands. In addition, this document discusses the acquisition and use of publicly-owned lands and recommends further implementation of studies and actions to guide development of open space in the City. Furthermore, in order to address the standards and criteria of identifying open space, this document describes various contextual factors that may affect open space, including, but not limited to, recreation standards; scenic corridors; density and development; cultural or historical sites; safety, health, and social welfare; environmental and ecological balance; and unique sites.

The City's General Plan Open Space Element update was formally initiated pursuant to a Council motion adopted on May 24, 2001 (Council File 96-1358) and has been undergoing revisions by the Department of City Planning. Until approval of the pending updates to the Open Space Element, the RAP is operating under the guidance of the Public Recreation Plan (PRP) discussed below.

Service Systems Element - Public Recreation Plan

As a part of the General Plan's Service Systems Element, the PRP establishes policies and standards related to parks and recreational facilities in the City (City of Los Angeles 1980). The PRP was adopted in 1980 by the Los Angeles City Council and amended by City Council resolution in March 2016. The amendments modernize the PRP's recommendations and provide for more flexibility and equity in the distribution of funds used for the acquisition and development of recreational resources. The PRP also addresses the need for publicly-accessible neighborhood, community, and regional recreational sites and facilities across the City. The PRP focuses on recreational site and facility planning in underserved neighborhoods with the fewest existing resources and the greatest number of potential users (i.e., where existing residential development generates the greatest demand), as well as areas where new subdivisions, intensification of existing residential development, or redevelopment of "blighted" residential areas creates new demand.

The amended PRP establishes general guidelines for neighborhood, community, and regional recreational sites and facilities that address general service radius and access as well as service levels relative to population within that radius. The PRP also states that the allocation of acreage for community and neighborhood parks should be based on the resident population within that general service radius. Toward this end, the amended PRP recommends the goals of 2.0 acres each of neighborhood and community recreational sites and facilities per 1,000 residents, and 6.0 acres of regional recreational sites and facilities per 1,000 residents. To determine existing service ratios, the RAP commonly uses the geographic area covered by the applicable Community Plan rather than the park service radius. The PRP does not establish requirements for individual development projects.

For a given neighborhood recreational site or facility, the amended PRP does not recommend a specific size, noting only that a school playground may partially serve this function (with up to one-half of its acreage counted toward the total acreage requirement [service level per capita]). The amended PRP does not define a specific service radius for neighborhood recreational sites and facilities, instead recommending that they should generally be within walking distance and not require users to cross a major arterial street or highway for access.

For community recreational sites and facilities, the amended PRP states that facilities may be of any size, but are generally larger than neighborhood parks, and a high school site may be counted toward half the acreage requirement/service level per capita. The amended PRP does not define a specific service radius for community recreational sites and facilities, instead recommending that they should generally be accessible within a relatively short bicycle, bus, or car trip, and easily accessible.

For regional recreational sites and facilities, the amended PRP states that facilities may be large urban recreational sites or smaller sites or facilities that draw visitors from across the City. The amended PRP does not define a specific service radius or further qualify access, stating only that the service radius should be that within a reasonable drive.

Health and Wellness Element

The *City's Plan for a Healthy Los Angeles* lays the foundation to create healthier communities for all Angelenos. As an Element of the General Plan, it provides high-level policy vision, along with measurable objectives and implementation programs, to elevate health as a priority for the City's future growth and development. Chapter 3 of the Health and Wellness Element, Bountiful Parks and Open Spaces, outlines policies and objectives to increase the availability of parks through park funding and allocation, park expansion, the Los Angeles River, park quality and recreation programs, park safety, local partnerships, water recreation, and active spaces. Specifically, the objectives include:

- Increase the number of neighborhood and community parks so that every Community Plan Area strives for 3 acres of neighborhood and community park space per 1000 residents (excluding regional parks and open spaces).
- Increase access to parks so that 75 percent of all residents are within a 0.25-mile walk of a park or open space facility.
- Increase the number of schools (public, private, and charter) that have shared use agreements for community use outside of normal school hours by 25 percent.
- Increase the miles of the Los Angeles River that are revitalized for natural open space and physical activity, particularly in low-income areas.
- Increase the number of parks that feature or incorporate universally-accessible features.
- Improve the percentage of citywide population meeting physical fitness standards per week so that 50 percent of the population meets physical activity guidelines.

Community Plan

The City of Los Angeles maintains 35 community plans, one for each of its Community Plan Areas. The community plans establish neighborhood-specific goals and implementation strategies

to achieve the broad objectives laid out in the City of Los Angeles General Plan. Together, the 35 community plans compose the General Plan's Land Use Element, which plays an important role in maintaining the City of Los Angeles's recreation needs. The proposed Project falls within the Silver Lake-Echo Park-Elysian Valley Community Plan. Goals, objectives and policies within the Community Plan applicable to the proposed Project are outlined below.

Goal 4: Adequate recreation and park facilities which meet the needs of the residents in the plan area and create links to existing facilities to expand recreational opportunities Citywide.

Objective 4-1: To conserve, maintain and better use existing recreation and park facilities.

Policy 4-1.1: Preserve the existing recreational facilities and park space.

Program: By maintaining the Open Space zone and land use designation, existing parks and recreational facilities are protected.

Policy 4-1.2: Preserve and encourage acquisition, development and funding of new recreational facilities and park space with the goal of creating greenways and trail systems.

Program: Encourage City departments to reuse and/or convert unused or underused publicly owned land and facilities for recreation and open space facilities, whenever feasible.

Goal 5: A community with sufficient open space in balance with new development to serve the recreational, environmental and health needs of the community.

Objective 5-1: Preserve existing and develop new open space resources.

Policy 5-1.1: Encourage the retention of passive and visual open space which provides a balance to the urban development of the Plan area

Policy 5-1.2: Accommodate active parklands and other open space.

Objective 5-2: Provide/ensure access to new recreational resources and open space developed throughout the Plan area, including trails and facilities along the Los Angeles River, and new parks.

Policy 5-2.1: Ensure that there is public access to any new open space and recreational facilities in the Plan Area, especially the Los Angeles River.

The Project's consistency with the Silver Lake-Echo Park-Elysian Valley Community Plan objectives and policies are evaluated in Section 3.11, *Land Use*, Table 3.11-1.

Los Angeles Department of Recreation and Parks 2009 Citywide Community Needs Assessment

In 2009, RAP commissioned an update of the last Recreation and Parks Needs Assessment from 1999 as a preliminary step in developing a citywide park master plan and five-year capital improvement plan. The report provides an inventory of existing facilities, defines geographic areas of need and recommended facilities to serve specific populations, and identifies priorities

for additional parks and recreation facilities. The report provides a more current assessment of conditions and future needs compared to the PRP, while the PRP recommends the ratios of park acreage per person used in the analysis.

The Citywide Community Needs Assessment (Needs Assessment) divides the RAP's jurisdiction (the City) into seven geographic districts. The geographic district in which the Silver Lake-Elysian Valley-Echo Park Community Plan area is located in the East Los Angeles district. According to the Needs Assessment, significant variation exists related to prioritized facility and program rankings, which are based on the levels of demand in the City's seven different geographical areas. In East Los Angeles, of the 26 recreational uses ranked by the RAP, walking and biking trails are ranked No. 1, small neighborhood parks are ranked No. 2, nature trails are ranked No. 14, indoor gyms are ranked No. 6, outdoor tennis courts are ranked No. 11, outdoor swimming pools are ranked No. 5, nature/environment centers are ranked No. 13, golf courses/driving ranges are ranked No. 22, youth soccer fields are ranked No. 20, and adult soccer fields are ranked No. 25 (RAP 2009).

50 Parks Initiative

In response to the 2009 Citywide Community Needs Assessment, the RAP developed the 50 Parks Initiative with the purpose of substantially increasing the number of parks and facilities available across the City, with a specific focus on densely populated neighborhoods and communities that lack sufficient open space and recreational services.

Park Proud LA Strategic Plan 2018–2022

The Park Proud LA Strategic Plan (Parks Strategic Plan) is the most recent strategic plan for the RAP, effective from 2018 until 2022. The Strategic Plan highlights critical work that needs to be accomplished over the next several years to ensure that the City has an accessible, equitable, and first class park system. The Strategic Plan reflects chief priorities of the RAP, confronts new and existing challenges, and lays the framework to pursue new opportunities. Within the Strategic Plan, there are over two dozen outcomes organized under the following seven high-level priority goals:

- Provide safe and accessible parks;
- Offer affordable and equitable recreation programming;
- Create and maintain world class parks and facilities;
- Actively engage communities;
- Ensure an environmentally sustainable park system;
- Build financial strength and innovative partnerships; and
- Maintain a diverse and dynamic workforce.

3.15.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to recreation and parks are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives for parks. (Refer to Impact 3.15-1)
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (Refer to Impact 3.15-2)
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Refer to Impact 3.15-3)

In addition, an evaluation was conducted using screening criteria included in the City's 2006 *L.A. CEQA Thresholds Guide: Your Resource for Preparing CEQA Analyses in Los Angeles* (L.A. CEQA Thresholds Guide). The evaluation concluded that none of the thresholds related to Recreation and Parks were triggered by the proposed Project. As a result, further analysis using the 2006 L.A. CEQA Thresholds Guide thresholds is not required for this topic.

Methodology

The analysis of parks and recreation impacts is typically based on an estimate of residential population increase that could potentially place additional demand on existing park and recreation facilities. The proposed Project would not contain a residential component that would increase the use of existing parks and recreational uses. However, the proposed Project would include the addition of new recreational facilities and a temporary impact to the existing recreational and park facilities within the SLRC during construction activities.

The analysis evaluates the following three distinctive thresholds: (1) the need to construct new facilities to maintain service ratios or other performance objectives for parks, (2) the deterioration of existing public park facilities due to increased demand, and (3) whether the construction and operation of a new facility would cause environmental impacts. The analysis of impacts to parks and recreational facilities identifies the potential demand that would be generated by the proposed Project and the potential for that additional demand to result in the need for expansion of existing and/or new facilities, the deterioration of existing facilities, or result in environmental impacts associated with the construction of new facilities. The analysis also considers the extent to which Project-provided park and recreational facilities would fulfill City goals and policies and reduce demand for such facilities. In addition, the environmental analysis in this section was prepared in consultation with RAP (Personal communication 2022).

3.15.4 Project Design Features

No specific Project Design Features are proposed with regard to parks and recreation beyond the open space and recreational amenities being constructed or improved by the proposed Project as described in Section 2, *Project Description*.

3.15.5 Impacts and Mitigation Measures

New Park Facility

Impact 3.15-1: Would the proposed Project result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives for parks?

Construction

The proposed Project would not require the addition of new residential units. The proposed Project would enhance existing public park facilities and construct new public park facilities. The proposed Project's construction workers would be drawn from an existing regional labor pool whose workers move between construction projects on a short-term basis without requiring relocation. Workers traveling to or from work, or during a lunch break, may utilize a park that is outside of their residential neighborhood. Such park use would be incidental and typical of conditions throughout the region. Such variations would occur on a short-term basis. Therefore, there would be no notable increase in park usage at the parks serving the area due to the Project's construction workers. There would be no need for the construction of additional park facilities to accommodate the construction worker population.

The existing on-site uses, walking paths, the Meadow, Recreation Center Facility, and Dog Park, would be vacated throughout construction during varying phases of construction, and on-site facilities would not be available to park users. Each of these SLRC components could be removed from public access for a year or more as improvements are made. This temporary access restriction would inconvenience local use, but would be temporary and necessary to improve the facilities for future generations of recreational users. Accordingly, displaced users of the walking paths, the Meadow, the Recreation Center Facility, and the Dog Park would potentially increase demand at other facilities. There are numerous parks located throughout Los Angeles County and within the City of Los Angeles.

Construction activities would occur all at once or in stages, with different park zones constructed at different times. In order to analyze the worst-case scenario during proposed Project and offsite improvements construction, the analysis within this EIR assumes a 2-phased approach, with the shortest construction duration occurring within an overall 5-year period. The following park zones are assumed to be constructed simultaneously within two groupings, where the second grouping would be constructed sequentially after the first: 1) Ivanhoe Reservoir (Ivanhoe Overlook), the Eucalyptus Grove, Habitat Islands, the Knoll, the Meadow (1st half) and 2) the East and West Narrows, the South Valley, Ivanhoe Reservoir (Ivanhoe Spillway and Promenade), and the Meadow (2nd half). Construction in the South Valley park zone would occur for

approximately 18 months. These two phases would be constructed within approximately 2.5 years each. During this period, much of the South Valley park zone would be closed to the public.

Detailed construction durations specific to each park zone are shown on Table 2-3. Construction activities could temporarily limit the use of existing recreational facilities within the SLRC such as the existing Meadow, Dog Park, Recreation Center, and walking paths. Such temporary limits on access (as described above) to the existing recreational facilities within the SLRC may create increased demand on other parks and recreational resources near the proposed Project area. Parks such as Griffith Park, Elysian Park, Echo Park, and walking paths along the Los Angeles River may see an increase in visitorship due to the temporary closure of existing recreational facilities within the SLRC. In addition, Recreation Centers in the vicinity, such as Elysian Valley and Lafayette Park and Dog Parks at Griffith Park and downtown Los Angeles may also see an increase in visitorship during construction. However, these impacts would be temporary in nature, since at the completion of construction, demand within the proposed Project area would be expected to increase and demand at nearby recreational facilities/parks would be returned to their existing conditions. Current visitorship of the existing recreational facilities within the SLRC, which functions as a community park, could be accommodated at any of the 42 local and regional parks within a 2-mile radius of the proposed Project area as discussed in Section 3.15.1, *Existing Setting* and shown on **Figure 3.15-1**. Demand from relocated users of the current SLRC park facilities would be displaced over several parks within the surrounding areas and would not focus on any one nearby park facility. Therefore, it is anticipated that relocated users would not exceed the design capacity of the affected facilities and RAP would continue to be able to maintain adequate service ratios within those facilities.

The addition of the proposed Project's construction workers and the relocation of recreational visitors during Project construction would not require the need for new or physically-altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios. Additionally, as no new recreational facilities would be constructed to replace recreation opportunities during construction, the impact would be less than significant. As described above, during construction, recreational visitors could be accommodated at any of the 42 local and regional parks within a 2-mile radius of the proposed Project area. Increased usage at neighboring parks during construction at the SLRC would be temporary and distributed among several parks in the surrounding area and not focused on any one facility. As such, impacts to public parks and recreational facilities during Project construction would be less than significant.

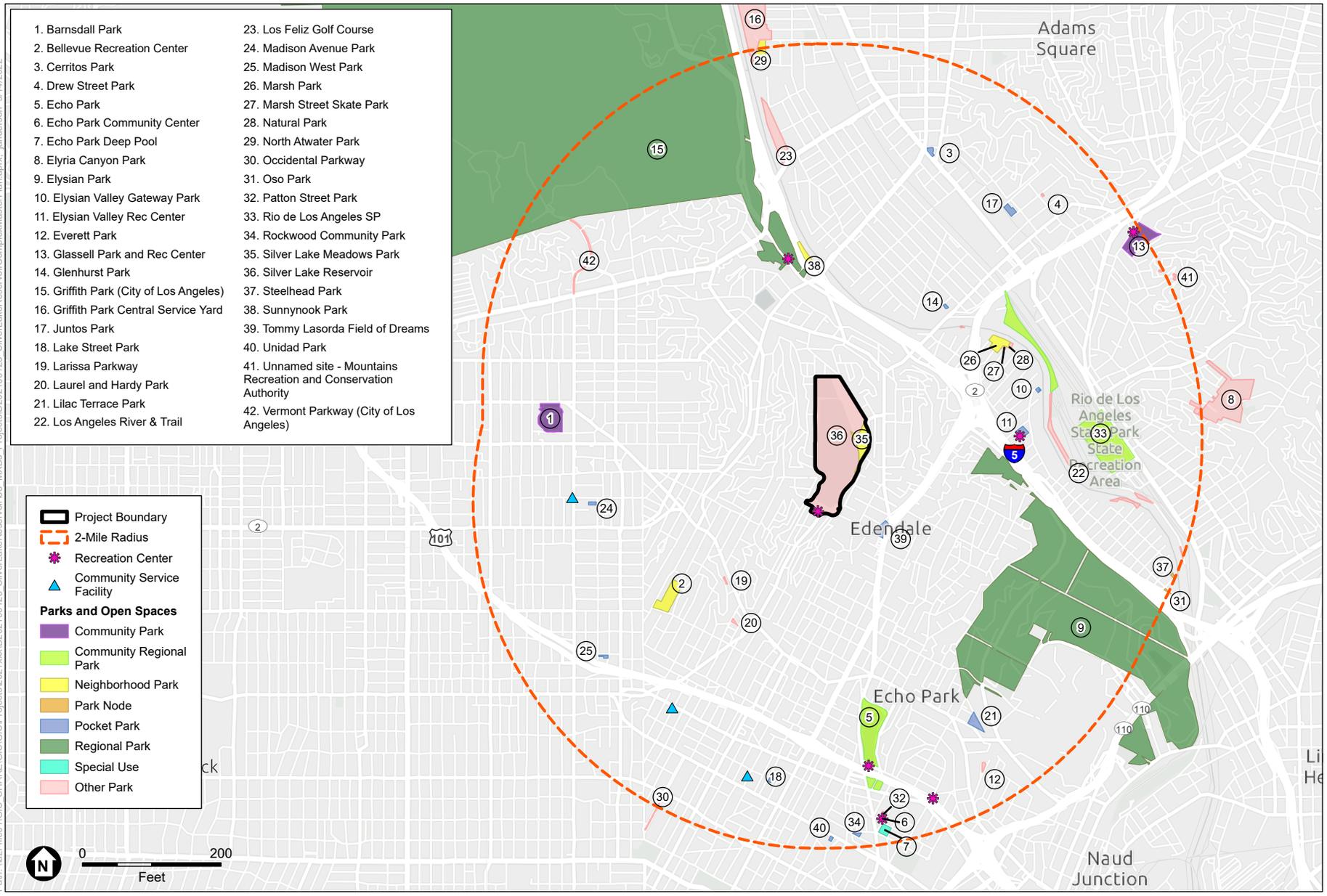
Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Path: \\azrfile01\GIS_SHARE\GIS\GIS\Projects\2021\00123_SilverLakeReservoir\03_MXD\Projects\2021\00123_SilverLakeReservoir\ComplexMasterPlan.aprx - janderson_9/14/2022



SOURCE: ESRI, 2022; County of Los Angeles, 2022; ESA, 2022.

Silver Lake Reservoir Complex Master Plan Project

Figure 3.15-1
Map of Neighborhood, Community, and Regional Parks



Operation

The Project would not include a residential component and, thus, would have no impact on existing public parks and recreational facilities caused by population increase. The proposed Project would substantially increase public park spaces for the nearby neighborhood and broader community through the expansion of the existing recreational facilities within the SLRC, such as the usable public space within the existing Meadow, expansion and improvement of the Dog Park, and expansion and improvement of the Silver Lake Recreation Center facilities along the proposed South Valley park zone. The proposed Project would reconfigure and expand the Meadow's existing 3.4 acres of open lawn and shade trees, into approximately 7.5 acres, by incorporating additional acreage to the west. The proposed Project would also allow for use of local schools and other educational centers through access to docent-led activities and use of the proposed Education Center. Once constructed, with removal of the perimeter chain link fence, and with the addition of several new park and recreational amenities within each of the seven proposed park zones (see Figure 2-4), visitorship demand is expected to increase at the SLRC facilities. It is assumed that the proposed Project would allow for an increase visitorship of approximately 390 park visitors daily (see Tables 2-7 and 2-8). The proposed Project would also allow for large, scheduled public events, including outdoor concerts, movie nights, or luncheons, and requiring amplified sound. It is anticipated that up to approximately 600 visitors would attend such events, with a mixture of approximately 70 percent of attendees coming from the immediate neighborhood by walking or other non-vehicle means, and 30 percent driving in to attend the event. However, the proposed facilities are all being expanded and improved and would be able to accommodate an increase in visitorship with the addition of habitat terraces, a lookout, shade pavilion, and promenade at the Ivanhoe Reservoir; promenade overlook, seating terraces, and promenade at the Eucalyptus Grove; promenade, seating terraces, overlook, and adult fitness area in the East and West Narrows; walking paths at the Knoll; seating terraces, walking paths, picnic grove, informal play area, promenade, and Education Center at the Meadow; and new Multi-purpose Facility at the South Valley (Figure 2-4). In addition, operations associated with the proposed Project would be expected to result in an increase in staffing of approximately five full-time employees for proposed park operations and maintenance activities, and security. This increase in staffing would be minimal and would not substantially increase population growth within the proposed Project area or surrounding areas. The proposed Project would not require the need for new or physically-altered government facilities, the construction of which would cause significant environmental impacts, in order to maintain acceptable service ratios. Impacts to public parks and recreational facilities during Project operation would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Neighborhood and Regional Parks

Impact 3.15-2: Would the proposed Project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Construction

The proposed Project would not include a residential component and not substantially increase population within the proposed Project area, as the construction workforce would be intermittent with a maximum of approximately 335 workers which would be accommodated within the existing and future labor market in the County of Los Angeles. Construction employment within the proposed Project area is not anticipated to generate population growth (see Section 3.13, *Population and Housing*) within the region such that it would add a substantial strain on neighborhood and regional park facilities.

As discussed above under Impact 3.15-1, there are numerous parks located throughout Los Angeles County and within the City of Los Angeles that could accommodate displaced recreational users during construction. Construction activities would occur all at once or in stages, with different park zones constructed at different times. Construction activities could temporarily limit the use of existing recreational facilities within the SLRC such as the Meadow (existing), Dog Park, Recreation Center, and walking paths. Such temporary limits on access to the existing recreational facilities within the SLRC may create increased demand on other parks and recreational resources near the proposed Project area. Increased visitorship at other nearby park facilities would be temporary in nature, since at the completion of construction, demand within the proposed Project area would be expected to increase and demand at nearby recreational facilities/parks would be returned to their existing conditions.

Local alternative recreational opportunities would be available during proposed Project construction closures and the proposed Project would not include construction of additional housing units or create a substantial increase in employment opportunities within the region. As such, construction of the proposed Project would not result in substantial physical deterioration of any park facility, and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As discussed under Impact 3.15-1, the proposed Project would not include a residential component that would increase demand on existing neighborhood, community, or regional parks and result in the substantial physical deterioration of existing parks or accelerate the physical deterioration of existing parks. In addition, as described in detail under Impact 3.15-1, above, the proposed Project would provide enhanced and new recreational uses for the public within the proposed Project area.

Once constructed, with removal of the perimeter chain link fence, and with the addition of several new park and recreational amenities within each of the seven proposed park zones (see Figure 2-4), visitorship demand is expected to increase at the SLRC facilities. It is assumed that the proposed Project would allow for an increase visitorship of approximately 390 park visitors daily (see Tables 2-7 and 2-8). Enhanced and expanded public park facilities and offsite improvements would be able to accommodate an increase in visitorship. Operations associated with the proposed Project would be expected to result in an increase in staffing of approximately five full-time employees for proposed park operations and maintenance activities, and security. This increase in staffing would not substantially increase population growth within the proposed Project area or surrounding areas. The proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Recreational Facilities

Impact 3.15-3: Would the proposed Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Construction

The proposed Project is a park enhancement and expansion project as described in Section 2, *Project Description*, which would improve and expand existing recreational facilities within the SLRC including the Meadow, Dog Park, and Recreation Center, and add facilities throughout the seven proposed park zones. Since the proposed Project is itself a recreational facility, the impacts associated with construction are analyzed throughout Chapter 3, *Environmental Setting, Impact Analysis, and Mitigation Measures* of this Draft EIR. The proposed Project would result in construction impacts related to aesthetics, air quality, biological resources, cultural resources, noise, paleontological resources, tribal cultural resources, and utilities. With the implementation of mitigation measures, construction impacts would be less than significant with the exception of noise. As discussed in Section 3.12, *Noise*, construction noise would result in a significant and unavoidable impact even after mitigation.

Mitigation Measures:

Implementation of all Mitigation Measures listed in Executive Summary Table ES-4 related to construction.

Significance Determination:

Significant and Unavoidable related to construction noise. It is not feasible to install noise barriers with height sufficient to block the line-of-sight for all noise-sensitive receptors located at higher elevation residential units due to barrier foundation and wind load restrictions. Because there could be receptors elevated above the construction work sites

throughout the Project area within the upper levels of a noise-sensitive receptor building, construction noise would represent a temporary noise increase in excess of standards for receptors identified in *Section 3.12, Noise* and would be a significant and unavoidable impact.

Operation

The proposed Project would redesign the SLRC into proposed park zones for recreational use; thereby increasing the quantity and quality of recreational facilities within the community. The proposed Project's physical impacts on the environment associated with operations are analyzed within Chapter 3, *Environmental Setting, Impact Analysis, and Mitigation Measures* of this Draft EIR. The proposed Project would result in impacts related to air quality, biological resources, and transportation. With the implementation of mitigation measures, operational impacts would be less than significant with the exception of noise impacts associated with public events. As discussed in *Section 3.12, Noise*, operational noise would result in a significant and unavoidable impact even after mitigation. Impacts to noise during public events would remain significant and unavoidable.

Mitigation Measures:

Implementation of all Mitigation Measures listed in Executive Summary Table ES-4 related to operations and maintenance.

Significance Determination:

Significant and Unavoidable related to Operational Noise during special events. While Mitigation Measure NOISE-4, Special Event Permit – Amplified Sound would require a special event permit and establish guidelines for speaker placement and directionality, operating hours, and the use of temporary noise barriers, blankets, or baffles may be required on either side of and behind speakers to limit the amount of excess noise reaching nearby sensitive receptors, noise from the amplified speaker system for special events may still temporarily exceed the significance threshold at sensitive receptors near to the amplified speaker system. Because special events may include outdoor concerts, movie nights, luncheons, or other similar types of events that draw members of the community, it may not be feasible to reduce the volume of the amplified speaker system to a level below the significance threshold while still retaining a sufficient volume level for people in the Meadow park zone to adequately hear and enjoy the special event. Therefore, while Mitigation Measure NOISE-4 would minimize sound from the amplified speaker systems for special events to the extent feasible, noise impacts would be significant and unavoidable even after mitigation is applied.

Cumulative Impact

Impact 3.15-4: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively considerable impact to recreation and parks?

Cumulative impacts on recreation could result when past, present, and reasonably foreseeable future projects combine to increase demand on recreation facilities such that additional facilities must be constructed to maintain acceptable levels of service, and the construction of such facilities would result in a physical impact on the environment. Table 3-2 identifies thirteen

related projects that are planned or are under construction within the Project area include mixed-use developments, a childcare facility, residential and commercial uses. The RAP calculates its availability of park space according to residential density, as opposed to employees or visitors to an area. Most park visits originate from people’s homes and residents tend to prefer using local parks out of convenience. Typically, employees in an area are engaged in their work during the day and do not contribute notable demand for parks. Given the RAP methodology for evaluating park services, this cumulative analysis on parks and recreation focuses on the related projects that propose residential uses.

The related projects would cumulatively generate the need for additional parks and recreational facilities. The increase in cumulative development, which includes a net increase in 835 dwelling units, and an increase in commercial/retail uses and other non-residential uses, would generate an increase in service population and a demand for park and recreational uses. However, the proposed Project would not contribute to the need for new facilities. Therefore, the project’s contribution would not cause a cumulatively considerable addition to the effects on parks and recreation from past, present, and reasonably foreseeable future projects. As such, cumulative impacts on parks and recreational facilities would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.15.6 Summary of Impacts

Table 3.15-1 summarizes the impact significance determinations and lists mitigation measures related to parks and recreation.

**TABLE 3.15-1
 SUMMARY OF PROPOSED PROJECT IMPACTS TO RECREATIONAL FACILITIES**

Impact	Mitigation Measure	Significance
3.15-1: New Park Facility	None Required	LTS
3.15-2: Neighborhood and Regional Parks	None Required	LTS
3.15-3: Recreational Facilities	All mitigation measures listed in the Executive Summary Table ES-4 related to construction and operations	SU during construction (due to construction Noise and groundborne vibration-human annoyance) and during operation (due to Special Events Noise)
3.15-3: Cumulative	None Required	LTS

NOTES:

- NI = No Impact, no mitigation proposed
- LTS = Less than Significant, no mitigation proposed
- LTSM = Less than Significant Impact with Mitigation Incorporated
- SU = Significant and Unavoidable

3.15.7 References

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3.16 Transportation

This section addresses the potential impacts to transportation associated with implementation of the proposed Project. This section includes: a description of the existing circulation system in the proposed Project area; a summary of applicable regulations related to transportation; and an evaluation of the potential impacts of the proposed Project related to transportation. Project design features related to transportation include: **PDF-TRA-1: Construction Traffic Management Plan, PDF-TRA-2: Construction Staging Plan, PDF-TRA-3: Construction Traffic, PDF-TRA-4: Access to Parcels, PDF-TRA-5: Site-Specific Traffic Control and Transit Plan for Large Events, and PDF-TRA-6: Expand Public Transit Connections.** Impacts to transportation are less than significant, and no mitigation is required.

The analysis of in this section is based on the Silver Lake Reservoir Complex Master Plan Project Transportation Impact Assessment (TIA) prepared by Jano Baghdanian & Associates in February 2022. The TIA is included as Appendix K of this Draft EIR. The analysis is further informed by a City of Los Angeles Inter-Departmental Memorandum prepared by the Department of Transportation dated June 1, 2022 that evaluates the proposed Project's impacts to transportation and traffic.

3.16.1 Environmental Setting

The proposed Project site and surrounding areas (within a quarter-mile buffer) has a dense street network including local city streets and nearby freeways. Primary roadways in the Project site and surrounding areas are listed in **Table 3.16-1** as described below.

**TABLE 3.16-1
PROJECT AREA STREET CLASSIFICATIONS**

Roadway	Direction	Classification	Lane Configuration	Parking
Silver Lake Blvd	N/S	Avenue II	1 lane in each direction	On-street
Silver Lake Dr	N/S	Collector	1 lane in each direction	On-street
Armstrong Ave	N/S	Collector	1 lane in each direction	On-street (residential side only)
Tesla Ave	E/W	Local	1 lane in each direction	On-street
Lakewood Ave	N/S	Local	1 lane in each direction	On-street
Van Pelt Pl	E/W	Local	1 lane in each direction	On-street

SOURCE: JBA 2022

Silver Lake Boulevard is classified as an Avenue II with a roadway width of 50 feet. In the vicinity of the Project, Silver Lake Boulevard has 1 travel lane and a Class II bike lane for each direction separated by a double yellow centerline. A dirt trail with traffic barriers is provided on the east west side of Silver Lake Boulevard adjacent to the reservoir and a concrete sidewalk is provided on the west east side. Silver Lake Boulevard has a 35 miles per hour (mph) speed limit.

Armstrong Avenue is a two-lane Collector. For the most part of Armstrong Avenue, the roadway width is 30 feet with the exception of a small portion just north of Edgewater Terrace, where the width increases to 35 feet. There is a double yellow centerline on the street. Armstrong Avenue has a concrete sidewalk on the residential (northeast) side and a dirt trail on the side adjacent to the project (southwest). Armstrong Avenue has a 25 mph speed limit.

Tesla Avenue is a one-way westbound local street with 1 travel lane. The street width is 24 feet. There is a concrete sidewalk on the south side of the roadway adjacent to the reservoir and a discontinuous sidewalk on the north. Tesla Avenue has a 25 mph speed limit.

West Silver Lake Drive is classified as a Collector. For the most part of West Silver Lake Boulevard adjacent to the reservoir, the roadway width is approximately 36 feet with one lane in each direction separated by a double yellow centerline. A concrete sidewalk is provided on the west side and a dirt trail is present on the east, adjacent to the reservoir. At the south end of the reservoir, where West Silver Lake Drive intersects Redesdale Avenue, the street width widens to approximately 50 feet. There are Metro Line 201 bus stops for north and southbound West Silver Lake Boulevard. Metro Line 201 provides services between the City of Glendale north of the SR 134 Freeway and Wilshire Boulevard in the Westlake North district of the City of Los Angeles. West Silver Lake Drive has a 25 mph speed limit.

Van Pelt Place has a roadway classification of Local Street. The street is about 30 feet wide with one lane in each direction. Van Pelt Place has a 25 mph speed limit.

Public Transit Connections

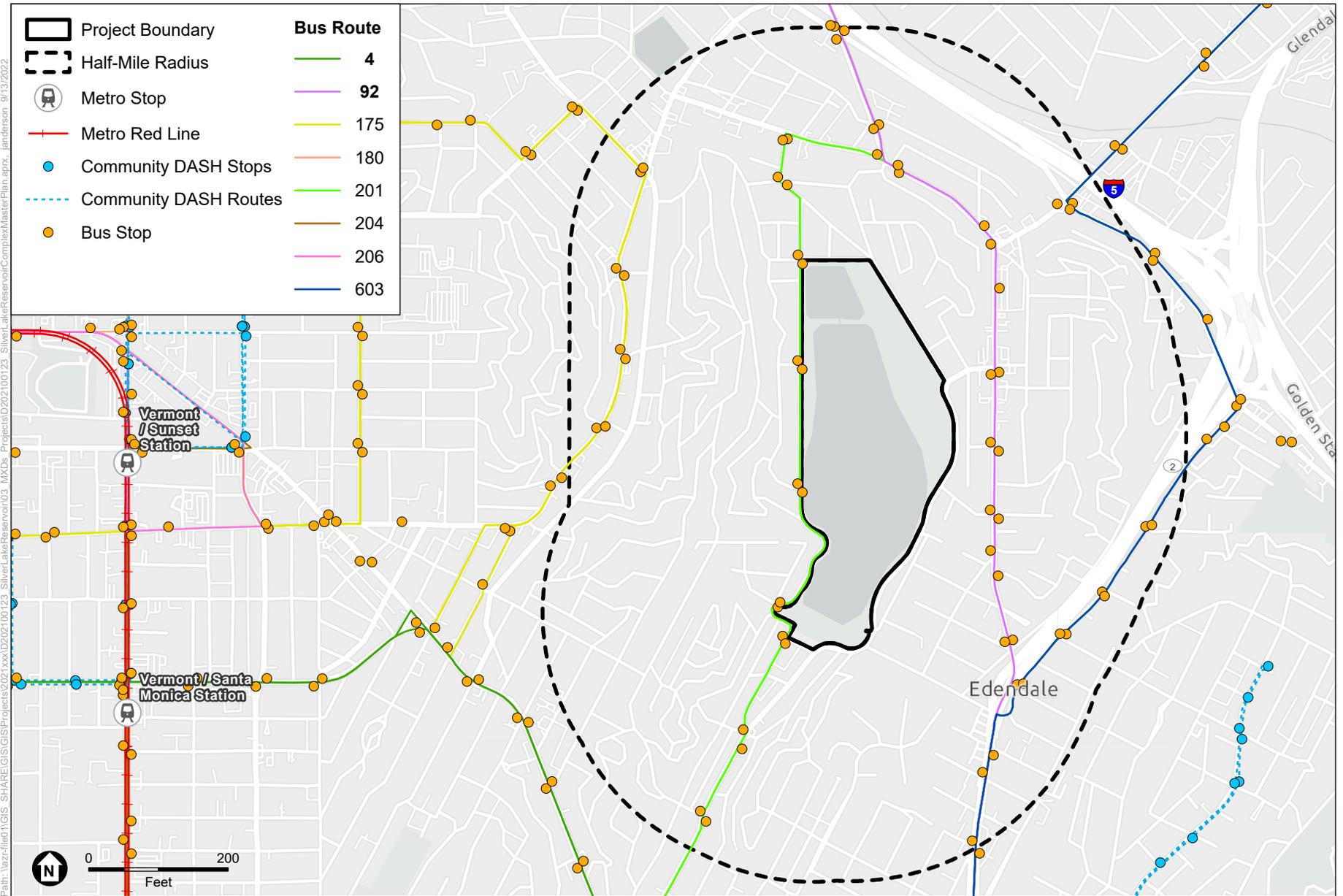
The SLRC is currently connected to the County Metro bus system via lines #201 that runs West Silver Lake Drive with multiple stops adjacent to the Complex and #92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the SLRC (**Figure 3.16-1**). Line #92 connects to Burbank, Glendale and downtown LA. According to LA Metro's NextGen Bus Plan, Line # 201 will be discontinued (LA Metro 2020). Portions of Line #182 and #603 will stop in the project vicinity and connect to Hollywood and Echo Park. The Vermont/Sunset Metro Station is approximately 1.45 mile west of the Project Site and the Vermont/Santa Monica Metro Station is approximately 1.42 miles southwest of the Project Site.

3.16.2 Regulatory Framework

Federal

Americans with Disabilities Act of 1990

Titles I, II, III, and V of the Americans with Disabilities Act (ADA) have been codified in Title 42 of the United States Code (USC), beginning at Section 12101. Title III prohibits discrimination based on disability in “places of public accommodation” (businesses and non-profit agencies that serve the public) and “commercial facilities” (other businesses). The regulation includes Appendix A through Part 36 (Standards for Accessible Design), establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility. Examples of key guidelines include detectable warnings for pedestrians entering traffic where there is no curb, a clear zone of 48 inches for the pedestrian travel way, and a vibration-free zone for pedestrians.



SOURCE: ESRI, 2022; County of Los Angeles, 2022; City of LA, 2022; ESA, 2022.

Silver Lake Reservoir Complex Master Plan Project

Figure 3.16-1
 Transportation Facilities

State

Complete Streets Act

Assembly Bill (AB) 1358, the Complete Streets Act (Government Code Sections 65040.2 and 65302), was signed into law by Governor Arnold Schwarzenegger in September 2008. As of January 1, 2011, the law requires cities and counties, when updating the part of a local general plan that addresses roadways and traffic flows, to ensure that those plans account for the needs of all roadway users. Specifically, the legislation requires cities and counties to ensure that local roads and streets adequately accommodate the needs of bicyclists, pedestrians and transit riders, as well as motorists.

At the same time, the California Department of Transportation (Caltrans), which administers transportation programming for the State, unveiled a revised version of Deputy Directive 64 (DD-64-R1 October 2008), an internal policy document that now explicitly embraces Complete Streets as the policy covering all phases of State highway projects, from planning to construction to maintenance and repair.

Senate Bill 743

On September 27, 2013, Governor Jerry Brown signed SB 743, which went into effect in January 2014. SB 743 directed the Governor's Office of Planning and Research (OPR) to develop revisions to the CEQA Guidelines by July 1, 2014 to establish new criteria for determining the significance of transportation impacts and define alternative metrics for traffic LOS. This started a process that changes transportation impact analysis under CEQA. These changes include elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts for land use projects and plans in California. Additionally, as discussed further below, as part of SB 743, parking impacts for particular types of development projects in areas well served by transit are not considered significant impacts on the environment. According to the legislative intent contained in SB 743, these changes to current practice were necessary to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

On January 20, 2016, OPR released the Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, which was an update to Updating Transportation Impacts Analysis in the CEQA Guidelines, Preliminary Discussion Draft of Updates to the CEQA Guidelines Implementing Senate Bill 743, which was released on August 6, 2014. Of particular relevance was the updated text of the proposed new CEQA Guidelines Section 15064.3 that relates to the determination of the significance of transportation impacts, alternatives, and mitigation measures. Specifically, CEQA Guidelines Section 15064.3, which is discussed further below, establishes VMT as the most appropriate measure of transportation impacts. In November 2018, the California Natural Resources Agency (CNRA) finalized the updates to the CEQA Guidelines and the updated guidelines became effective on December 28, 2018.

Based on these changes, on July 30, 2019, the City of Los Angeles City Council adopted the CEQA Transportation Analysis Update, which sets forth the revised thresholds of significance for

evaluating transportation impacts as well as screening and evaluation criteria for determining impacts. The CEQA Transportation Analysis Update establishes VMT as the City’s formal method of evaluating a project’s transportation impacts. In conjunction with this update, LADOT adopted its Transportation Assessment Guidelines (TAG) in July 2019 and updated in July 2020, which defines the methodology for analyzing a project’s transportation impacts in accordance with SB 743.

CEQA Guidelines Section 15064.3

As discussed above, recent changes to the CEQA Guidelines include the adoption of Section 15064.3, Determining the Significance of Transportation Impacts. CEQA Guidelines Section 15064.3 establishes VMT as the most appropriate measure of transportation impacts. Generally, land use projects within 0.5 miles of either an existing major transit stop¹ or a stop along an existing high quality transit corridor² should be presumed to cause a less than significant transportation impact. Projects that decrease VMT in the project area compared to existing conditions should be presumed to have a less than significant transportation impact. A lead agency has discretion to choose the most appropriate methodology to evaluate VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may also use models to estimate VMT, and may revise those estimates to reflect professional judgment based on substantial evidence. As discussed further below, LADOT developed City of Los Angeles VMT Calculator Version 1.3 (May 2020) (VMT Calculator) (LADOT 2020) to estimate project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits. The methodology for determining VMT based on the VMT Calculator is consistent with CEQA Guidelines Section 15064.3 and the TAG.

Regional

Southern California Association of Governments 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy

In compliance with SB 375, on September 3, 2020, the Southern California Association of Governments (SCAG) Regional Council adopted the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), a long-range visioning plan that incorporates land use and transportation strategies to increase mobility options and achieve a more sustainable growth pattern while meeting GHG reduction targets set by CARB. The 2020-2045 RTP/SCS contains baseline socioeconomic projections that are used as the basis for SCAG’s transportation planning, as well as the provision of services by the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG policies are directed towards the development of regional land use patterns that contribute to reductions in vehicle miles and improvements to the transportation system.

¹ “Major transit stop” is defined in Public Resources Code Section (PRC) 21064.3 as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

² “High-quality transit corridors” are defined in (PRC) Section 21155 as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

The 2020-2045 RTP/SCS builds on the long-range vision of SCAG’s prior 2016-2040 RTP/SCS to balance future mobility and housing needs with economic, environmental and public health goals. A substantial concentration and share of growth is directed to Priority Growth Areas (PGAs), which include high quality transit areas (HQTAs), Transit Priority Areas (TPAs), job centers, Neighborhood Mobility Areas (NMAs) and Livable Corridors. These areas account for four percent of SCAG’s total land area but the majority of directed growth. HQTAs are corridor-focused PGAs within one 0.5mile of an existing or planned fixed guideway transit stop or a bus transit corridor where buses pick up passengers at a frequency of every 15 minutes (or less) during peak commuting hours. TPAs are PGAs that are within a 0.5 of a major transit stop that is existing or planned. Job centers are defined as areas with significant higher employment density than surrounding areas which capture density peaks and locally significant job centers throughout all six counties in the region. NMAs are PGAs with robust residential to non-residential land use connections, high roadway intersection densities, and low-to-moderate traffic speeds. Livable Corridors are arterial roadways, where local jurisdictions may plan for a combination of the following elements: high-quality bus frequency; higher density residential and employment at key intersections; and increased active transportation through dedicated bikeways.

The 2020-2045 RTP/SCS’ “Core Vision” prioritizes the maintenance and management of the region’s transportation network, expanding mobility choices by co-locating housing, jobs, and transit, and increasing investment in transit and complete streets. Strategies to achieve the “Core Vision” include, but are not limited to, Smart Cities and Job Centers, Housing Supportive Infrastructure, Go Zones, and Shared Mobility. The 2020-2045 RTP/SCS intends to create benefits for the SCAG region by achieving regional goals for sustainability, transportation equity, improved public health and safety, and enhancement of the regions’ overall quality of life. These benefits include, but are not limited to, a five percent reduction in VMT per capita, nine percent reduction in vehicle hours traveled, and a two percent increase in work-related transit trips.

Local

City of Los Angeles General Plan

As required by the State of California, the City’s General Plan addresses goals, policies, and standards related to land use, circulation, housing, conservation, open space, noise, and safety (City of Los Angeles, 2001). To address goals that meet the unique needs of the City, the General Plan also includes elements related to health and wellness, air quality, historic preservation and cultural resources, and public facilities and services. Several of the General Plan elements are currently being updated.

City of Los Angeles Mobility Plan 2035

In August 2015, the City Council adopted Mobility Plan 2035 (Mobility Plan), which serves as the City’s General Plan circulation element. The City Council has adopted several amendments to the Mobility Plan since its initial adoption, including the most recent amendment on September 7, 2016. The Mobility Plan incorporates “complete streets” principles and lays the policy foundation for how the City’s residents interact with their streets. The Mobility Plan includes five main goals that define the City’s high-level mobility priorities:

- (1) Safety First;

- (2) World Class Infrastructure;
- (3) Access for All Angelenos;
- (4) Collaboration, Communication, and Informed Choices; and
- (5) Clean Environments and Healthy Communities.

Each of the goals contains objectives and policies to support the achievement of those goals.

Street classifications are designated in the Mobility Plan, and may be amended by a Community Plan, and are intended to create a balance between traffic flow and other important street functions, including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. The Complete Streets Design Guide, which was adopted by the City Council alongside the Mobility Plan, defines the street classifications as follows:

- Arterial Streets: Major streets that serve through traffic and provide access to major commercial activity centers. Arterials are divided into two categories:
 - Boulevards represent the widest streets that typically provide regional access to major destinations and include two further categories, Boulevard I and Boulevard II.
 - Avenues pass through both residential and commercial areas and include three further categories, Avenue I, Avenue II, and Avenue III.
- Collector Streets: Generally located in residential neighborhoods and provide access to and from arterial streets for local traffic and are not intended for cut-through traffic.
- Local Streets: Intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street.
 - Continuous local streets that connect to other streets at both ends, and/or
 - Non-Continuous local streets that lead to a dead-end.

The Mobility Plan also identifies enhanced networks of major and neighborhood streets that facilitate multi-modal mobility within the citywide transportation system. This layered approach to complete streets selects a subset of the City's streets to prioritize travel for specific transportation modes. In all, there are four enhanced networks: the Bicycle Enhanced Network (BEN), Transit Enhanced Network (TEN), Vehicle Enhanced Network (VEN), and Neighborhood Enhanced Network (NEN). In addition to these networks, many areas that could benefit from additional pedestrian features are identified as Pedestrian Enhanced Districts (PED). These networks and PED are defined as follows:

- The NEN is a selection of streets that provide comfortable and safe routes for localized travel of slower-moving modes, such as walking, bicycling, or other slow speed motorized means of travel.
- The TEN is the network of arterial streets prioritized to improve existing and future bus service for transit riders.
- The BEN is a network of streets to receive treatments that prioritize bicyclists. Tier 1 Protected Bicycle Lanes are bicycle facilities that are separated from vehicular traffic. Tier 2 and Tier 3 Bicycle Lanes are facilities on roadways with striped separation. Tier 2 Bicycle Lanes are those more likely to be built by 2035.

- The VEN identifies streets that prioritize vehicular movement and offer safe, consistent travel speeds and reliable travel times.
- The PEDs identify where pedestrian improvements on arterial streets could be prioritized to provide better walking connections to and from the major destinations within communities.

Silver Lake-Echo Park-Elysian Valley Community Plan

The Silver Lake-Echo Park-Elysian Valley Community Plan Area is located approximately 2 miles north of Downtown Los Angeles and is generally separated from Downtown Los Angeles by Chinatown. The Community Plan Area's 4,579 acres (7 square miles) is bordered by the Hollywood and Wilshire Community Plan Areas to the west, Westlake Community Plan Area to the southwest, Central City North Community Plan Area to the south and the Northeast Community Plan Area to the north and east. The Silver Lake-Echo Park-Elysian Valley Community Plan (2004) includes the following issues and opportunities related to transportation (City of Los Angeles, 2004):

Issues

- Residential neighborhood streets are being used to avoid traffic on congested major thoroughfares, disturbing quality of life and making neighborhood streets unsafe for children and pedestrians.
- Traffic congestion and circulation issues in the Plan area that reflect regional transportation problems and Citywide deficiencies in multi-modal transit options.
- Limited access to mass transportation.
- Narrow and substandard residential streets in the hillsides that hinder circulation and create problems for parking and access by safety vehicles.

Opportunities

- Identify and encourage the implementation of regional transportation solutions that will minimize the impact of commuter traffic on the Plan area.
- Establish non-motorized transportation alternatives which build on an existing network of bike paths
- Identify and recommend additional commuter bus routes such as DASH service to underserved areas such as Elysian Valley and to connect hillside residential neighborhoods to commercial centers, downtown and public transit systems including the Red Line and Gold Line.

Los Angeles Municipal Code

With regard to construction traffic, Los Angeles Municipal Code (LAMC) Section 41.40 limits construction activities to the hours from 7:00 a.m. to 9:00 p.m. on weekdays and from 8:00 a.m. to 6:00 p.m. on Saturdays and national holidays. No construction is permitted on Sundays.

LAMC Section 12.37 sets forth requirements for street dedications and improvements for new development projects. Specifically, LAMC Section 12.37 states that no building or structure shall be erected or enlarged on any property, and no building permit shall be issued therefore, on any R3 or less restrictive zone, or in any lot in the RD1.5, RD2, or R3 Zones, if the lot abuts a major

or secondary highway or collector street unless one-half of the street adjacent to the subject property has been dedicated and improved to the full width to meet the standards for a highway or collector street as provided in the LAMC. While LAMC Section 12.37 generally applies to projects meeting the above criteria, the authority to require right-of-way dedications and improvements for discretionary projects that involve zone changes or divisions of land falls under LAMC Sections 12.32 G.1 and 17.05.

LADOT Transportation Assessment Guidelines

As discussed above, on July 30, 2019, LADOT updated its Transportation Impact Study Guidelines, travel demand model and transportation impact thresholds based on VMT, pursuant to State CEQA Guidelines Section 15064.3, of the 2019 CEQA Updates that implement SB 743. The City established the Transportation Assessment Guidelines (TAG) that includes both CEQA thresholds (and screening criteria) and non-CEQA thresholds (and screening criteria). LADOT most recently updated the TAG in July 2020. The CEQA thresholds provide the methodology for analyzing the Appendix G transportation thresholds, including providing the City's adopted VMT thresholds. The non-CEQA thresholds provide a method to analyze projects for purposes of entitlement review and making necessary findings to ensure the project is consistent with adopted plans and policies including the Mobility Plan. Specifically, the TAG is intended to effectuate a review process that advances the City's vision of developing a safe, accessible, well-maintained, and well-connected multimodal transportation network. The TAG has been developed to identify land use development and transportation projects that may impact the transportation system; to ensure proposed land use development projects achieve site access design requirements and on-site circulation best practices; to define whether off-site improvements are needed; and to provide step-by-step guidance for assessing impacts and preparing Transportation Assessment Studies.

NextGen Bus Plan

The NextGen Bus Plan was approved by the Metro Board of Directors in October 2020, to be implemented with a 3-phased roll-out beginning in December 2020. The NextGen Bus Plan was developed to implement a new competitive bus system in Los Angeles County that provides fast, frequent, reliable, and accessible service. The NextGen Bus Plan, implemented by Metro includes a comprehensive marketing campaign to promote public awareness of the new routes, schedules and other system changes.

Vision Zero

The Vision Zero Los Angeles program, implemented by LADOT, represents a citywide effort to eliminate traffic deaths in the City by 2025. Vision Zero has two goals: a 20-percent reduction in traffic deaths by 2017 and zero traffic deaths by 2025. In order to achieve these goals, LADOT has identified a network of streets, called the High Injury Network, which has a higher incidence of severe and fatal collisions. The High Injury Network, which was last updated in 2018, represents 6 percent of the City's street miles but accounts for approximately two thirds (64 percent) of all fatalities and serious injury collisions involving people walking and biking.

Citywide Design Guidelines

The Citywide Design Guidelines serve to implement the Framework Element's urban design principles and are intended to be used by City of Los Angeles Department of City Planning staff, developers, architects, engineers, and community members in evaluating project applications, along with relevant policies from the Framework Element and Community Plans. The Citywide Design Guidelines were updated in October 2019 and include guidelines pertaining to pedestrian-first design which serves to reduce VMT.

Complete Street Design Guide

The Complete Streets Design Guide provides design concepts and best practices to promote safe and accessible streets for all transportation users (i.e., pedestrians, bicyclists, transit riders, and motorists) within the City (City of Los Angeles, n.d.). The purpose of the guide is to supplement existing engineering practices and requirements in order to meet the goals of California's Complete Streets Act (AB 1358). The guide accompanies Mobility Plan 2035 and provides a framework for stakeholders to plan for, implement, and maintain complete streets.

3.16.3 Significance Thresholds and Criteria

On July 30, 2019, pursuant to Senate Bill (SB) 743 and Section 15064.7 of the State's California Environmental Quality Act (CEQA) Guidelines, the Los Angeles City Council adopted the LADOT TAG as the criteria by which to determine transportation impacts under CEQA, and authorized LADOT to make any necessary updates. Therefore, the CEQA thresholds set forth in the LADOT TAG will apply to the proposed Project. The proposed Project would have a significant impact if it would:

- T-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. (Refer to Impact 3.16-1)
- T-2: Would the project cause substantial vehicle miles traveled in conflict or inconsistent with CEQA Guidelines section 15064.3, subdivision (b). (Refer to Impact 3.16-2)
- T-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) (Refer to Impact 3.16-3)
- Result in inadequate emergency access. (Refer to Impact 3.16-4)

Methodology

There are two categories of transportation impact analysis required by the LADOT's TAG. The first category, in Section 2 of the TAG, relates to potential transportation impacts under the California Environmental Quality Act (CEQA). Should a project exceed thresholds identified in the TAG, its impact would be considered significant under CEQA and thus would require any feasible mitigation measures be implemented to reduce the impact below the threshold of significance, to the extent feasible. The CEQA thresholds identified in the TAG are consistent with City adopted thresholds and with State CEQA guidance.

The second category of analysis, non-CEQA transportation impact analysis found in Section 3 of the TAG, analyzes transportation issues relating to safety, access, and circulation as they may be

the result of the construction or operation of a project. The TAG identifies specific screening criteria in Sections 2 and 3 to determine whether each type of CEQA and non-CEQA transportation analysis is required depending on the size, use and daily vehicular trip generation of the project.

3.16.4 Project Design Features

The following Project Design Features (PDFs) related to transportation would be implemented as part of the Project:

PDF-TRA-1: Construction Traffic Management Plan. A Construction Traffic Management Plan will be prepared for the phases of the proposed Project that affect offsite components or require increased vehicle access consistent with the LADOT Construction Traffic Control Guidelines. This plan will address the planned Project construction phasing, sequence of construction activities, access, and circulation. In addition, the plan would include planned detour routes and BMPs, as well as coordination with and advance notice to local emergency providers.

PDF-TRA-2: Construction Staging Plan. A construction staging plan shall be developed to reduce impacts related to noise, dust, traffic, and other health hazards. In addition, construction site BMPs (e.g., fencing, signs, and detours) shall be implemented to minimize hazards and prevent safety issues on the roadways and sidewalks surrounding the construction site.

PDF-TRA-3: Construction Traffic. Construction-related trips shall be scheduled with increased frequency during off-peak hours to minimize impacts to commuters.

PDF-TRA-4: Access to Parcels. It is not anticipated that access to existing parcels outside of the proposed Project impact areas would be impacted. However, if access to any existing parcels is removed during proposed construction activities, temporary access shall be provided, and/or new points of access shall be constructed.

PDF-TRA-5: Site-Specific Traffic Control and Transit Plan for Large Events. Large event permittees shall develop a site-specific traffic control plan to provide information on parking and circulation and highlight transit options for event attendees to minimize congestion and vehicle miles traveled. Traffic control strategies for events will include inbound/outbound flex lanes and sheriff-controlled intersections. Traffic control plans will also identify nearby public parking facilities and identify passenger pick-up/drop-off locations. Permittees will be required to consider the cumulative traffic impacts of their event in relation to other events in the Project Area. The traffic control plans will also identify emergency services egress and access.

PDF-TRA-6: Expand Public Transit Connections. The future site operator and relevant City departments (LADOT, Recreation and Parks Department, City Planning, etc.) shall work together to explore options for expanding public transit connections to the Project site to expand community access and reduce VMT.

3.16.5 Impacts and Mitigation Measures

Program Plan, Ordinance, or Policy

Impact 3.16-1: Would the proposed Project conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Construction / Operation

According to the City’s TAG, the City has adopted programs, plans, ordinances, and policies that establish the transportation planning regulatory framework for all travel modes. The overall goals of these policies are to achieve a safe, accessible, and sustainable transportation system for all users. The TAG requires the completion of the Plan Consistency Worksheet to determine whether the Project conflicts with any City circulation system policy. According to the TAG, a mere conflict with adopted transportation related policies, or standards that requires administrative relief or legislative change does not in itself constitute an impact. The Plan Consistency Worksheet is provided in Appendix K, and in **Table 3.16-2** below. As shown in Table 3.16-2, the proposed Project would be subject to the provisions of LAMC 12.37, the Mobility Plan 2035, Healthy LA, Vision Zero, and the Sustainability Plan.

**TABLE 3.16-2
 PROJECT APPLICABILITY TO PLANS, POLICIES AND PROGRAMS**

	Guiding Questions	Relevant Plans, Policies, and Programs	Supporting/Complementary City Plans, Policies, and Programs to consult	Is the Guiding Question Applicable to the Project
Existing Plan Applicability				
1	Does the Project include additions or new construction along a street designated as a Boulevard I, and II, and/or Avenue I, II, or III on property zoned for R3 or less restrictive zone? (screening question)	LAMC Section 12.37	LAMC Section 12.37	Yes
2	Is Project Site along any network identified in the City's Mobility Plan?	Mobility Plan 2035	MP 2035 – Neighborhood Enhanced Network; Bicycle Lane Network; Pedestrian Enhanced Districts.	Yes
3	Are dedications or improvements needed to serve long-term mobility needs identified in the Mobility Plan 2035?	Mobility Plan 2035	MP 2035 - 2.17 Street Widening	No
4	Does the Project require placement of transit furniture in accordance with City's Coordinated Street Furniture and Bus Bench Program?	City Coordinated Street Furniture Program	City Coordinated Street Furniture Program	No
5	Is Project Site in an identified Transit Oriented Community (TOC)?	ZIMAS	ZIMAS	No
6	Is Project Site on a roadway identified in City's High Injury Network?	Vision Zero	Vision Zero - High Injury Network (HIN) Map	No
8	Does project propose narrowing or shifting existing sidewalk placement?	Mobility Plan 2035	Healthy LA; Vision Zero; Sustainability Plan	Yes

	Guiding Questions	Relevant Plans, Policies, and Programs	Supporting/Complementary City Plans, Policies, and Programs to consult	Is the Guiding Question Applicable to the Project
9	Does project propose paving, narrowing, shifting, or removing an existing parkway?	Mobility Plan 2035	MP 2035 – 3.9 Increased Neighborhood Access	No
10	Does project propose modifying, removing or otherwise affect existing bicycle infrastructure? (ex: driveway proposed along street with bicycle facility)	Mobility Plan 2035	Vision Zero; Complete Streets Design Guide – Section	Yes
11	Is project site adjacent to an alley? If yes, will project make use of, modify, or restrict alley access?	Mobility Plan 2035	Complete Streets Design Guide – Section 6.9: Driveways	No
12	Does project create a cul-de-sac or is project site located adjacent to existing cul-de-sac? If yes, is cul-de-sac consistent with design goal in Mobility Plan 2035 (maintain through bicycle and pedestrian access)?	Mobility Plan 2035	MP 2035 – 3.10 Cul-de-sacs	No
Access: Driveway and Loading				
13	Does project site introduce a new driveway or loading access along an arterial (Avenue or Boulevard)?	Mobility Plan 2035	MP 2035 – 2.10 Loading Areas; Vision Zero	No
14	If yes to 13, Is a non-arterial frontage or alley access available to serve the driveway or loading access needs?	Mobility Plan 2035	MP 2035 – 2.10 Loading Areas; Vision Zero	No
15	Does project site include a corner lot? (avoid driveways too close to intersections)	CDG 4.1.01	Complete Streets Design Guide – Section 6.9 Driveways	No
16	Does project propose driveway width in excess of City standard?	MPP Sec. 321, LAMC 16.16.060	LAMC 16.16.060	No
17	Does project propose more driveways than required by City maximum standard?	MPP - Sec No. 321 Driveway Design	Vision Zero, MP, Healthy LA	No
18	Are loading zones proposed as a part of the project?	Mobility Plan 2035	MP 2035 – 2.10 Loading Areas	No
19	Does project include "drop-off" zones or areas? If yes, are such areas located to the side or rear of the building?	Mobility Plan 2035	MP 2035 – 2.10 Loading Areas	No
20	Does project propose modifying, limiting/ restricting, or removing public access to a public right-of-way (e.g., vacating public right-of-way?)	Mobility Plan 2035	MP 2035 – 3.9 Increased Neighborhood Access	No

SOURCE: JBA, 2022

In consultation with City Planning, the Project would be consistent with the LAMC 12.37 and Mobility Plan 2035. (BOE 2022). The Project would include short- and long-term bicycle parking and proposes to provide internal pedestrian walkways. The addition of new parking for the project may induce driving, which may increase VMT and may result in impacts to bicycle

safety by adding new conflict points (such as opening doors from parked cars, cars crossing the bike lane to park or re-enter traffic, and cars waiting in bike lanes to park their car). Increased parking and conflict points may be incompatible with relevant plans, policies, and programs, such as the Mobility Plan 2035, that aim to reduce driving, promote active transportation, and reduce related emissions and traffic collisions. (LADOT 2022)

However, adding the limited parking proposed by the Project would not increase visitorship at the park, since projected visitors far exceed current parking capacity. Rather, the additional parking spaces would improve congestion by accommodating existing visitorship and reduce parking within the neighboring residential streets. The parking would not increase VMT or conflict with bus or bicycle access. As noted below in Impact 3.16-2, the proposed Project would not result in a significant impact related to VMT. (LADOT 2022)

To minimize conflict points and address this potential incompatibility, the proposed Project would improve the bike lanes within Silver Lake Boulevard, including the use of lane buffers to create protected bike lanes consistent with LADOT design recommendations. Offsite improvements would occur along Silver Lake Boulevard, between Armstrong Avenue and Duane Street for a length of approximately 3,000 feet. As described in Chapter 2, Project Description, two design options for improvement are proposed along this portion of the proposed Project (see Figure 2-16). Option 1 would include an improved bike lane on the west side of the road, closest to the SLRC, buffered by a 2-foot sidewalk running the length of this segment, followed by the addition of parallel parking on the west side of the road. Option 2 would include restriping along Silver Lake Boulevard to with improvements to the bike lane only and no addition of parking. Both options would result in protected bike lanes which would protect cyclists from conflict points. In addition, Option 1 would increase pedestrian safety by providing parking opportunities adjacent to the site, avoiding the need to cross Silver Lake Boulevard. With these project improvements, the Project would not conflict with a program plan, (including the Mobility Plan 2035), ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Conflict with CEQA Guidelines section 15064.3, subdivision (b)

Impact 3.16-2: Would the proposed Project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Construction / Operation

As described in the TIA prepared for the Project and in consultation with LADOT (LADOT 2022), the City of Los Angeles VMT Calculator Documentation Version 1.3 was consulted to evaluate the Project's VMT and compare it to the VMT impact criteria (Appendix K). The land use categories included in VMT Calculator tool are based on the land uses identified in the ITE

Trip Generation manual (except where otherwise identified in Section 3.1 of the VMT Guidelines). Table 1 of the City of Los Angeles VMT Calculator does not have parks and recreational uses as a land use. In addition, the VMT Calculator is intended for evaluation of residential and office projects in accordance with the TAG and reports daily vehicle trips, daily VMT, daily household VMT per capita, and daily work VMT per employee.

As shown in Figure 3.15-1, there are 42 local and regional parks located within a 2-mile radius of the SLRC. Specifically, Griffith Park, one of the largest municipal parks in the United States and the largest regional open space within the City, totals over 4,511 acres and provides lots of active and passive recreation opportunities. Other major parks include Elysian Park (600 acres), Rio de Los Angeles State Park (40 acres), and Echo Park (29 acres). As a result, the Project's VMT impacts would be less than significant due to the presence of many nearby parks within a 2-mile radius and general lack of regionally attracting amenities as part of the proposed Project. Even with the proposed addition of a 151 parking spaces, VMT is not anticipated to substantively increase as a result of the proposed Project, based on the LADOT VMT estimation methods utilized in the TIA, which relies on land uses to determine VMT. The availability of many nearby parks, including several major parks, and lack of regional recreational uses to generate traffic supports the assumption that the park users would be based locally. The addition of street parking would provide safe access to the facilities for users who may not live within walking distance, who may need to transport families or pets, who don't have easily accessible public transit options, and who may have previously traveled further to access such amenities, based on the location of vehicle parking. While the addition of parking could result in additional project-related trips, the VMT per capita of project users may be lessened as a result of the project.

The Education Center would potentially be considered a regional use, serving as a field trip destination for schools. However, trips to these facilities would typically consist of school bus trips. In addition, the majority of the new or renovated amenities are local serving, such as the basketball court; meadows area; shade pavilions; Multi-Purpose Facility; and Recreation Center.

Based on the discussion above, calculating the household VMT per capita and work VMT per employee is not applicable considering the Project's local serving nature as it would not generate substantial additional vehicle miles. As stated in recent communications from LADOT, based on the VMT Analysis report submitted, the proposed Project is considered to be local serving with no applicable VMT. Therefore, it is concluded the Project would result in no significant Household or Work VMT impact.

The Project is considered to be primarily a locally-serving use since it is located in a densely populated residential and commercial area. There are no major regional serving amenities planned such as golf courses, athletic fields complexes (multiple soccer fields and baseball diamonds), boating and fishing. Although the Project would support periodic special events within the SLRC such as concerts or movie nights that would have a larger draw, these events would be subject to PDF-TRA-5: Site-Specific Traffic Control and Transit Plan for Large Events. As a result, the proposed Project would not result in a significant impact regarding VMT and no mitigation measures are required.

In addition, the proposed Project includes enhancements to the street infrastructure surrounding the SLRC including pedestrian paths and trails, and protected bicycle lanes. Although the addition of on-street parking spaces would increase the number of trips generated by the Project, it would not be a substantial increase and it would discourage park visitors who are not able to walk, bike, or take public transit to the Project site from circulating among narrow residential streets searching for parking. In addition, to reduce VMT and provide access opportunities to community residents who do not live within walking distance of the Project site, PDF-TRA-6: Expand Public Transit Options requires the future site operator to work with the relevant City departments to increase public transit connections. One option might be working with LA Metro to expand Metro Micro service areas to include the Project site. As a result, the proposed Project would accommodate all travel modes and result in a less than significant impact.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Geometric Design Features

Impact 3.16-3: Would the proposed Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Construction / Operation

Traffic hazards can be related to vehicle/vehicle, vehicle/bicycle, or vehicle/pedestrian conflicts as well as to operational delays caused by vehicles slowing and/or queuing to access a project site. In consultation with LADOT (LADOT 2022), an analysis was conducted to evaluate the potential for the proposed Project to result in traffic hazards (see TIA in Appendix K). The analysis concludes that the Project would not increase hazards due to geometric design features since most of the Project improvements are on-site within the SLRC.

The analysis identifies that existing access points to the SLRC will remain intact. Currently, the Project site has twelve access points for vehicular and pedestrian traffic. The locations of these access points are identified in Appendix K. The proposed Project would not affect these access points. The existing curbs, slopes, sidewalks, and walking trails around the perimeter of the Project site consist of a combination of concrete sidewalks and dirt. The intersections are controlled by stop signs and have handicap ramps. There is a Class II bicycle facility located on Silver Lake Boulevard.

The existing LADWP maintenance and operation vehicular access driveways would remain to provide access to LADWP's facilities and structures. In addition, there are no additional vehicular access driveways planned within the proposed Project. The main vehicular access driveway to the Project site is located at the intersection of Armstrong Avenue and Tesla Avenue. This driveway is currently used by LADWP for maintenance of fleet vehicles.

The analysis concludes that the proposed Project would not adversely affect access to the site via public transportation or bicycle. The SLRC is connected to the County Metro bus system via lines #201 that runs West Silver Lake Drive with multiple stops adjacent to the Complex and #92 which runs on Glendale Boulevard with multiple stops which are a short walking distance from the SLRC.

To enhance safety in the area, the proposed Project would include improvements to two local intersections to enhance safety for pedestrians and vehicles. These enhancements would include installing flashing beacons at the Silver Lake Boulevard and Armstrong Avenue intersection (JBA, 2022; Section 3.6.3.1) and at the West Silver Lake Drive and Hawick Street intersection (JBA, 2022; Section 3.6.3.2). These improvements are included in the Project description and are described in Appendix K.

PDF-TRA-1 and PDF-TRA-2 would require the preparation of a Construction Traffic Management Plan and a Construction Staging Plan to reduce impacts of construction to local streets and sidewalks surrounding the SLRC and construction site. The Construction Traffic Management Plan would be consistent with the LADOT Construction Traffic Control Guidelines. In addition, PDF-TRA-4 would ensure that access to parcels and driveways are maintained throughout construction activities.

The TIA also included an analysis on pedestrian, bicycle, and transit access (JBA, 2022; Section 4.1); safety and circulation (JBA, 2022; Section 4.2); project construction (JBA, 2022; Section 4.3); residential street cut through analysis (JBA, 2022; Section 4.4); and parking inventory and demand analysis (JBA, 2022; Section 4.2.3.5). The TIA concludes that with implementation of the off-site improvements and PDFs described above, impacts would be minimized and the Project would not result in new hazards.

Finally, the TIA also evaluates the potential impacts of providing new parking on Silver Lake Boulevard by creating new conflict points with the existing bike lane (such as opening doors from parked cars, cars crossing bike lanes to park or re-enter traffic, and cars waiting in bike lanes to park their car). The introduction of new parking would potentially strain the existing bike lanes on Rowena Avenue that connect to Silver Lake Drive and bike lanes on Sunset Boulevard that connect to Silver Lake Boulevard. However, the analysis concludes that there are adequate markings and signage to minimize the potential for conflict along Silver Lake Boulevard. Furthermore, offsite improvements are recommended along Silver Lake Boulevard, between Armstrong Avenue and Duane Street for a length of approximately 3,000 feet. As described in Chapter 2, Project Description, two design options for improvement are proposed along this portion of the proposed Project (see Figure 2-16). Option 1 would include an improved bike lane on the west side of the road, closest to the SLRC, buffered by a 2-foot sidewalk running the length of this segment, followed by the addition of parallel parking on the west side of the road. Option 2 would include restriping along Silver Lake Boulevard to with improvements to the bike lane only and no addition of parking. Both options would result in protected bike lanes which would protect cyclists from conflict points.

During operation of the proposed Project site, PDF-TRA-5 would require that a Site-Specific Traffic Control and Transit Plan be implemented for large special events, in order to ensure that information on parking, circulation, and transit options are available for event attendees to minimize congestion and vehicle miles traveled.

With implementation of these off-site improvements, the proposed Project would not increase hazards due to geometric design features. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Emergency Access

Impact 3.16-4: Would the proposed Project result in inadequate emergency access?

In consultation with LADOT (LADOT 2022), an emergency access analysis for the proposed Project was performed.

Construction

Construction activities would be confined primarily to within the perimeter of the SLRC and would not impact surrounding roadways or restrict access for emergency vehicles. It is not anticipated that roadway users would experience temporary delays that could impair emergency access. During construction of offsite improvements, such as restriping along Silver Lake Boulevard for the addition of bike lanes and/or parking, partial road closures would be required. These closures would be temporary, lasting approximately 2.5 weeks. The proposed Project would include implementation of PDF-TRA-1 and PDF-TRA-2, requiring the implementation of a traffic management plan and construction staging plan which would include detour routes and BMPs, as well as coordination with and advance notice to local emergency providers. In addition, PDF-TRA-3 would require construction trips to be scheduled during off-peak hours, and PDF-TRA-4 would ensure that temporary access shall be provided to any parcels that may be impacted by construction. Impacts during construction would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As part of the Operations and Maintenance Plan to support operations, an Evacuation Plan would be prepared. Ingress and egress within the Project site would continue to operate similar to existing conditions, and no changes to emergency access would occur. During public events PDF-TRA-5 would ensure that event permittees develop a site-specific traffic control plan to minimize

congestion and vehicle miles traveled. Traffic control strategies for events will include inbound/outbound flex lanes and sheriff-controlled intersections. Traffic control plans will also identify nearby public parking facilities and identify passenger pick-up/drop-off locations. Permittees will be required to consider the cumulative traffic impacts of their event in relation to other events in the Project Area. The traffic control plans will also identify emergency services egress and access. Therefore, the proposed Project would not result in inadequate emergency access, and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Cumulative Impact

Impact 3.16-5: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively considerable impact to transportation?

In consultation with LADOT (2022), cumulative impacts on transportation could result when past, present, and reasonably foreseeable future projects combine to increase VMT, create hazards, or impede emergency access. Table 3-2 identifies nine related projects that are planned or are under construction within the Project area, including mixed-use developments, a childcare facility, and commercial uses. Seven of these projects would generate new trips and were considered in the TIA “related future project” analysis.

The related projects would cumulatively generate additional trips and increase VMT affecting the local and regional roadway network. The increase in cumulative development, which includes a net increase in 405 dwelling units, 28,802 square feet of commercial/retail uses and other non-residential uses, would generate additional traffic. The TIA concludes in Section 4.2.3.5 based on the location of the related projects and access to area street network, the potential traffic trips generated from the cumulative projects would not impact the study intersections. As a result, the proposed Project’s contribution to local trips combined with foreseeable future project trips would not cause a cumulatively considerable impact to VMT, hazards or emergency access. As such, cumulative impacts on transportation would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.16.6 Summary of Impacts

Table 3.16-3 summarizes the impact significance determinations and lists mitigation measures related to transportation.

**TABLE 3.16-3
 SUMMARY OF PROPOSED PROJECT IMPACTS TO TRANSPORTATION**

Impact	Mitigation Measure	Significance
3.16-1: Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities	None Required	LTS
3.16-2: Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)	None Required	LTS
3.16-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	None Required	LTS
3.16-4: Result in inadequate emergency access	None Required	LTS
3.16-5: Cumulative	None Required	LTS

NOTES:
 NI = No Impact, no mitigation proposed
 LTS = Less than Significant, no mitigation proposed
 LTSM = Less than Significant Impact with Mitigation Incorporated
 SU = Significant and Unavoidable

3.16.7 References

- City of Los Angeles, n.d. City of Los Angeles Complete Streets Design Guide. Available: https://planning.lacity.org/odocument/c9596f05-0f3a-4ada-93aa-e70bbde68b0b/Complete_Street_Design_Guide.pdf.
- City of Los Angeles, 2001. Framework Element Executive Summary. August 2001. Available: <https://planning.lacity.org/plans-policies/framework-element>, accessed September 2022.
- City of Los Angeles, 2004. Silver Lake-Echo Park-Elysian Valley Community Plan. Available online at: https://planning.lacity.org/odocument/e87507ac-8c40-49a0-aa1c-21df963f2298/Silver_Lake-Echo_Park-Elysian_Valley_Community_Plan.pdf, accessed November 2021.
- City of Los Angeles, Bureau of Engineering (BOE). 2022. Silver Lake Reservoir Complex Master Plan Project and Mobility Element/General Plan Consistency Memorandum.
- Jano Baghdanian & Associates (JBA), February 2022; Transportation Impact Assessment for Silver Lake Reservoir Complex Master Plan Environmental Impact Report Silver Lake Reservoir, Los Angeles, CA 90039.
- L.A. Department of Transportation (LADOT). 2020. City of Los Angeles VMT Calculator Documentation. May 2020. Available: https://ladot.lacity.org/sites/default/files/documents/vmt_calculator_documentation-2020.05.18.pdf, accessed September 2022.
- L.A. Department of Transportation (LADOT). June 1, 2022. Inter-Departmental Memorandum: *Transportation Impact Analysis for the Proposed Silver Lake Reservoir Complex Master Plan Located at 1850 North Silver Lake Drive*.
- LA Metro. 2020. NextGen Bus Plan. Available: <https://www.metro.net/about/plans/nextgen-bus-plan/>. Accessed: September 2, 2022.

3.17 Tribal Cultural Resources

This section addresses potential impacts to tribal cultural resources. The analysis of tribal cultural resources provided in this section is based on a Sacred Lands File (SLF) search conducted by the California Native American Heritage Commission (NAHC), project notification letters submitted by the City to Native American individuals and organizations, and follow-up Native American consultations pursuant to Assembly Bill (AB) 52. The findings of these studies are presented in the Archaeological Resources Technical Report, which is provided in confidential Appendix E, of this Draft EIR.

Tribal cultural resources are defined by the California Public Resources Code (PRC) Section 21074 as sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources (California Register) or included in a local register of historical resources, or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant.¹ Historical resources, unique archaeological resources, or non-unique archaeological resources may also be tribal cultural resources if they meet these criteria. The Project includes the following Project Design Features: **PDF-CR-1: Archaeological Resource Discovery During Construction**, and **PDF-CR-2: Human Remains Discovery During Construction**. Impacts to tribal cultural resources are less than significant with implementation of Mitigation Measure **TCR-1: Native American Monitoring**.

3.17.1 Environmental Setting

Ethnographic Setting

The Project Site is located in a region traditionally occupied by one Native American group; the Gabrielino (including the Tongva and Kizh). The terms Tongva, Kizh are preferred by many descendant groups over the Spanish words that have historically been used to describe them. The group is described below.

The main sources of historical information on the Gabrielino (Tongva and Kizh) include Hugo Reid (see Heizer 1968), Zephyrin Engelhardt, Alfred Kroeber, John P. Harrington, Bernice E. Johnston, Thomas C. Blackburn, and C. Hart Merriam. In 1978, the Smithsonian Institution compiled the *Handbook of North American Indians* – a 20-volume encyclopedia summarizing the work of previous ethnographers and what was known about the prehistory, history, and culture of indigenous North American groups. *Volume 8: California* serves as the primary source material for the information presented in this section. Where possible, this information has been supplemented with information gleaned from other published sources (such as McCawley 1996, and O’Neil and Evans 1980). The following summaries are not intended to provide a comprehensive account of these groups, but are instead brief historical overviews based on available information. However, tribes are the authority on their cultural history.

¹ A cultural landscape that meets these criteria is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

It should be noted that the information presented herein is related to living tribes who still reside in Los Angeles and Orange counties and who maintain a vested interest in their history, culture, practices, customs, and beliefs. Currently, there are five Gabrielino (Tongva and Kizh) groups that are recognized by the State as California Native American Tribes (as indicated by the California Native American Heritage Commission [NAHC]): Gabrieleño Band of Mission Indians – Kizh Nation; Gabrielino Tongva Indians of California Tribal Council; Gabrieleno-Tongva San Gabriel Band of Mission Indians; Gabrielino-Tongva Tribe; Gabrielino/Tongva Nation. These tribes are living communities who actively participate in the preservation of their culture and tribal resources.

Gabrielino (or Tongva and Kizh)

The term “Gabrielino” is a general term that refers to those Native Americans who were sent by the Spanish to the Mission San Gabriel Arcángel. The term first appears, spelled Gabrieleños, in an 1876 report by Oscar Loew (Bean and Smith 1978). Two indigenous terms are commonly used by tribal groups to refer to themselves and are preferred by descendant groups: Tongva and Kizh. The term Tongva was recorded by ethnographer C. Hart Merriam in 1903 (Heizer 1968). The term Kizh was first published by ethnologist Horatio Hale in 1846 (Heizer 1968). Since there are two terms that are used by different groups to refer to themselves, the term Gabrielino is used in this section to encompass both Tongva and Kizh groups.

Prior to European colonization, the Gabrielino occupied a diverse area that included the watersheds of the Los Angeles, San Gabriel, and Santa Ana rivers; the Los Angeles basin; and the islands of San Clemente, San Nicolas, and Santa Catalina (Bean and Smith 1978). Their neighbors included the Chumash and Tataviam to the north, the Juaneño to the south, and the Serrano and Cahuilla to the east. The Gabrielino are reported to have been second only to the Chumash in terms of population size and regional influence (Bean and Smith 1978). The Gabrielino language was part of the Takic branch of the Uto-Aztecan language family.

The Gabrielino Indians were hunter-gatherers and lived in permanent communities located near the presence of a stable food supply. Subsistence consisted of hunting, fishing, and gathering. Small terrestrial game was hunted with deadfalls, rabbit drives, and by burning undergrowth, while larger game such as deer were hunted using bows and arrows. Fish were taken by hook and line, nets, traps, spears, and poison (Bean and Smith 1978). The primary plant resources were the acorn, gathered in the fall and processed in mortars and pestles, and various seeds that were harvested in late spring and summer and ground with manos and metates. The seeds included chia and other sages, various grasses, and islay or holly-leaved cherry. Community populations generally ranged from 50 to 100 inhabitants, although larger settlements may have existed. The Gabrielino are estimated to have had a population numbering around 5,000 in the pre-contact period (Kroeber 1925).

The Late Prehistoric period, spanning from approximately 1,500 years B.P. to the mission era, is the period associated with the florescence of the Gabrielino (Wallace 1955). Coming ashore near Malibu Lagoon or Mugu Lagoon in October of 1542, Juan Rodriguez Cabrillo was the first European to make contact with the Gabrielino Indians.

Community populations generally ranged from 50 to 100 inhabitants, although larger settlements may have existed. The Gabrielino are estimated to have had a population numbering around 5,000 in the pre-contact period (Kroeber 1925). Villages are reported to have been the most abundant in the San Fernando Valley, the Glendale Narrows area north of downtown, and around the Los Angeles River's coastal outlets (Gumprecht 2001). Gabrielino villages are reported by early explorers to have been most abundant near the Los Angeles River, in the area north of downtown, known as the Glendale Narrows, and those areas along the river's various outlets into the sea. Among those villages north of downtown are *Maawnga* in the Glendale Narrows; *Totongna* and *Kawengna*, in the San Fernando Valley; *Hahamongna*, northeast of Glendale; and the village of *Yangna*, in the vicinity of present-day downtown Los Angeles. The closest village to the Project Site would have been *Yangna*, located approximately 3.10 miles southeast.

The exact location of *Yangna*, within downtown Los Angeles continues to be debated, although some believe it to have been located at the present-day location of the Civic Center (McCawley 1996). Other proposed locations are near the present day Union Station (Chartkoff and Chartkoff 1972:64), to the south of the old Spanish Plaza, and near the original site of the Bella Union Hotel located on the 300 Block of North Main Street (Robinson 1963:83, as cited in Dillon 1994:30). Dillon (1994:30) hypothesizes that the Union Station location is an unlikely spot for a large village or habitation, as it lies within the annual Los Angeles River flood zone. Local sources such as the Echo Park Historical Society, report that when Gaspar de Portola and Father Juan Crespi camped on the river bank opposite the North Broadway Bridge entrance to Elysian Park, they were served refreshments by *Yangna* Indian villagers from the current location of the Los Angeles Police Academy (Echo Park Historical Society 2008). The Los Angeles Police Academy is located in the northern portion of Elysian Park, which appears an unlikely location for the Native American Village of *Yangna* because this location is more consistent with the location of the village of *Maawnga*, which was reported to have been originally located within the *Rancho de los Feliz*. This rancho originally encompassed Griffith Park and extended south to the northern portion of Elysian Park. The village of *Maawnga*, also recorded as *Maungna*, is believed to have been located "high on a bluff overlooking Glendale Narrows in the hills now occupied by Elysian Park" (Gumprecht 2001:31).

A third community or village, named Geveronga, may have been located in the vicinity of the current downtown Los Angeles' city center, reported in the San Gabriel baptismal records as located "in the rancheria adjoining the Pueblo of Los Angeles" (McCawley 1996:57).

Archival Research Summary

The records search results indicate that 29 cultural resources studies have been conducted within a 0.50-mile radius of the Project site and 6 of which are located within the Project site. The entire Project site has been included in previous cultural resources assessments. The six reports overlapping the Project site are: one (LA-02099) overlaps the west boundary; one LA-08254 intersects the northwest corner; one LA-12800 is on the west portion boundary, LA-05353 overlaps the eastern boundary, LA-09200 is located at the south end, and one (LA-13249) overlaps the south, west and east portions. Studies relevant to the current Project site (LA-2099 and LA-13249) and study area are described in further detail below. One study entitled, *Extent of Zanja Madre* (LA-13239) which includes maps depicting that a segment of the *Zanja* is located

0.10-mile from the Project site. The accompanying map to the record provided includes the entire *Zanja* conduit system in addition to the *Zanja Madre*. The segment close to the Project site is Canal and Reservoir Ditch. The map that this record is based on is from the 1880's and not completely accurate. Additional map research was conducted in order to see if additional mapping could be found to correct any inaccuracies but was not publically available.

The SCCIC search identified 15 cultural resources within 0.50-mile of the Project site. These included the Project site (Silver Lake Reservoir Complex Historic District; P-19-192627; 3CD; designated LAHCM). For the purposes of this historic report, ESA only included those located within 0.25-mile of the Project site. There were four resources within 0.25-mile of the Project site. All four were also identified by SurveyLA and two were also recorded in the BERD. No prehistoric resources have been recorded within the Project site or within the 0.50-mile radius.

Geologic Map Review

The proposed Project falls within the greater Los Angeles Basin, a structural depression approximately 50 miles long and 20 miles wide in the northernmost Peninsular Ranges geomorphic province (Ingersoll and Rumelhart 1999). This basin can be broken down into subbasins that share a similar geological history (Yerkes et al. 1965; Sylvester and O'Black 2016). Each of these basins primarily formed from the migration of the San Andreas Fault Zone northward during the late Miocene (Irwin 1990; Powell and Weldon 1992; Critelli et al. 1995). Mountain ranges such as the Transverse Ranges bound these basins and are composed of older, uplifted rocks. As the various mountain ranges were folded and thrust upward, they eroded forming dissected surfaces and filling the intervening basins with thick piles of alluvium (Yerkes et al. 1965). While sediments dating back to the Cretaceous (66 million years ago) are preserved in the basin, continuous sedimentation began in the middle Miocene (around 13 million years ago) (Yerkes et al. 1965). Since that time, sediments have been eroded into the basin from the surrounding highlands, resulting in thousands of feet of accumulation. Most of these sediments are marine, until sea level dropped during the Pleistocene and deposition of the alluvial sediments that compose the uppermost units in the Los Angeles Basin began.

The Project, specifically, lies in a valley within Yerkes and others' (1965) 'Northeastern block' dissected into uplifted Miocene-age marine sediments. The bedrock formed in deep marine conditions and comprises mostly fine-grained shale that is well-cemented (Yerkes and Graham, 1997). Dibblee and Ehrenspeck (1991) refer to these sediments as the sandstone member of the Monterey Formation (Tmss). Earlier geologists ascribed these units to the Puente Formation (Lamar 1970; Yerkes et al. 1977; Weber 1980) or the Modelo Formation (Hoots 1931 and Durrell 1954). The uplift occurred in the Pliocene or Pleistocene and the eroded valleys became the site of deposition of Quaternary-age alluvium (Dibblee and Ehrenspeck 1991). The current Silver Lake Reservoir is entirely surrounded by alluvium though the proposed Project does impact the surrounding bedrock hills of the Puente Formation, dating to the Neogene or Upper Tertiary geological period that began 2.5 million years ago in the northeastern corner.

Aerial Photo, Topographic Map, and As-Built Review

ESA reviewed GPA's 2019 report "Silver Lake Reservoir Complex Master Plan: Research & Analysis Historical Resources Report," which included a chronological table indicating construction dates and alteration history of the SLRC. In 2020, GPA Consulting also created a narrative form of this construction chronology in a memorandum. ESA has compiled and summarized the most salient parts of this narrative from both the 2020 memorandum and the 2019 report below. In addition to this summarization, ESA reviewed historic geotechnical reports and as-builts as well to understand the nature of fill materials from previous construction within the Project.

The Silver Lake and Ivanhoe Reservoir Complex (complex) is situated in the Silver Lake-Echo Park-Elysian Valley Community Plan area. The complex encompasses approximately 127 acres and is made up of the Silver Lake and Ivanhoe Reservoirs, three dams, ancillary buildings and structures associated with LADWP's maintenance and operation, as well as landscape features such as stone and concrete retaining walls, trees, and shrub (GPA 2019).

The Ivanhoe Reservoir, which is trapezoidal in shape with rounded corners, and features sloped concrete embankments, is situated to the north of the Silver Lake Reservoir and covers approximately 7.84 acres. The Ivanhoe Dam and a reinforced concrete spillway separate the Silver Lake Reservoir from the Ivanhoe Reservoir. The Silver Lake Reservoir, which is irregularly shaped, and features sloped embankments covered in an asphaltic cement paving, encompasses approximately 78.2 acres. The Silver Lake Dam is a reinforced earthen dam, located south of the Silver Lake Reservoir (GPA 2019). The Ivanhoe and Silver Lake reservoirs were designed and constructed by William Mullholland, the former Los Angeles Department of Water Superintendent in 1906 and 1907.

In 1903, the City of Los Angeles acquired the land on which the SLRC is now located. Prior to this acquisition, the land was marshy swampland. Originally proposed in 1903, both reservoirs were planned to hold one billion gallons of extra water collected during wet months. Excavation for the Ivanhoe Reservoir began in November of 1905 and completed in May 1906. Work at Silver Lake Reservoir began in August of 1906 using an innovative hydraulic sluicing technique (GPA, 2019). In its early years, the Silver Lake Reservoir was utilized as a source of water for irrigation. The Ivanhoe Reservoir functioned as a source of domestic drinking water. The complex has experienced many alterations over the years to better serve its function and the community.

In 1911, the Water Department built a wooden roof over the newly constructed Ivanhoe Reservoir to decrease evaporation; however, it was removed in 1938 due to health and maintenance reasons. Major alterations occurred to the Complex in 1920, when the reservoirs were altered so that both the Ivanhoe Reservoir and the Silver Lake Reservoir could be used for domestic water supply. To accommodate this change, the embankments of the Silver Lake Reservoir were altered to have a steeper slope and consequently increase the depth of the reservoir. Parts of the embankments were also covered in a paving material. In 1922, fences were placed around the reservoirs to keep out violators attempting to go fishing, bathing, boating and hunting. A diversion ditch (which

received drainage from the surrounding hills) was also constructed in the same year around Silver Lake Reservoir.

A 1942 Topographic Map of the Silver Lake & Ivanhoe Reservoirs shows the Ivanhoe reservoir and Silver Lake Reservoir which shows the steeper banks described in the 1920's as well as conduits, the bypasses and outlets between the reservoirs, and the caretakers house and sluice gates on the eastern shore near the divider dam between the two reservoirs. The Meadow appears to be sloped up in the center to an elevation of 500 feet above sea level (asl) and the area that is now the Meadow was still part of the reservoir with an elevation of 430-450 feet asl which was known as East Cove. By 1944, the new River Supply Conduit (composed of 41,260 feet of reinforced concrete pipe) was built to deliver aqueduct water from the North Hollywood Pumping Plant to the Silver Lake Reservoir. In 1945, the reservoirs were drained, the Ivanhoe Inlet Tower was constructed, and the earth-filled dams improved.

Between 1950 and 1953, major improvements were undertaken at both reservoirs, including draining, regrading, resurfacing. Additionally, the dams were raised by two feet, a 60-inch bypass pipeline was placed on the bottom of the reservoirs, a new 66-inch outlet line was constructed from the Silver Lake dam south and along West Silver Lake Drive, and a portion of Silver Lake Reservoir was filled in. Both reservoirs were refilled and were back in service by December of 1953. These renovations included a significant alteration to the Silver Lake Reservoir: a lagoon known as the East Cove on the eastern shoreline was filled in, constructing the area now referred to as "the Meadow." Ivanhoe was also deepened and basin embankments paved with asphalt as visible in the aerial photo from 1952 (GPA 2019). The Final Engineering Report of the 1950-1951 Improvements for the Silver Lake Reservoir (LADWP) indicated that the filling of East Cove was completed by constructing a rolled fill dike across the bay and filling in behind it with mud and loose earth from the reservoir bottom and slopes. Photos from this report show considerable and likely complete disturbance to the reservoir and for excavation of the outlet tower and other large infrastructure such as pipelines placed within the reservoirs. Many of the excavations appear to be down to bedrock and were into the Puente Formation sandstone. Areas outside the reservoir footprint and away from the fill areas such as the Meadows appear to have had less disturbance.

In the 1970s, the SLRC underwent additional changes that included the reconstruction of the Silver Lake Dam due to seismic issues (1975 – 1976). A 1970 geological map of the vicinity of the reservoirs (C-1709-G-2, DWP Water and Engineering Design Division) shows that the divider dam between the reservoirs is fill with fill on the west side and east side of the northern half. There is also fill at the southern end of Silver Lake Reservoir. Most of the area surrounding the lake is developed but the area north of the Meadows is quaternary alluvium at the lower elevations and Puente Formation sandstone (Tpss) at the higher peaked elevation. The 1970 map shows East Cove still as water although that area had been filled in the 1950's. A second geological map from 1973 shows similar areas of quaternary alluvium on the eastern shore of the Ivanhoe Reservoir with the same outcrop of Tpss but shows the area of fill where the Meadows has been filled in. There is additional infrastructure shown within Silver Lake Reservoir as well. Reconstruction of the Silver Lake Dam during this time consisted of the material from the old dam being removed to bedrock and then reconditioned and compacted into a new embankment.

589,000 cubic yards of material was used from the old dam and 719,300 cubic yards were ultimately placed, the difference was excavated from the reservoir bottom. The Silver Lake outlet tower was also renovated at this time and a 72-inch bypass pipe was installed. Additionally, the southeastern corner of the Silver Lake Reservoir was infilled with the dirt, reclaiming a small portion of land and reshaping the reservoir into its current configuration. These changes are evident from 1976 and 1977 respectively, when the reservoir was drained, and 1977, when this work was complete.

In 2008, the SLRC was taken out of service due to high levels of toxic contamination and they were drained and refilled. The reservoirs were drained again in 2016 to construct a bypass project and were refilled in 2017. The Ivanhoe Reservoir was removed from the distribution system in 2017 (GPA 2019).

Identification of Tribal Cultural Resources

Sacred Lands File Search

The NAHC maintains a confidential SLF database which contains resources of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on October 7, 2021 to request a search of the SLF. The NAHC responded to the request in a letter dated November 19, 2021 indicating that the results were positive. The response letter did not provide details on resources within the Project site, but suggested contacting the Gabrieleño Band of Mission Indians – Kizh Nation. The NAHC also provided a list of other Native American tribes to contact as they may have knowledge of cultural resources within the Project site. The Zanja System is recorded on the Sacred Land File as portions of the system were built and utilized by Native Americans living in Los Angeles while the system was in use and this is a possible reason for the positive findings. The City is conducting consultation with appropriate tribes per AB 52 requirements, as well as conducting outreach to the Kizh Nation regarding the positive finding.

Assembly Bill 52 Tribal Consultation

In compliance with the requirements of AB 52, the City of Los Angeles Bureau of Engineering provided formal notification of the Project via certified mail to Native American groups that are listed on the City's AB 52 contact list, on December 13, 2021. A summary is provided below in **Table 3.17-1**. The letters included a description of the proposed Project, the Project location, and a notification of the type of consultation being initiated. The City received a response from the Gabrielino Tongva Indians of California Tribal Council (Christina Conley, Cultural Resource Administrator). The other Native American groups contacted by the City have not responded.

In an email dated February 22, 2022, Christina Conley, Cultural Resource Administrator of the Gabrielino Tongva Indians of California Tribal Council (Tribe), initiated AB 52 consultation in response to the City's notification. Ms. Conley indicated that the tribe sees the Project will be a positive addition to the community. In addition, she noted that the area is within the *Maawnga* village site and is considered to be culturally sensitive. In addition, Ms. Conley provided the Tribe's cultural resource monitoring recommendations, recovery and reburial procedures,

treatment and disposition of human remains and associated grave goods procedures, and a history of the Gabrielino Tongva Indians of California which includes a list of Project Sites.

**TABLE 3.17-1
 SUMMARY OF AB 52 CONSULTATION**

Contact	Tribe/Organization	Date AB 52 Notice Sent	Response Received	Date AB 52 Initiation Sent	Consultation Results
Jairo Avila, Tribal Historic and Cultural Preservation Officer	Fernandeño Tataviam Band of Mission Indians	12/13/2021	No response	-	-
Andrew Salas, Chairperson	Gabrieleño Band of Mission Indians – Kizh Nation	12/13/2021	Responded to request regarding SLF, consultation in progress	-	Consultation Closed
Robert F. Dorame, Tribal Chair/Cultural Resources	Gabrielino Tongva Indians of California Tribal Council	12/13/2021	No response	-	-
Christina Conley, Cultural Resource Administrator	Gabrielino Tongva Indians of California Tribal Council		Request consultation	02/22/2022	Consultation Closed
Sandonne Goad, Chairperson	Gabrielino/Tongva Nation	12/13/2021	No response	-	-
Anthony Morales, Chairperson	Gabrielino/Tongva San Gabriel Band of Mission Indians	12/13/2021	No response	-	-
Charles Alvarez	Gabrielino-Tongva Tribe	12/13/2021	No response		
Isaiah Vivanco, Chairperson	Soboba Band of Luiseño Indians	12/13/2021	No response	-	-
Lovina Redner, Tribal Chair	Santa Rosa band of Cahuilla Indians	12/13/2021	No response	-	-

Although the Kizh Tribe initially did not indicate to the City they wished to engage in AB 52 consultation, the City reached out to them informally in an effort to gather more information on resources within or in the vicinity of the Project Site, regarding the positive SLF result. The City met with the Kizh on May 31, 2022 and provided additional information on Project disturbance as a result of these conversations on July 13, 2022. The Kizh Tribe requested additional time to consult and a meeting was held on August 23, 2022 to further discuss approaches to cultural resource monitoring. Based on this consultation, the City revised the mitigation to include both tribes to be present on-site for monitoring within the specific areas of the Project Site that require monitoring and recirculated the mitigation measures and a close out letter to both Tribes on September 19, 2022.

3.17.2 Regulatory Framework

State

Assembly Bill 52

AB 52 was signed by California State Governor Brown on September 25, 2014. AB 52 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of

Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration (ND) or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under the California Environmental Quality Act (CEQA), known as tribal cultural resources. PRC Sections 21074(a)(1) and 21074(a)(2) define tribal cultural resources as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either included or determined to be eligible for inclusion in the California Register or included in a local register of historical resources, or a resource that is determined to be a tribal cultural resource by a lead agency, in its discretion and supported by substantial evidence. Further, as stated under PRC Section 21074(b), “a cultural landscape that meets these criteria is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Historical resources, unique archaeological resources, or non-unique archaeological resources may also be tribal cultural resources if they meet these criteria.” On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources provided in Appendix G of the CEQA Guidelines, which was approved by the Office of Administrative Law on September 27, 2016.

PRC Section 21080.3.1 requires that within 14 days of a lead agency determining that an application for a project is complete, or a decision by a public agency to undertake a project, the lead agency provide formal notification to the designated contact, or a tribal representative, of California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the project (as defined in PRC Section 21073) and who have requested in writing to be informed by the lead agency (PRC Section 21080.3.1[b]). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency’s formal notification and the lead agency must begin consultation within 30 days of receiving the tribe’s request for consultation (PRC Sections 21080.3.1[d] and 21080.3.1[e]).

PRC Section 21080.3.2(a) identifies the following as potential consultation discussion topics: the type of environmental review necessary; the significance of tribal cultural resources; the significance of the project’s impacts on the tribal cultural resources; project alternatives or appropriate measures for preservation; and mitigation measures. Consultation is considered concluded when either (1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource or (2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached (PRC Section 21080.3.2[b]).

If a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC Section 21082.3[d][2] and [3]).

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native

American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Confidentiality does not, however, apply to data or information that are, or become publicly available, are already in lawful possession of the project applicant before the provision of the information by the California Native American tribe, are independently developed by the project applicant or the project applicant's agents, or are lawfully obtained by the project applicant from a third party that is not the lead agency, a California Native American tribe, or another public agency (PRC Section 21082.3(c)(2)(B)).

3.17.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to tribal cultural resources are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
 - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). (Refer to Impact 3.17-1)
 - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. (Refer to Impact 3.17-2)

The 2006 L.A. CEQA Thresholds Guide does not include thresholds of significance pertaining to tribal cultural resources.

Methodology

Under CEQA, the evaluation of impacts to tribal cultural resources consists of two-parts: (1) identification of tribal cultural resources within the project site or immediate vicinity through AB 52 consultation, as well as a review of pertinent academic and ethnographic literature for information pertaining to past Native American use of the project area, SLF search, and SCCIC records review; and (2) a determination of whether the project may result in a “substantial adverse change” in the significance of any identified resources.

3.17.4 Project Design Features

The Project includes the implementation of PDF-CR-1 and PDF-CR-2 as included in Section 3.5, *Cultural Resources*.

3.17.5 Impacts and Mitigation Measures

Tribal Cultural Resource

Impact 3.17-1: Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- i) **Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1 (k), or**
- ii) **A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.**

Construction / Operation

The City submitted request to consult letters to nine Native American individuals and organizations on the City's AB 52 Notification List on December 13, 2021 as part of the AB 52 Tribal consultation effort. As determined through the City's consultation with Native American Tribes who requested consultation, no known Tribal cultural resources have been identified within the Project Site.

As discussed in the Setting section above, consultation between the City and the Gabrielino Tongva Indians of California Tribal Council has been completed. Consultation with the Gabrieleno Band of Mission Indians-Kizh Nation has also been completed. **Mitigation Measure TCR-1** was revised after consultation and the consultation was concluded in good faith. No Tribal cultural resources as defined in PRC Section 21074(a)(1) that are listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k), or that are determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to PRC Section 5024.1, have been identified within the Project site.

During AB 52 consultation, the Tribe stressed the potential tribal cultural resources sensitivity of the Project site and indicated that the Project site vicinity maintains a high sensitivity for having the potential to encounter resources of prehistoric and historic archaeological resources that may be identified as tribal cultural resources as a result of the Project site being within the ethnographic village of *Maawanga*.

Review of the documentation from the Tribe did support the conclusion reached in Section 3.5, *Cultural Resources*, of this Draft EIR, that the Project site has potentially high sensitivity for buried archaeological resources in areas of native soils which include quaternary alluvium in the Knoll portion of the Project Site and the Eucalyptus Grove. Once encountered, these could potentially be considered a tribal cultural resource. PDF-CR-1 and PDF-CR-2 provide for unanticipated discovery of such archaeological resources. In addition to the cultural Project Design Features, as an added protection for inadvertent discoveries, the Project would be required to comply with the City's standard conditions of approval for the treatment of inadvertent tribal cultural resource discoveries. The City would be required to comply with these conditions, which provide treatment requiring the immediate halt of construction activities in the vicinity of the discovery, the coordination with Native American tribes and the City, and for the development and implementation of appropriate measures for treating the discovery. In addition, review of the disturbance at the Silver Lake and Ivanhoe Reservoirs indicated that as a result of multiple phases of construction within the reservoir complex have resulted in substantial disturbance to the complex. Fill was used from the bottom of the reservoir as described above and subjected to processing and compaction in the Meadow and Dams. In addition, portions of the project site also have the Puente Formation at the surface which is 2.5 million years old or older and although could have potentially have prehistoric resources present on the surface at one time, due to the disturbance over more than 100 years, this is highly unlikely and the formation is too old to contain prehistoric resources related to past human civilization in the area. Therefore, tribal monitoring has been recommended for the areas containing native quaternary alluvium within the Knoll and the Eucalyptus Grove which has not been impacted by Reservoir development. All other ground disturbance will be within areas of fill or the Puente Formation, including boring activities within the lakebed which would be within the underlying Puente Formation and fill layers at that depth.

Per AB 52, all information received from the Tribal consultation is included in a confidential appendix in the project files of the Bureau of Engineering.

For these reasons, the Project and offsite improvements would not result in a substantial adverse change in the significance of a Tribal cultural resource as defined in PRC Section 21074. Impacts would be considered less than significant.

Mitigation Measures:

TCR-1: Native American Monitoring. Prior to the commencement of any ground disturbing activity at the project site, the City shall reach out to retain a Native American Monitor from both the Gabrieleno Band of Mission Indians-Kizh Nation and the Gabrielino Tongva Indians of California Tribal Council to provide a Native American monitor. Should neither Tribe be available to monitor during ground disturbance, work may continue but should Tribal Cultural Resources be encountered work will stop and both Tribes will be immediately notified. The Tribal monitors will only be present on-site during the construction phases that involve ground-disturbing activity in areas of quaternary alluvium within the Knoll, and will not be necessary in portions of the Knoll where the Puente Sandstone bedrock formation is present either at depth or at the surface. In addition, any ground disturbance required in the Eucalyptus Grove will be subject to Tribal monitoring. Ground disturbing activities are defined by the Tribe as activities that may include, but are not limited to, pavement removal, potholing, or auguring, grubbing,

tree removals, boring, grading, excavation, drilling, and trenching within the areas above. The on-site Tribal monitoring shall end when all ground-disturbing activities within the Knoll and the Eucalyptus Grove are completed, or when the Tribal representatives and Tribal Monitors have indicated that the project site has little to no potential for impacting Tribal Cultural Resources.,

In the event that cultural resources of Native American origin are identified during construction, the City will coordinate with the qualified archaeologist (who meets the Secretary of the Interior's Professional Qualifications Standards), and both tribes that participated in consultation. If the City, in consultation with the Gabrieleno Band of Mission Indians-Kizh Nation and the Gabrielino Tongva Indians of California Tribal Council, determines that the resource is a Tribal Cultural Resource and thus significant under CEQA, a treatment plan shall be prepared and implemented in accordance with state guidelines and in consultation with the two Native American tribes. The treatment plan may include, but would not be limited to, avoidance, capping in place, excavation and removal of the resource, interpretive displays, sensitive area signage, or other mutually agreed upon measure.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

Cumulative Impact

Impact 3.17-2: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively considerable impact to tribal cultural resources?

The City submitted request to consult letters to nine Native American individuals and organizations on the City's AB 52 Notification List on December 13, 2021 as part of the AB 52 Tribal consultation effort. As determined through the City's consultation with Native American Tribes who requested consultation, no known Tribal cultural resources have been identified within the Project Site. The Project would not result in a substantial adverse change in the significance of a Tribal cultural resource as defined in PRC Section 21074. Related projects may impact tribal cultural resources due to the potential to encounter tribal cultural resources at depth during construction. This potential exists given the Project Site's location in the general vicinity of a known Native American village (*Maawnga*) and where recent discoveries during other construction projects have been made, its location in an area where prehistoric trading routes had once existed, and its proximity to the Los Angeles River, all of which would have attracted prehistoric inhabitants to the Project Site and vicinity. Nonetheless, since the proposed Project would not impact a tribal cultural resource, it would not contribute considerably to a cumulative Tribal Cultural Resource. In light of the City's standard Condition of Approval for the treatment of inadvertent tribal cultural resource discoveries, and similar anticipated mitigation requirements for Projects in areas of heightened sensitivity, cumulative impacts associated with tribal cultural resources would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.17.6 Summary of Impacts

Table 3.17-2 summarizes the impact significance determinations and lists mitigation measures related to tribal cultural resources.

**TABLE 3.17-2
SUMMARY OF PROPOSED PROJECT IMPACTS TO TRIBAL CULTURAL RESOURCES**

Impact	Mitigation Measure	Significance
3.17-1: Tribal Cultural Resources	Mitigation Measure TCR-1	LTSM
3.17-2: Cumulative	None Required	LTS

NOTES:

NI = No Impact, no mitigation proposed
LTS = Less than Significant, no mitigation proposed
LTSM = Less than Significant Impact with Mitigation Incorporated
SU = Significant and Unavoidable

3.17.7 References

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3.18 Utilities and Service Systems

This section addresses the potential impacts to utilities and service systems associated with implementation of the proposed Project. This section includes: a description of the existing utilities and service systems in the proposed Project area; a summary of applicable regulations related to utilities and service systems; and an evaluation of the potential impacts of the proposed Project related to utilities and service systems. Project design features include **PDF-UTIL-1: Drought-Tolerant Landscaping**, **PDF-UTIL-2: Water-Efficient Irrigation**, and **PDF-UTIL-3: Decentralized Drainage Strategy**. Impacts to utilities and service systems are less than significant with incorporation of mitigation measure **UTIL-1: Underground Utilities Search and Coordination**.

3.18.1 Environmental Setting

Water Supply

Several water agencies participate in delivering water to retail customers and households in Los Angeles County. The California Department of Water Resources (DWR) operates and maintains the State Water Project that imports water from the Sacramento River Delta to Southern California. The Metropolitan Water District (Metropolitan) buys imported State Water Project water, imports water from the Colorado River through the Colorado River Aqueduct (CRA), and wholesales water to its member agencies. Water wholesalers provide water to retail customers; some are agencies of cities or counties, some are private companies, and some are special districts. The proposed Project is located within Los Angeles Department of Water and Power's (LADWP's) service area, which provides potable water and electricity to over four million residents and businesses in the city of Los Angeles and surrounding communities. LADWP is the largest municipal water and power utility in the United States.

In May 2021, LADWP adopted its 2020 Urban Water Management Plan (UWMP) (LADWP 2021). The UWMP has been used to inform existing water supply settings in this section. Primary sources of water for the LADWP service area include the Los Angeles Aqueducts (LAA), local groundwater, recycled water, and imported supplemental water purchased from Metropolitan. Water from the LAA and Metropolitan is classified as imported because it is obtained from outside LADWP's service area (LADWP 2021). Local groundwater is locally obtained within the service area. Recycled water, another local supply source, is becoming a larger part of LADWP's overall supply portfolio. The average total water supply in LADWP's service area between the 2015-2016 fiscal year and the 2019-2020 fiscal year was approximately 497,386 acre-feet per year (AFY) (LADWP 2021). Many of LADWP's traditional water supply sources are becoming increasingly constrained due to hydrologic variability, environmental regulations, and groundwater basin contamination. LADWP is actively pursuing increased sustainability by investing in conservation, water use efficiency, water recycling, stormwater capture, and local groundwater development and remediation, while also protecting its imported water supplies.

Total water demand in the LADWP service area varies from year to year and is influenced by a number of factors such as population growth, weather, water conservation, water use efficiency, dry periods, and economic activity. From the period between 2016 and 2020, average total water

use per year was 495,685 AF, which is below the 30-year average of 588,611 AF for the years 1991 through 2020 (LADWP 2021, p. 2-3). LADWP expects to have a reliable supply of up to 746,000 AF, inclusive of planned conservation, in 2045 under a multiple dry years scenario. Also, under drought conditions, LADWP will have a reliable supply of 655,700 AF of water in 2025 (LADWP 2021). Based on water demand projections through the year 2045, existing and planned water supplies and purchases in the LADWP service area together with water conservation efforts and Metropolitan water purchases, will meet future water demands in its service area.

Los Angeles Aqueduct

Since the early 1900s, the LAA historically provided the vast majority of water for the City. From the 2015-2016 fiscal year to the 2019-2020 fiscal year, the LAA accounted for 48 percent of the total water supply. LAA deliveries are dependent on snowfall in the Eastern Sierra Nevada. Years with abundant snowpack result in larger water deliveries from the LAA, and reduced purchases of supplemental water from Metropolitan. However, between 1992 and 2020, the City reallocated approximately one-half of the LAA water supply (approximately 177,000 AFY) to other uses to supply a variety of environmental projects within the Owens Valley and Mono Basin in the Eastern Sierra (LADWP 2021, p. ES-4).

Los Angeles Aqueduct Filtration Plant

The Los Angeles Aqueduct Filtration Plant (LAAFP) is located in the northern portion of the San Fernando Valley. The LAAFP treats unfiltered water from the LAA for turbidity and untreated State Water Project water for bromate formation (LADWP 2021, p. 9-9). The plant was completed in 1986 and has a treatment capacity of up to 600 million gallons per day (MGD) of water (U.S. Department of Energy [USDOE] 2022).

Local Groundwater

LADWP relies on local groundwater as a major component of its local water supply portfolio. From the 2015-2016 fiscal year to the 2019-2020 fiscal year, local groundwater has provided approximately 8 percent of the total water supply in Los Angeles, and since 1970 has provided up to 23 percent of total supply during extended dry periods when imported supplies became less reliable.

The Upper Los Angeles River Area (ULARA) watershed, which includes the San Fernando Basin and Sylmar Basin, is the principal groundwater resource where LADWP recharges and extracts local groundwater. LADWP also owns and extracts its local groundwater rights from the Central Basin and is entitled to produce water from the neighboring West Coast Basin. The unadjudicated Hollywood, Santa Monica, and northern Central Basins are local groundwater sources that do not currently provide groundwater to LADWP, but there is potential to develop future drinking water supplies for LADWP from these basins. In total, LADWP's groundwater rights can potentially supply more than 110,000 AFY of groundwater. While LADWP's groundwater rights are a critical component of local supply, the groundwater basins also provide LADWP with opportunities for water storage to meet its future supply reliability strategy. The San Fernando Basin has an available storage capacity of 500,000 AF, and the West Coast and Central Basins have a combined available storage capacity of 500,000 AF (LADWP 2021).

The primary source of groundwater for the City is the San Fernando Basin (Basin 4-12), which has provided as much as 89 percent of the City's groundwater supply from 2015 to 2020, ranging from 22,259 AFY to 75,958 AFY. LADWP has 10 major wellfields within Basin 4-12, with 41 operable wells with the capacity to pump 184,611 AFY as of December 2020 (LADWP 2021).

Currently, the reservoirs at the SLRC are supplied with treated Basin 4-12 groundwater from Pollock Well #3 (Refer to Section 3.10, *Hydrology and Water Quality*). The Pollock Wellfield is located approximately 0.5-mile northeast of the Project site and provides approximately 6 cubic feet per second (cfs) of capacity (LADWP 2021, p. 5-7). It should be noted that capacity figures are often higher than what is actually produced or intended normal operations, and thus, the 6 cfs of capacity (43,700 AFY) is not indicative of the historic production figure at Pollock Wellfield. The *Silver Lake Reservoir Complex Master Plan Water Quality Model* (Water Quality Model) prepared for the Project estimates that the annual average volume of Basin 4-12 groundwater pumped into the SLRC is approximately 241 AFY (CWE 2020).

Recycled Water

LADWP serves approximately 179 sites in the City with recycled water for irrigation, industrial, and environmental beneficial uses. From the 2015-2016 fiscal year to the 2019-2020 fiscal year, 2 percent of the total water supply was recycled water. Recycled water produced for the 2019-2020 fiscal year amounted to approximately 36,392 AFY, including municipal and industrial, and environmental reuse (LADWP 2021). All recycled water used within the City undergoes, at minimum, tertiary treatment and disinfection and meets or exceeds local and state requirements designed to ensure public safety (See *Wastewater Treatment* below for more information).

Metropolitan Supply

As a wholesaler, Metropolitan sells supplemental water to its 26 member agencies. LADWP is exclusively a retailer and has historically purchased supplemental imported supplies from Metropolitan to meet city demands. From the 2015-2016 fiscal year to the 2019-2020 fiscal year, purchases of supplemental water from Metropolitan amounted to an average of 42 percent of LADWP's water supply portfolio. Metropolitan owns and operates five water treatment plants that are located throughout Metropolitan's six-county service area (LADWP 2021, p. 9-1). The Silver Lake neighborhood is located in the service area of both the Joseph Jensen Treatment Plant and the F.E. Weymouth Treatment Plant. The facilities treat water that is delivered from the State Water Project and the Colorado River.

Joseph Jensen Treatment Plant

The Joseph Jensen Treatment Plant is located in Granada Hills and distributes water to San Fernando Valley, Ventura County, West Los Angeles, Santa Monica and the Palos Verdes Peninsula. It is Metropolitan's largest treatment plant and the largest west of the Mississippi River, with a capacity of 750 MGD. The 125-acre Jensen plant only treats water from the State Water Project, which comes from the California Aqueduct (Metropolitan 2022). The aqueduct carries water from Northern California that flows through the Sacramento-San Joaquin Delta. The facility was among the first of Metropolitan's treatment plants to convert to ozone treatment, with the project finished in 2005.

F.E. Weymouth Treatment Plant

The F.E. Weymouth Treatment Plant is located in the City of La Verne and was the first treatment plant built by Metropolitan, completed in the year 1940. It largely serves Los Angeles and Orange Counties. The plant was part of the district's Colorado River Aqueduct construction project. Today, it treats water from the Colorado River and the State Water Project, which imports supplies from Northern California. Weymouth has a treatment capacity of 520 MGD (Metropolitan 2022). Weymouth is also the location of Metropolitan's state-of-the-art water quality lab, where more than 250,000 water quality tests are conducted each year. The laboratory's primary purpose is to safeguard the drinking water served to nearly 19 million Southern California residents.

Wastewater

City of Los Angeles Bureau of Sanitation

LASAN provides wastewater treatment to the City, as well as several unincorporated areas adjacent to the city of Los Angeles. LASAN operates and maintains its own wastewater collection and treatment systems with over 6,700 miles of sewers that serve more than four million residential and business customers in Los Angeles and 29 contracting cities and agencies (LASAN 2022a). These sewers are connected to the city of Los Angeles's four wastewater and water reclamation plants, discussed below, that process an average of 580 MGD of wastewater each day of the year (LASAN 2022b).

Hyperion Water Reclamation Plant

The Hyperion Water Reclamation Plant (HWRP) is the city's oldest and largest wastewater treatment facility and has been operating since 1894. An average of 275 MGD of wastewater enters the HWRP on a dry-weather day. Since the amount of wastewater entering HWRP can double on rainy days, the plant was designed to accommodate both dry- and wet-weather days with a maximum flow of 450 MGD and peak wet-weather flow of 800 MGD. The plant has been expanded and improved numerous times over the last 100 years. Today, leading-edge technological innovations capitalize upon the opportunity to recover wastewater bio-resources that are used for energy generation and agricultural applications. In addition, air emission controls and odor management facilities are integrated in all improvements. The wastewater treatment process at the HWRP includes preliminary treatment (i.e. removing solids from sewage via screening and use aerated grit chambers), primary treatment, and secondary treatment. Solids removed during primary and secondary treatment are pumped for further processing in digester tanks (LASAN 2022c).

Los Angeles-Glendale Water Reclamation Plant

In 1976 the Los Angeles-Glendale Water Reclamation Plan (LAGWRP) started operations as the first water reclamation plant in the city. The plant processes approximately 20 MGD of wastewater. The plant's highly treated wastewater meets and exceeds the water quality standards for recycled water for irrigation and industrial processes, and conserves over one billion gallons of potable water per year. LASAN and the City of Glendale co-own the plant, and LASAN operates and maintains it. Each City pays 50 percent of the costs and receives an equal share of the recycled water. The facility is strategically located to serve east San Fernando Valley

communities that are both within and outside of the City of Los Angeles limits. By processing flows in the eastern San Fernando Valley, the plant is able to provide critical hydraulic relief to the City's major sewers downstream. The LAGWRP is highly automated and staff can control processes from the on-site control room or at remote locations (LASAN 2022d).

Stormwater

The Los Angeles County Department of Public Works, Flood Control District (LACFCD) encompasses more than 2,700 square miles and approximately 2.1 million land parcels within 6 major watersheds. It includes drainage infrastructure within 86 incorporated cities as well as the unincorporated county areas. LACFCD operates the vast majority of drainage infrastructure near the Project site. This includes 14 major dams and reservoirs, 483 miles of open channel, 27 spreading grounds, 3,330 miles of underground storm drains, 47 pumping plants, 172 debris basins, 27 sediment placement sites, 3 seawater intrusion barriers and an estimated 82,000 catch basins (LACFCD 2022).

The SLRC is equipped with overflow discharge facilities and could discharge into the LACFCD storm drain network under maximum precipitation storm conditions. However, the SLRC is largely isolated from the surrounding drainage system due to factors such as its local topography, limited surface water supplies, and existing seepage and evaporation in the reservoirs. Existing surface water flow conditions are discussed further Section 3.10, *Hydrology and Water Quality*.

Solid Waste Management

LASAN is responsible for the collection and removal of all solid materials and waste in the City, and would provide services to the proposed Project. LASAN collects an average of 6,652 tons per day (TPD) of refuse, recyclables, yard trimmings, and other bulky items from more than 750,000 homes. LASAN owns and operates the Central LA Recycling and Transfer Station (CLARTS), which was designed to accommodate a capacity of 4,025 TPD and temporarily stores refuse and transports it to the nearest landfill or recycling facility. LASAN has closed all of its landfills and now uses the privately owned Sunshine Canyon landfill for refuse disposal (LASAN 2022e). Sunshine Canyon Landfill, located in the northwest region of the City, handles approximately one-third of the daily waste of all of Los Angeles County and receives roughly 9,000 TPD of waste, or more than 2.5 million tons annually, and has a max permitted throughput capacity of 12,100 TPD. The facility has a remaining capacity of 77,900,000 tons, and would not cease operations until 2037 (Republic Services 2022; CalRecycle 2022a)

LACSD serves the solid waste management needs of a large portion of Los Angeles County with several landfills, recycle centers, materials recovery/transfer facilities, and energy recovery facilities. LASAN disposes waste at several County landfills. The nearest solid waste facilities operated by LACSD that would be available to service the proposed Project are described below.

Scholl Canyon Landfill

The Scholl Canyon Landfill (SCLF) located in the City of Glendale is operated by LACSD. The facility is a solid waste facility that accepts materials such as construction and demolition waste, industrial waste, and mixed municipal waste. The facility accepts an average of 1,300 TPD and

has a max permitted throughput capacity of 3,400 TPD. Further, the SCLF has a remaining capacity of 9,900,000 tons and is expected to operate until the year 2030 (CalRecycle 2022b).

Southeast Resource Recovery Facility (SERRF)

The SERRF is a Refuse-To-Energy facility in Long Beach owned by a joint powers authority (JPA) between LACSD and the City of Long Beach, and is operated by a private company under contract. Southeast Resource Recovery Facility (SERRF) processes an average of 1,290 tons of municipal solid waste each day and generates up to 36 MW of electricity. The electricity is used to operate the facility with the remainder sold to SCE. In addition, SERRF performs "front-end" and "back-end" recycling by recovering white goods prior to incineration and collecting metals removed from the boilers after incineration. Each month, an average 825 tons of metal are recycled rather than sent to a landfill (LACSD 2022a).

Downey Area Recycling and Transfer Facility

The Downey Area Recycling and Transfer Facility (DART) is a materials recovery and transfer facility that accepts different types of non-hazardous waste and recyclables from residential waste, commercial waste, industrial waste, construction and demolition waste, and green waste (LACSD 2022b).

Electric Power

LADWP provides over 23 MWh of electricity for the 1.5 million customers in its service area, which covers a 465-square-mile area in the city of Los Angeles and much of the Owens Valley (LADWP 2015). LADWP is the third largest California electric utility in terms of consumption, behind Pacific Gas & Electric and SCE (LADWP 2015). The SLRC accesses electricity from LADWP.

Natural Gas

The Southern California Gas Company (SCG) provides natural gas services to Los Angeles County. California imports 90 percent of its natural gas. Most imports are delivered via interstate pipelines from the Southwest, Rocky Mountains, and Canada (USEIA 2021). In 2020, Los Angeles County used 2,936 million kWh of gas (CEC 2022c). The SLRC accesses natural gas from SCG.

Telecommunication

Most telecommunication services in the county and City of Los Angeles are delivered by private service providers.

3.18.2 Regulatory Framework

Federal

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) (40 CFR, Part 258 Subtitle D) establishes minimum location standards for siting municipal solid waste landfills. In addition, because

California laws and regulations governing the approval of solid waste landfills meet the requirements of Subtitle D, the U.S. EPA has delegated the enforcement responsibility to the State of California.

State

California Code of Regulations (CCR)

California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, means of egress to facilities (entering and exiting), and general stability of buildings. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The provisions of the CBC apply to the construction, alteration, movement, replacement, location, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California. The 2019 edition of the CBC is based on the 2018 International Building Code (IBC) published by the International Code Council, which replaced the Uniform Building Code (UBC). The code is updated triennially, and the 2019 edition of the CBC was published by the California Building Standards Commission on July 1, 2019, and took effect starting January 1, 2020.

Water Efficiency Standards for Non-Federally Regulated Appliances

Title 20, Sections 1605.3 (h) and 1505(i) of the CCR establishes applicable State efficiency standards (i.e., maximum flow rates) for plumbing fittings and fixtures, including fixtures such as showerheads, lavatory faucets, and water closets (toilets). Among the standards, the maximum flow rate for lavatory faucets manufactured after July 1, 2016 is 1.2 gallons per minute at 60 psi. The standard for toilets sold or offered for sale on or after January 1, 2016 is 1.28 gallons per flush.

California Green Building Standards (CALGreen)

Part 11 of Title 24, the title that regulates the design and construction of buildings, establishes the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or a positive environmental impact and encouraging sustainable construction practices in the following categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. The CALGreen Code includes both mandatory measures as well as voluntary measures. The mandatory measures establish minimum baselines that must be met in order for a building to be approved. The mandatory measures for water conservation provide limits for fixture flow rates, which are the same as those for the Title 20 efficiency standards listed above. The voluntary measures can be adopted by local jurisdictions for greater efficiency.

Plumbing Code

Title 24, Part 5 of the CCR establishes the California Plumbing Code. The California Plumbing Code sets forth efficiency standards (i.e., maximum flow rates) for all new federally-regulated plumbing fittings and fixtures, including showerheads and lavatory faucets. The 2019 California Plumbing Code, which is based on the 2018 Uniform Plumbing Code, has been published by the California Building Standards Commission and went into effect on January 1, 2019.

Executive Orders

In addition, the Project would be required to comply with the following Executive Orders issued to regulate water usage in the Project area:

- On July 8, 2021, Executive Order N-10-21 was issued, calling for voluntary cutbacks of water usage by 15 percent from 2020 usage levels. The Order lists commonsense measures Californians can undertake to achieve water usage reduction goals and identifies the SWRCB for tracking of monthly reporting on the State's progress.
- On April 7, 2017, Executive Order B-40-17 was issued. Cities and water districts throughout the state are required to report their water use each month and ban wasteful practices, including hosing off sidewalks and running sprinklers when it rains

Sustainable Groundwater Management Act of 2014

The State Legislature enacted landmark groundwater legislation known as the Sustainable Groundwater Management Act (SGMA), which took effect on January 1, 2015. With SGMA, the State focused upon equipping and empowering local agencies with tools needed to manage high- and medium-priority groundwater basins in a sustainable manner. Actions necessary to achieve sustainability vary by basin, but SGMA generally required local government and water agencies to form Groundwater Sustainability Agencies (GSAs) by January 30, 2017, and requires them to develop and implement Groundwater Sustainability Plans (GSPs), and monitor and report status of groundwater conditions of high- and medium-priority groundwater basins. GSPs and critically overdrafted high- and medium-priority basins were due to DWR by January 31, 2020, and GSPs for the remaining high- and medium-priority basins were due to DWR by January 31, 2022. The State seeks to mitigate and prevent the occurrence of adverse effects caused by unreasonable use of groundwater, such as groundwater storage depletion, land subsidence, seawater intrusion, water quality degradation, critical overdraft basin conditions, and surface water depletions (LADWP 2021, p. 5-21).

Throughout the development of SGMA there was broad public consensus that adjudicated basins are well managed, subject to Court jurisdiction, and should not be the primary focus for SGMA. The new law only requires managers of adjudicated basins to file a copy of their adjudications with DWR and provide annual reports that document basin conditions. Areas associated with adjudicated basins were eventually characterized as lower priority and exempt by DWR (LADWP 2021, p. 5-21). Groundwater is supplied to the proposed Project site from Basin 4-12, which is designated as a very low priority basin and has not been identified as a critically overdrafted basin by DWR. As such, the San Fernando Valley Basin does not have a specific groundwater management plan and is not subject to SGMA (DWR 2021).

California Urban Water Management Planning Act

Section 10610 of the California Water Code establishes the Urban Water Management Planning Act. The act states that every urban water service provider that serves 3,000 or more customers or that supplies over 3,000 acre-feet of water annually should prepare an Urban Water Management Plan (UWMP) every 5 years. The goal of a UWMP is to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. LADWP adopted its latest UWMP in May 2021 (LADWP 2021).

NPDES Construction General Permit

Construction associated with the proposed Project would disturb more than 1 acre of land surface for centralized and regional structural Best Management Practices (BMPs) (and possibly for those distributed structural BMPs larger than 1 acre), affecting the quality of stormwater discharges into waters of the United States. The proposed Program would therefore be subject to the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Order 2009-0009- DWQ, NPDES No. CAS000002, Construction General Permit, as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ). The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb one or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface.

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific BMPs designed to prevent pollutants from contacting stormwater and keep all products of erosion from moving off-site into receiving waters. The SWPPP BMPs are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. The CGP and SWPPPs are described in more detail in Section 3.10, *Hydrology and Water Quality*.

Senate Bills 610 and 221 (Chapters 643 and 642, Statutes of 2001)

Senate Bill (SB) 610 and Senate Bill 221 are companion measures that seek to promote more collaborative planning among local water suppliers and cities and counties. SB 610 requires that, for projects subject to CEQA that meet specific size criteria, the water supplier prepare water supply assessments (WSAs) that determine whether the water supplier has sufficient water resources to serve the projected water demands associated with the projects. A WSA must identify existing water entitlements, rights, and contracts and a quantification of the prior year's water deliveries. In addition, the supply and demand analysis must address water supplies during single and multiple dry years presented in 5-year increments for a 20-year projection. If groundwater is the proposed supply source, the required assessments must include detailed analyses of historic, current, and projected groundwater pumping and an evaluation of the sufficiency of the groundwater basin to sustain a new project's demands. However, WSAs are only required for large-scale development projects. The Project does not meet any of the criteria, and would not require a WSA.

SB 221 also addresses water supply in the land use approval process for large residential subdivision projects. However, unlike SB 610 WSAs, which are prepared at the beginning of a planning process, SB 221-required Water Supply Verification (WSV) is prepared at the end of the planning process for such projects. Under SB 221, a water supplier must prepare and adopt a WSV indicating sufficient water supply is available to serve a proposed subdivision, or the local agency must make a specific finding that sufficient water supplies are or will be available prior to completion of a project, as part of the conditions for the approval of a final subdivision map. In accordance, SB 221 specifically applies to residential subdivisions of 500 units or more. Since the proposed Project is not a residential subdivision, it is not subject to SB 221.

Construction and Demolition Waste Materials Diversion Requirements (Senate Bill 1374)

Signed in 2002, the Construction and Demolition Waste Materials Diversion Requirements (SB 1374) were codified in PRC Section 42919. SB 1374 requires that jurisdictions include in their annual AB 939 report a summary of the progress made in diverting construction and demolition waste. The legislation also required that CalRecycle adopt a model ordinance for diverting 50 to 75 percent of all construction and demolition waste from landfills. The model ordinance was adopted by CalRecycle on March 16, 2004.

California Integrated Waste Management Act of 1989 (Assembly Bill 939)

The California Integrated Waste Management Act of 1989 (Public Resources Code Division 30) enacted through Assembly Bill (AB) 939 emphasized conservation of natural resources through reduction, recycling, and reuse of solid waste. AB 939 requires that all cities and counties divert 25 percent of solid waste streams from landfills by 1995 and 50 percent by 2000. In accordance with AB 939, each local agency must submit an annual report to the California Integrated Waste Management Board summarizing its progress in diverting solid waste disposal.

Mandatory Commercial Recycling Regulation (Assembly Bill 341)

In October 2011, Governor Brown signed AB 341 into law, setting a 75 percent recycling goal for California by 2020. The purpose of this new law is to reduce greenhouse gas emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California. AB 341 went into effect July 1, 2012 and requires all commercial businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The same requirement is also applied to multifamily dwellings of five units or more. The focus of AB 341 has been on dry recyclables such as cardboard, paper fiber, pallets, rigid plastics, and containers. Cardboard and paper fiber recycling offer the highest methane mitigation potential per ton recycled, and can also count towards the efforts of SB 1383 compliance.

Mandatory Commercial Organics Recycling Regulation (Assembly Bill 1826)

AB 1826 requires jurisdictions to implement an organic waste recycling program for businesses, including outreach, education, and monitoring of affected businesses. Additionally, each jurisdiction is to identify a multitude of information, including barriers to siting organic waste recycling facilities, as well as closed or abandoned sites that might be available for new organic

waste recycling facilities. AB 1826 defines “organic waste” as food waste, green waste, landscape and pruning waste, non-hazardous wood waste, and food-soiled paper waste that is mixed in with food waste. It also defines a “business” as a commercial or public entity, including, but not limited to, a firm, partnership, proprietorship, joint stock company, corporation, or association that is organized as a for-profit or nonprofit entity, or a multifamily residential dwelling consisting of five or more units. As of January 1, 2017, businesses that generate 4 cubic yards or more of organic waste per week are subject to this requirement. Commencing January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week also were required to arrange for organic waste recycling services. In September 2020, CalRecycle reduced this threshold to 2 cubic yards of solid waste (i.e., total of trash, recycling, and organics) per week generated by covered businesses (CalRecycle 2022c).

Protection of Underground Infrastructure

The California Government Code Section 4216-4216.9 “Protection of Underground Infrastructure” requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least 2 days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for Southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

California Energy Action Plan II

The California Energy Action Plan II is the state’s principal energy planning and policy document (California Energy Commission 2005, updated 2008). The plan identifies state-wide energy goals, describes a coordinated implementation plan for state energy policies, and identifies specific action areas to ensure that California’s energy is adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the first priority actions to address California’s increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods in order to address system reliability and support the best use of energy infrastructure). Additional priorities include the use of renewable sources of power and distributed generation (i.e., the use of relatively small power plants near or at centers of high demand). To the extent that these actions are unable to satisfy the increasing energy and capacity needs, clean and efficient fossil-fired generation is supported.

The State of California adopted standards to increase the percentage of electricity that retail sellers, including investor-owned utilities and community choice aggregators, must provide from renewable resources. The standards are referred to as the Renewables Portfolio Standards (RPS). The legislation requires utilities to increase the percentage of electricity obtained from renewable sources to 33 percent by 2020 and 50 percent by 2030. On September 10, 2018, Governor Jerry Brown signed SB 100, which further increased the California RPS and requires retail sellers and local publicly owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by December 31, 2024; 52 percent by December 31, 2027; and 60 percent by December 31, 2030.

County of Los Angeles General Plan

The proposed Project would be required to comply with all applicable county ordinances, and with General Plan goals, policies, and objectives related to water and wastewater treatment facilities infrastructure. City and unincorporated Los Angeles County General Plan regulations applicable to the proposed Project are described below.

Policy PS/F 3.1: Increase the supply of water through the development of new sources, such as recycled water, gray water, and rainwater harvesting.

Policy PS/F 3.2: Support the increased production, distribution and use of recycled water, gray water, and rainwater harvesting to provide for groundwater recharge, seawater intrusion barrier injection, irrigation, industrial processes and other beneficial uses.

County of Los Angeles Construction Green Building Standards Code

The County of Los Angeles Board of Supervisors adopted the Construction and Demolition (C&D) Debris Recycling and Reuse Ordinance on January 4, 2005, which was amended in January 2009. Effective January 2, 2011, Los Angeles County adopted the Green Building Standard Code, which increases the percentage at which non-residential construction projects must recycle material from 50 percent to 65 percent. The more stringent provisions of the Green Building Standard Code are currently enforced by Los Angeles County Department of Public Works. The purpose is to increase the diversion of construction and demolition debris from disposal facilities and will assist the County in meeting the State of California's 50 percent waste reduction mandate. Any construction project that requires a demolition or grading permit must submit a Recycling and Reuse Plan.

Local

LADWP 2020 Urban Water Management Plan

In accordance with the California Urban Water Management Planning Act, Urban Water Management Plans (UWMPs) are updated at 5-year intervals. LADWP adopted the 2020 UWMP on May 25, 2021. The 2020 UWMP builds upon the goals and progress made in the 2015 UWMP and currently serves as the City's master plan for reliable water supply and resource management consistent with the City's goals and objectives. The UWMP details LADWP's efforts to promote the efficient use and management of its water resources. LADWP's UWMP used a service area-wide methodology in developing its water demand projections. This methodology does not rely on individual development demands to determine area-wide growth. Rather, the projected growth in water use for the entire service area was considered in developing long-term water projections for the City to the year 2045. Long range projections are based on Southern California Association of Government (SCAG) growth projections. The 2020 UWMP is based on projections in the 2020 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

One Water LA 2040 Plan

In April 2018, the City prepared the One Water LA 2040 Plan (One Water LA Plan), an integrated approach to Citywide recycled water supply, wastewater treatment, and stormwater

management (City of Los Angeles 2018). The new plan builds upon the City's Water IRP, which projected needs and set forth improvements and upgrades to wastewater conveyance systems, recycled water systems, and runoff management programs through the year 2020, and extends its planning horizon to 2040. The One Water LA Plan proposes a collaborative approach to managing the City's future water, wastewater treatment, and stormwater needs with the goal of yielding sustainable, long-term water supplies for Los Angeles to ensure greater resilience to drought conditions and climate change. The One Water LA Plan is also intended as a step toward meeting the Mayor's Executive Directive to reduce the City's purchase of imported water by 50 percent by 2024 (City of Los Angeles 2014). Major challenges addressed in the One Water LA Plan include recurring drought, climate change, and the availability of recycled water in the future in light of declining wastewater volumes.

City of Los Angeles Water Integrated Resources Plan

The City of Los Angeles Water Integrated Resources Plan (IRP) was developed by multiple departments in order to address the facility needs of the City's wastewater program, recycled water, and urban runoff/stormwater management through the year 2020. The Final IRP 5-Year Review was released in June 2012, which included 12 projects that were separated into two categories: (1) "Go Projects" for immediate implementation; and (2) "Go-If Triggered Projects" for implementation in the future once a trigger is reached (LASAN and LADWP 2012). Triggers for these projects include wastewater flow, population, regulations, or operational efficiency. Based on the Final IRP 5-Year Review, the Go Projects consisted of six capital improvement projects for which triggers were considered to have been met at the time the IRP EIR was certified. The Go-If Triggered Projects consisted of six capital improvement projects for which triggers were not considered to have been met at the time the IRP EIR was certified.

Since the implementation of the IRP, new programs and projects, which have resulted in a substantial decrease in wastewater flows, have affected the Go Projects and Go-If Triggered Projects. Based on the Final IRP 5-Year Review, two of the Go Projects have been moved to the Go-If Triggered category (Go Project 2 and Go Project 3) and two have been deferred beyond the 2020 planning window of the IRP (Go Project 4 and Go Project 5). Construction of wastewater storage facilities at the Donald C. Tillman Water Reclamation Plant (Go Project 1) has been completed. In addition, Go Project 6, involving the design of the North East Interceptor Sewer Phase II, is no longer being pursued (City of Los Angeles 2020).

City of Los Angeles Solid Waste Integrated Resources Plan

The Solid Waste Integrated Resources Plan (SWIRP) - most commonly known as the City's Zero Waste Plan - lays out a long term plan through 2030 for the City's solid waste programs, policies and environmental infrastructure (LASAN 2013). The SWIRP proposes an approach for the City to achieve a goal of 90 percent diversion by 2025. These targeted diversion rates would be implemented through an enhancement of existing policies and programs, implementation of new policies and programs, and the development of future facilities to meet the City's recycling and solid waste infrastructure needs over a 20-year planning period.

The term "zero waste" refers to maximizing recycling, minimizing waste, reducing consumption, and encouraging the use of products with recycled/reused materials. As noted by the City, "zero

waste” is a goal and not a categorical imperative; the City is seeking to come as close to “zero waste” as possible. Based on the 2013 Zero Waste Progress Report and using the calculation methodology adopted by the State of California, the City achieved a landfill diversion rate of approximately 76 percent in 2012 (LASAN 2022f).

RENEW LA Plan

RENEW LA was adopted by the City Council in March 2006 for the purpose of facilitating a shift from solid waste disposal to resource recovery. This shift is predicted to result in “zero waste” and an overall diversion level of 90 percent by 2025. The plan focuses on combining key elements of existing reduction and recycling programs and infrastructure with new systems and conversion technologies to achieve resource recovery (without combustion) in the form of traditional recyclables, soil amendments, and renewable fuels, chemicals, and energy. The RENEW LA Plan also calls for reductions in the quantity of residual materials disposed in landfills and their associated environmental impacts.

City of Los Angeles Green New Deal

The City released the first Sustainable City pLAn in April 2015, which has been updated in 2019 as the City’s Green New Deal. The Green New Deal includes a multi-faceted approach to developing a locally sustainable water supply to reduce reliance on imported water, reducing water use through conservation, and increasing local water supply and availability.

City of Los Angeles Municipal Code

The City has adopted several ordinances, later codified in the Los Angeles Municipal Code (LAMC), in an effort to reduce water consumption, assure sewer capacity for new projects, reduce solid waste generation, and further energy efficiency in the City. A summary of the City’s key ordinances and regulations regarding utilities is provided below.

- **Ordinance No. 180,822** amended LAMC Chapter XII, Article 5 to establish water efficiency requirements for new development and renovation of existing buildings, and mandate installation of high efficiency plumbing fixtures in residential and commercial buildings.
- **Ordinance No. 181,480** amended LAMC Chapter IX by adding Article 9 (Green Building Code) to the LAMC to incorporate various provisions of the CALGreenCode. This ordinance added mandatory measures for newly constructed low-rise residential and non-residential buildings to reduce indoor water use by at least 20 percent by (1) using water saving fixtures or flow restrictions; and/or (2) demonstrating a 20-percent reduction in baseline water use.
- **Ordinance Nos. 181,899 and 183,833** amended LAMC Chapter VI, Article 4.4, Section 64.72, regarding stormwater and urban runoff to include new requirements, including Low Impact Development (LID) requirements that promote water conservation.
- **Ordinance No. 182,849** amended LAMC Chapter IX, Article 9 (Green Building Code) to mandate that for new water service or for additions or alterations requiring upgraded water service for landscaped areas of at least 1,000 square feet, separate sub-meters or metering devices shall be installed for outdoor potable water use. This ordinance also required that for new non-residential construction with at least 1,000 square feet of cumulative landscaped area, weather or soil moisture–based irrigation controllers and sensors be installed.

- **Ordinance No. 184,692** amended LAMC Chapter IX, Article 4 (Plumbing Code) by adopting by reference various sections of the California Plumbing Code. This ordinance also added requirements for plumbing fixtures and fixture fitting.
- **Ordinance No. 184,248** amended LAMC Chapter IX, Article 4 (Plumbing Code) and Article 9 (Green Building Code) to establish Citywide water efficiency standards and mandate a number of new fixture requirements and methods of construction for plumbing and irrigation systems.
- **LAMC Section 64.15** requires that the City perform a Sewer Capacity Availability Review (SCAR) when an applicant seeks a sewer permit to connect a property to the City sewer system, proposes additional discharge through their existing public sewer connection, or proposes a future sewer connection or development that is anticipated to generate 10,000 gallons or more of sewage per day.
- **LAMC Sections 64.11 and 64.12** require approval of a sewer permit, also called an “S” Permit, prior to connection to the wastewater system.
- **LAMC Sections 64.11.2 and 64.16.1** require the payment of fees for new connections to the City’s sewer system to assure the sufficiency of sewer infrastructure. New connections to the sewer system are assessed a Sewerage Facilities Charge. The rate structure for the Sewerage Facilities Charge is based upon wastewater flow strength as well as volume. The determination of wastewater flow strength for each applicable project is based on City guidelines for the average wastewater concentrations of two parameters, biological oxygen demand and suspended solids, for each type of land use.
- **Bureau of Engineering Special Order No. SO 06-0691** establishes design criteria for sewer systems to assure that new infrastructure provides sewer capacity and operating characteristics to meet City standards. Per the Special Order, lateral sewers, which are sewers 18 inches or less in diameter, must be designed for a planning period of 100 years. The Special Order also requires that sewers be designed so that the peak dry weather flow depth during their planning period does not exceed one-half of the pipe diameter (D) (i.e., depth-to-diameter ratio or d/D).
- **Ordinance No. 170,978** amended LAMC Sections 12.40 through 12.43 to establish consistent landscape requirements for new projects within the City. Section 12.40 contains general requirements, including a point system for specific project features and techniques in order to determine compliance with the ordinance, and defines exemptions from the ordinance. Section 12.41 sets minimum standards for water delivery systems (irrigation) to landscapes. Section 12.42 provides various regulations, of which two are applicable to stormwater management. The Heat and Glare Reduction regulation states among its purposes the design of vehicular use areas that reduce stormwater runoff and increase groundwater recharge; and the Soil and Watershed Conservation regulation is intended, among other purposes, to increase the “residence time of precipitation” within a given watershed. Implementation guidelines developed for the ordinance provide specific features and techniques for incorporation into projects, and include water management guidelines addressing runoff, infiltration, and groundwater recharge.
- **Ordinance No. 171,678** (the “Space Allocation Ordinance”) was enacted on August 13, 1997 pursuant to the California Solid Waste Reuse and the Recycling Access Act of 1991 (AB 1327), and has been incorporated in various sections of the LAMC. The Space Allocation Ordinance requires the provision of an adequate recycling area or room for collecting and loading recyclable materials in all new construction projects, all existing multi-family residential projects of four or more units where the addition of floor area is 25 percent or

more, and all other existing development projects where the addition of floor area is 30 percent or more.

- **Ordinance No. 181,519** was approved by the Los Angeles City Council on March 5, 2010, pertaining to a Citywide Construction and Demolition (C&D) Waste Recycling Ordinance that requires all mixed C&D waste generated within city limits be taken to City certified C&D waste processors. All haulers and contractors responsible for handling C&D waste must obtain a Private Waste Hauler Permit from LASAN prior to collecting, hauling and transporting C&D waste, and C&D waste can only be taken to City certified C&D processing facilities. The Department of Building and Safety aids in facilitating implementation of this ordinance; Building and Safety Building Permit applications will require contractors to either identify the permitted private solid waste hauler handling C&D waste from their City project or provide the contractor's own private solid waste hauler permit should the contractor choose to self-haul C&D waste (LASAN 2022g).

City of Los Angeles General Plan

General Plan Framework Element

The Citywide General Plan Framework Element (Framework Element) establishes the conceptual basis for the City’s General Plan (City of Los Angeles 1995). The Framework Element sets forth a comprehensive Citywide long-range growth strategy and defines Citywide policies regarding land use, housing, urban form and neighborhood design, open space and conservation, economic development, transportation, infrastructure and public services.

Chapter 9, Infrastructure and Public Services, of the City’s Framework Element identifies goals, objectives, and policies for City utilities. This chapter responds to federal and State mandates to plan for adequate infrastructure in the future. The Framework Element supports AB 939 and its goals by encouraging “an integrated solid waste management system that maximizes source reduction and materials recovery and minimizes the amount of waste requiring disposal.” The Framework Element addresses many of the programs the City has implemented to divert waste from disposal facilities such as source reduction programs and recycling programs (e.g., Curbside Recycling Program and composting). Additional goals related to the proposed Project are list on **Table 3.18-1**.

**TABLE 3.18-1
 RELEVANT GENERAL PLAN UTILITIES AND SERVICE SYSTEMS GOALS, OBJECTIVES, AND POLICIES**

Goal/Objective/ Policy	Goal/Objective/Policy Description
Framework Element – Chapter 9 Infrastructure and Public Services	
Goal 9A	Provide adequate wastewater collection and treatment capacity for the City and in basins tributary to City-owned wastewater treatment facilities
Goal 9C	Adequate water supply, storage facilities, and delivery system to serve the needs of existing and future residents and businesses.

SOURCE: City of Los Angeles, General Plan, Framework Element, re-adopted 2001.

Silver Lake-Echo Park-Elysian Valley Community Plan

The Silver Lake-Echo Park-Elysian Valley Community Plan provides a guide for the arrangement of land uses, streets, and services which will encourage and contribute to the economic, social and physical health safety, welfare and conveniences of the people who live and work in the community.

Water System Plan Objective 5: To set forth design standards for the water system relating to the total water demand and availability of supply, number and size of facilities, and to assure construction of facilities to be aesthetically compatible with adjacent lands and development.

3.18.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to utilities and service systems are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. (Refer to Impact 3.18-1)
- Have sufficient water supplies available to serve the proposed Project and reasonably foreseeable future development during normal, dry and multiple dry years. (Refer to Impact 3.18-2)
- Result in a determination by the wastewater treatment provider which serves or may serve the proposed Project that it has adequate capacity to serve the proposed Project's projected demand in addition to the provider's existing commitments (Refer to Impact 3.18-3)
- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (Refer to Impact 3.18-4)
- Not comply with federal, state, and local management and reduction statutes and regulations related to solid waste. (Refer to Impact 3.18-5)

In addition, the 2006 L.A. CEQA Thresholds Guide holds that the determination of significance shall be made on a case-by-case basis after considering the following factors:

Methodology

The environmental analysis of the potential impacts related to utilities and service systems is based on a review of the following information sources: the definition of the proposed Project provided in Chapter 2, *Project Description*, information included in the Water Resources Report and Water Quality Model (CWE 2019, 2020), as well as the information provided above in Section 3.16.1, *Environmental Setting*, all of which reflect the most up-to-date understanding of utilities and service systems in the Project area and vicinity. In the evaluation of existing utility capacities, it is conservatively assumed that the facilities would not be expanded prior to the Project construction. In addition, the environmental analysis was conducted in consultation with

relevant expert City departments, including LADWP (electrical supply and water supply) and LASAN (wastewater and solid waste).

The proposed Project would be regulated by the various laws, regulations, and policies summarized in Section 3.16.2, *Regulatory Setting*. Compliance by the proposed Project with applicable federal, State, and local laws and regulations is assumed in this analysis and local and State agencies would be expected to continue to enforce applicable requirements to the extent that they do so now.

2020 SLRC Master Plan Project Changes and Modeling Accuracy

Discussions regarding the groundwater supplies that would be required to refill the SLRC under the proposed Project rely specifically on the results of the Water Quality Model, which includes volumetric calculations for the different ways that water supplies would enter and exit the SLRC under the proposed Project (i.e., precipitation, pumping Pollock Wellfield groundwater, runoff from the Stormwater Capture Projects, overflow from Ivanhoe to Silver Lake, recirculation from Silver Lake to Ivanhoe reservoir, exfiltration, evaporation, transpiration, and overflow). Since the Water Quality Model was prepared, LADWP has halted its plans to implement the Stormwater Capture Projects. The elimination of stormwater runoff as a variable could therefore affect the accuracy of the Water Quality Model with respect to future water supplies. The discussion below provides reasoning for continued use of the Water Quality Model as the basis of the analysis despite this change.

Water levels in the reservoirs were projected to be similar under all modeled scenarios receiving Pollock Wellfield groundwater supplies regardless of receiving additional supplies from Stormwater Capture Projects (CWE 2020, p. 30). Furthermore, elimination of the additional runoff supplies from the Stormwater Capture Projects would have no effect on the volume and frequency of groundwater pumping from Pollock Wellfield during operations. Therefore, the results of the Water Quality Model remain accurate with respect to the proposed Project's impacts on groundwater supplies. Other changes to the proposed Project since the year 2020, such as the addition of off-site parking spaces on existing streets, would also have no effect on utilities and service systems in the Project area.

3.18.4 Project Design Features

The following Project Design Features (PDFs) related to water supply and stormwater would be implemented as part of the Project:

PDF-UTIL-1: Drought-Tolerant Landscaping. The Project will use a mix of native and drought-tolerant plants appropriate to the Los Angeles region to provide a plant palette adapted to climate change. Lawn would be used sparingly and strategically distributed where needed to support multifunctional cultural and recreational uses.

PDF-UTIL-2: Water-Efficient Irrigation. Irrigation water would be pumped from the reservoirs to wetland habitat areas which would then flow back into the reservoirs. Transition habitat zones would also be irrigated with reservoir water on a separate cycle appropriate for the drought-tolerant, coastal scrub planting palette. Remaining upland habitat, lawn areas, and ornamental gardens would be irrigated via a potable water supply

available from the LADWP distribution system which would require a dedicated meter. Recycled water may also be used to irrigate ornamental planting, should such water supplies become available in the future.

PDF-UTIL-3: Decentralized Drainage Strategy. To prevent untreated surface runoff from entering the reservoir waters, proposed Project will implement decentralized drainage facilities to capture and filter or infiltrate stormwater runoff from the developed portions of the Project site.

3.18.5 Impacts and Mitigation Measures

Utilities Expansion or Relocation

Impact 3.18-1: Would the proposed Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Construction

The proposed Project and off-site improvements would require minimal amounts of water for construction activities, such as cement mixing and dust control. Construction water demands may be met by imported water trucks or existing fire hydrants. Any wastewater generated by construction workers would be collected in portable toilet facilities and hand wash areas provided by the construction contractor, hauled off-site by a permitted waste hauler, and disposed of at a liquid-disposal station that has been permitted by the Regional Water Quality Control Board (RWQCB). As a result, substantial new wastewater flows would not be discharged into the public sewer system. The City's water and wastewater treatment providers would have adequate capacity to serve the construction needs of the Project, and construction of new or expanded facilities would not be required. Therefore, there would be no impact with regard to water or wastewater treatment facilities.

Construction contractors would be required to implement BMPs pursuant to the General Construction Stormwater NPDES permit to ensure that surface water runoff does not entrain contaminants including fuels, oils, paints, and sediment. Surface water runoff would be subject to SWPPPs prepared for each construction area. No new or expanded stormwater drainage facilities would be required to capture stormwater during construction other than those proposed by the Project. Impacts to the existing municipal drainage system would be less than significant.

As discussed in section 3.6, *Energy*, electric power required for construction activities would be supplied to the Project site by LADWP and would be obtained from existing electrical lines that connect to the Project site. Construction would not require new or expanded electric power facilities, and no impact would occur.

Nearly all construction would occur within the boundary of the SLRC. The proposed Project includes construction of aboveground structures, such as the Education Center, the Multi-Purpose Facility, the upgraded Recreation Center, and shade pavilions, as well as installation of underground utilities. In addition, the proposed Project would involve offsite improvements

including the addition of bike lanes and/or parking along Silver Lake Boulevard and new parking along the south west side of the South Valley. As the proposed Project site and the surrounding neighborhood are highly urbanized, construction activities could require relocation of utilities that could disrupt service delivery. Implementation of Mitigation Measure UTIL-1 would ensure that the City coordinates with utility providers operating within proposed impact areas during design and prior to construction in order to ensure that temporary effects to existing utility connections are restored in communication with local customers. Thus, the proposed Project would not require or result in the relocation of water, wastewater treatment, stormwater drainage, electric power, natural gas, and telecommunications facilities. Impacts would be less than significant with mitigation.

Mitigation Measures:

UTIL-1 Underground Utilities Search and Coordination: During design and prior to construction of Project facilities, the City shall conduct an underground utilities search and coordinate with all utility providers that operate in the same public rights-of-way impacted by construction activities. The City shall ensure that any temporary disruption in utility service caused by construction is minimized and that any affected parties are notified in advance.

Significance Determination:

Less than Significant Impact with Mitigation Incorporated

Operation

The proposed Project would enhance existing recreational areas with the construction of more public recreational facilities and opportunities within the SLRC boundary, the environmental effects of which are evaluated throughout this Draft EIR. Proposed Project components would include landscaping, replanting, throughout the SLRC; the implementation of floating habitat wetlands, the addition of pathways and trails that provide passive and active recreational opportunities; built structures and buildings including proposed shade pavilions, seated terraces, picnic groves, reservoir overlooks and docs, the proposed Education Center, Silver Lake Recreation Center upgrades, expanded Dog Park, the proposed new Multi-Purpose Facility; and related facilities, such as lighting, underground utility connections, and additional parking. It is anticipated that the enhanced recreational facilities would result in increased day-use populations in the Project area, and would be used for occasional outdoor events (e.g., concerts, movie nights, or luncheons) that would draw local and regional populations to the Project site and increase demand for water consumption and wastewater generation.

The City's existing water supplies are expected to be sufficient to serve the proposed buildings and structures described above, as they would not include water-intensive amenities, or substantial amounts of new employees and visitors that would consume substantial amounts of water. The Water Quality Model for the Project concluded that the groundwater supplies which are pumped into the reservoirs would be reduced under the proposed Project (CWE 2020). In order to reduce irrigated water demand, the Project would implement conservation strategies as part of the Project design, including use of native and drought-tolerant plant species appropriate for the region (See PDF-UTIL-1), and strategic irrigation of habitat, lawn areas, and ornamental gardens (See PDF-UTIL-2). Although water supplies would be sufficient for operation of the

proposed Project, improvements to the water system in the Project area may be required to provide adequate fire flow. Fire-flow requirements vary from 2,000 gallons per minute (gpm) in low density residential areas to 12,000 gpm in high-density commercial or industrial areas. A minimum residual water pressure of 20 pounds per square inch (psi) is to remain in the water system, with the required gallons per minute flowing. The required fire-flow for this project would be 4,000 gpm from four adjacent fire hydrants flowing simultaneously (Saunders, pers comm 2022). During project approval, regarding water main improvements, coordination with LADPW would be required to ensure sufficient fire flow would be available to serve the proposed Project. Therefore, construction of new or expanded water facilities would not be required to support the proposed Project. Impacts would be less than significant.

Wastewater from the proposed Project would be conveyed to the HWRP via the existing municipal sewer system. Currently, HWRP has approximately 175 MGD of remaining available capacity under average conditions (LASAN 2022c). Based on LASAN's average flow projections for the HWRP, it is anticipated that average flows in 2025 would be approximately 265 MGD, and thus, the future remaining available capacity in 2025 would be approximately 185 MGD (LADWP 2018). Relative to existing and future wastewater treatment capacities at the HWRP, the limited amounts of wastewater that would be generated by workers and visitors to the Project site are not anticipated to substantially increase wastewater flows. Therefore, construction of new or expanded wastewater treatment facilities or sewer connections would not be required, and impacts would be less than significant.

Although the proposed facilities would increase areas of impermeable surfaces that could result in increased runoff rates and/or quantities, the proposed Project would implement decentralized drainage facilities to capture stormwater within the proposed Project site. As described in Section 3.10, *Hydrology and Water Quality*, the Project would comply with applicable design standards and permits regulating stormwater discharge, such as those included in the MS4 and LADPW Hydrology Manual, and implement LID strategies with BMPs (e.g., proposed bioswales and wetlands) to treat localized rainfall before routing the water into the reservoirs (See PDF-UTIL-3). Further, areas adjacent to the reservoir, such as the great lawn and seating terraces, would be designed for surface runoff to move thorough the proposed habitat island areas before entering the reservoirs. In other areas, stormwater runoff would be treated by infiltration gardens located throughout the SLRC (e.g., proposed picnic grove and ornamental gardens would drain to depressions in the landscape which would filter stormwater before it's collected and piped into the reservoirs). At the proposed Knoll park zone, runoff from slopes would be collected in swales adjacent to the proposed Education Center and treated before entering Silver Lake Reservoir. Along the proposed promenade, biofiltration planting would be incorporated to treat stormwater runoff from its paving surfaces. Therefore, the proposed Project would not require or result in the construction of new or expanded stormwater facilities, and impacts would be less than significant.

As described previously, the Project would implement new underground utility connections for all proposed park zones except for the habitat islands. Electricity would be required to power various proposed facilities, including but not limited to lighting, buildings, and performance equipment hookups required for special events. Natural gas may be required to heat water and interior spaces, operate cooling equipment, and generate power for buildings. Other utility

improvements may include the installation of internet service and security cameras. As described in Section 3.6, *Energy*, the proposed Project incorporates a variety of conservation measures and features to reduce energy usage and minimize energy demand. The Project-related net increase to energy demands would be within LADWP's projected energy supplies and would not necessitate the construction of new or expanded electric power facilities or natural gas facilities. The City would coordinate with utility providers operating within proposed impact areas during design and prior to construction in order to ensure that existing utility connections are not impacted.

Therefore, the proposed Project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Water Supplies

Impact 3.18-2: Would the proposed Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Construction

LADWP would have sufficient water supplies available to serve the Project's water needs during construction, such as water for cement mixing and dust control. The relatively minor water supply needed for the proposed construction activities would leave sufficient water supplies available for other reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As described above in Section 3.8.1, *Environmental Setting*, the average total water supply in LADWP's service area between the 2015-2016 fiscal year and the 2019-2020 fiscal year was approximately 500,000 AFY. The projected average-weather water pre-conservation demand for the City in 2030 is 660,200 AFY (LADWP 2021). Basin 4-12 has 41 operable wells with capacity of 255 cfs as of December 2020, and has provided as much as 89 percent of the City's groundwater supply from the years 2015 to 2020 (LADWP 2021). The reservoirs at the SLRC are supplied with treated Basin 4-12 groundwater from Pollock Well #3, which is a part of LADWP's Pollock Wellfield that altogether provides approximately 6 cfs of groundwater capacity to the

City (LADWP 2021). It should be noted that capacity figures are often higher than what is actually produced or the intended normal operations, and thus, the 6 cfs of capacity (43,700 AFY) is not indicative of the historic production figure at Pollock Wellfield.

The Water Quality Model (CWE 202) for the proposed Project estimates that the annual average volume of Basin 4-12 groundwater which is currently pumped into the SLRC is 241 AFY, and would be reduced to approximately 227 AFY following implementation of the proposed Project. (CWE 2020). Relative to existing Basin 4-12 capacities, the proposed Project would contribute to a beneficial impact on groundwater supplies. Further, over the course of the entire 20-year modeled period from 1999 to 2019, the Water Quality Model found that the maximum groundwater required by the proposed Project would be 338 AFY. If this volume were to be pumped during the operational life of the Proposed project, increased pumping from Pollock Well #3 would be negligible relative to volumes currently pumped from the Pollock Wellfield.

The projections for the Project's groundwater needs, discussed above, are based on the proposed Project maintaining a suggested water level elevation range (between 445 and 447 feet) for optimal wetland habitats growth and sustainability. However, under certain future drought or other emergency conditions, supply augmentation and operational changes imposed under LADWP's Water Shortage Contingency Plan (WSCP) could affect the availability of local groundwater supplies at Pollock Wellfield used to fill the Silver Lake and Ivanhoe Reservoirs (Refer to Section 2.7.4, *Drought Emergency Contingencies*). The ability to curtail groundwater pumping to the reservoirs during emergency droughts would ensure that potable water demands relying on groundwater are met. This need for operational flexibility based on demands, available supplies, and constraints is a key feature of the proposed Project operations.

The Project would also receive potable water from LADWP to supply the proposed buildings, structures, and other facilities, such as drinking fountains in the proposed park zones. The proposed potable water demands would not substantially increase the existing demand and would be within the UWMP demand projections.

Complying with applicable federal, State, and local regulations would ensure that impacts would be less than significant without mitigation. Further, the proposed Project would implement drought-tolerant landscaping and water-efficient irrigation design and practices (See PDF-UTIL-1 and PDF-UTIL-2). Therefore, the proposed Project would have sufficient water supplies available to serve the proposed Project and reasonably foreseeable future development during normal, dry, and multiple dry years. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Wastewater Treatment

Impact 3.18-3: Would the proposed Project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction

As discussed for Impact 3.18-1, with respect to wastewater generation during construction, temporary facilities, such as portable toilet and hand wash areas, would be provided by the construction contractor. Any sewage generated from these facilities would be collected and hauled off-site to be disposed of at a liquid-disposal station that has been permitted by the RWQCB. As a result, substantial new wastewater flows would not be discharged into the City's wastewater system. Therefore, the HWRP would have adequate capacity to serve the Project's construction needs in addition to existing commitments, impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

As discussed for Impact 3.18-1, wastewater from the proposed Project would be conveyed to the HWRP via the existing municipal sewer system. Currently, the HWRP has approximately 175 MGD of remaining available capacity, and in 2025 the future remaining available capacity would be approximately 185 MGD (LADWP 2018). Relative to existing and future treatment capacity of the HWRP, the limited amounts of wastewater that would be generated by employees and visitors to the Project site are not anticipated to substantially increase wastewater flows. Project-related sanitary sewer connections and on-site infrastructure would be designed and constructed in accordance with applicable LASAN and California Plumbing Code standards. In addition, a final approval of the sewer capacity and required connection permit would be made at the time of permitting. Therefore, construction of new or expanded wastewater treatment facilities or sewer connections would not be required, and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Solid Waste

Impact 3.18-4: Would the proposed Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

Construction

Construction of the proposed Project would generate solid waste, included but not limited to, soil, asphalt, wood, paper, glass, plastic, and metals that would require disposal at a landfill. Table 2-6 provides an estimate of the amount of construction-related waste that would be exported during Project construction. Across all park zones, the Project would import approximately 86,765 cubic yards and export approximately 89,003 cubic yards of soil during grading/excavation (a net export of 2,238 cubic yards of soil during this construction phase), and export approximately 30,332 cubic yards of soil (drainage/utilities trenching), approximately 21,450 cubic yards of demolition debris (asphalt, earthwork, and general construction debris) and approximately 13,264 cubic yards of site preparation debris (vegetation and minor earthwork). The volumes of solid waste generated during construction would contribute to the diminishing of available landfill capacity.

It is anticipated that the City would deliver the majority of its non-hazardous construction waste to the privately-owned Sunshine Canyon Landfill and/or LACSD's Scholl Canyon Landfill, which are located nearest to the Project site and permitted to accept 12,100 TPD and 3,400 TPD, respectively. Further, both landfills are estimated to have capacity to operate beyond 2030 and would be available for the proposed construction duration (CalRecycle 2020a and 2020b). As required by City Ordinance No. 181,519 (Waste Hauler Permit Program), the inert solid waste and soil would require disposal at LACSD's operating inert landfill, Azusa Land Reclamation, or at any of a number of State-permitted Inert Debris Engineered Fill Operations in the County, such as the Hanson Rock Quarry or United Rock Products in Irwindale.

Waste disposal for the Project would be subject to the California Integrated Waste Management Act requiring 50 percent diversion of all solid waste streams from landfills. Thus, the City would ensure that any recyclable materials recovered during construction activities are delivered to County- or privately-owned recycling facilities for recovery and reuse. Compliance with all applicable local, State, and federal regulations and statutes is required. Therefore, impacts to landfill capacity would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

The majority of the Project's waste generation would occur during construction activities, as described above. Operation of the proposed park zones and buildings would not include activities that could generate substantial amounts of waste compared to existing conditions. Special events at the Project site would result in occasional, short-term increases in waste generation. The City would

limit attendees and provide recycling bins to reduce daily amounts of waste that would be sent to nearby landfills following the public events. In addition, occasional maintenance of proposed Project would involve invasive plant species removal, erosion control, sediment removal, and trash collection that would contribute to diminishing landfill capacities. However, given the capacity of nearby landfills, described above, and the limited operational waste generation that is anticipated for the Project, it is reasonable to assume that existing landfills would be adequate for serving the proposed Project. Solid waste collection services would be provided by LASAN similar to existing operations. Further, the additional permanent employees are not expected to contribute to a significant increase in solid waste. All applicable local, state, and federal regulations and statutes would be followed throughout operation. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Solid Waste Regulations

Impact 3.18-5: Would the proposed Project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Construction

As discussed above for Impact 3.18-3, construction activities at the Project would generate large volumes of solid waste. A significant impact could occur if the construction of the proposed Project would conflict with any statutes and regulations governing solid waste. The City of Los Angeles has enacted numerous waste reduction and recycling programs in order to comply with the California Integrated Waste Management Act (AB 939), which requires every city in California to divert at least 50 percent of its annual waste and be consistent with AB 341, which sets a 75 percent recycling goal for California. The City of Los Angeles has also prepared a Solid Waste Integrated Resources Plan (SWIRP), which specifies that the City's Zero Waste goal is to reduce, reuse, recycle, or convert the resources currently going to disposal so as to achieve an overall diversion rate of 90 percent or more by the year 2025. Further, the City of Los Angeles has adopted a Citywide Construction and Demolition (C&D) Waste Recycling Ordinance that requires all mixed construction and demolition waste generated within City limits be taken to City certified C&D waste processors. The handling of all debris and waste generated during construction would be required to be taken to a certified C&D waste processor. The Project development would comply with all other federal, state, and local statutes and regulations related to solid waste. Impacts related to conflict with statutes and regulation governing solid waste generated during construction would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Operation and maintenance of the proposed Project is anticipated to increase amounts of solid waste generated at the Project site, due to drawing recreational visitors, horticultural maintenance, special events, and other activities discussed above. Operational refuse and trash would be removed from the sites and disposed of in an approved manner, consistent with applicable federal, state, and local statutes and regulations regarding solid waste, and oils or chemicals would be hauled to a disposal facility authorized to accept such materials. Compliance with all other applicable statutes and regulations in place relative to solid waste disposal is required. As such, operation-related impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Cumulative Impact

Impact 3.18-6: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to utilities and service systems?

This section presents an analysis of the cumulative effects of the proposed Project in combination with other present and reasonably foreseeable future projects that could generate cumulatively considerable impacts to utilities and service systems. The geographic scope of analysis for cumulative utilities and service systems impacts encompasses similar present and future project sites within the Project area, as well as the utilities and services systems that supply the project sites with water, solid waste disposal services, electricity, etc. Table 3-2 identifies thirteen related projects that are planned or are under construction within the Project area that may have cumulatively considerable impacts when considered in combination with the proposed Project. The proposed development projects listed in which include mixed-use developments, a childcare facility, and commercial uses that would require similar utilities and service systems as the proposed Project.

Two related projects are currently in progress in proximity to the proposed Project site: the LADWP Aeration and Recirculation Project (Related Project 13), which involves installation of a bubble plume aeration system and a recirculation pipe system within Silver Lake and Ivanhoe Reservoirs, and the City of Los Angeles Bureau of Engineering (BOE) Sidewalk Repair Program (Related Project 13), under which sidewalk repairs and related improvements (e.g., street tree removal and utility relocations) would occur along various roadways surrounding the Project site. Due to their location within and in close proximity to the Project site, construction activities for these related projects would have the potential to result in impacts related to the relocation of utilities.

According to the 2020 IS/MND for Related Project 13, the project would not involve construction or relocation of utilities to serve the project. Additionally, it is anticipated that construction of

Related Project 13 would be complete by December 2022, prior to the start of the proposed Project construction period (LADWP 2020). Therefore, Related Project 13 would not contribute to cumulatively considerable impacts related to the relocation of utilities as a result of construction. However, Project 14 includes a 30-year program implementation period, from June 2017 through June 2047, and thus the improvements along West Silver Lake Drive, Van Pelt Place, Silver Lake Boulevard, and at the Duane Street/Silver Lake Boulevard may overlap with the proposed Project construction period. If the projects are constructed at the same time, the impacts to utilities could be cumulatively significant. However, according to the 2019 Program EIR, individual sidewalk repair projects may only require approximately 5 non-consecutive days for construction, or a maximum of 30 non-consecutive days of construction if extensive repairs are required (City of Los Angeles 2019). As such, any potential overlap with the proposed Project would not be for substantial amount of time. As stated in Section 3.18, *Utilities and Services Systems*, construction of the proposed Project would have a less than significant impact related to the relocation of utilities with implementation of **Mitigation Measure UTIL-1**. Furthermore, of construction timing and utilities work would be coordinated with BOE, the City agency responsible for administering Related Project #14 pursuant to CEQA. Therefore, with implementation of Mitigation Measure UTIL-1, the proposed Project would not contribute cumulatively considerable impacts related to utilities relocation.

All other related projects are located 650 feet or more away from the Project site. Therefore, even if construction of the related projects were to occur at the same time as the Project, construction the proposed Project would not have the potential to occur in the same areas as the other related projects, and would not contribute to combined, localized effects that result in the relocation of utilities. Construction and operation of the proposed Project would have less than significant impacts with regard to water supplies, wastewater treatment, and solid waste generation as it relates to local infrastructure capacities and regulatory reduction goals would be implemented for reduction of operational impacts.

The proposed Project would primarily be supplied by groundwater pumped from Basin 4-12, similar to existing conditions. However, during extended periods of drought, the proposed Project and related projects in the vicinity may both require Basin 4-12 for operations, which could result in cumulatively considerable impacts on the availability of Basin 4-12 groundwater supplies. As discussed in Section 2.7.3, *Drought Emergency Contingencies*, LADWP evaluates system capabilities and constraints annually and, in accordance with the 2020 UWMP Water Shortage Contingency Plan (WSCP), adjusts water supply availability to account for these constraints. The operational constraints may require modifications to the proposed Project's water levels corresponding to overall system needs, including the need to prioritize use of local groundwater to augment potable water supplies during periods of drought. This need for operational flexibility based on demands, available supplies, and constraints is a key feature of SLRC operations. Thus, LADWP's continued monitoring of water supplies and implementation of WSCP requirements for supply augmentation and operational changes would ensure that the impacts of the proposed Project and the related projects to local groundwater supplies would not be cumulatively considerable.

With regard to overall water supplies in the City, based on existing and planned water supplies and purchases in the LADWP service area, LADWP expects to have a reliable supply of up to

742,900 AF of water in 2045 under a multiple dry years scenario to meet future water demands in its service area (See Section 3.18, *Utilities and Services Systems, Water Supply*). Furthermore, the water demand for projects that are consistent with the allowable land uses, building area, and density contained in the City's General Plan have been taken into account in the planned growth of the water distribution system. Development of each related project would be evaluated on a case-by-case basis to determine if they are consistent with the allowable land uses and densities pursuant to the applicable zoning and land use designations.

For projects that meet the requirements established in Sections 10910-10915 of the State Water Code (Senate Bills 610 and 221), a WSA report demonstrating sufficient water availability would be required prior to project approval to ensure LADWP has sufficient capacity to serve the project without affecting regional water supplies. Further, the Project and all of the related projects within the City would be required to meet the prescriptive water conservation plumbing fixture requirements of Sections 99.04.303 and 99.05.303 of the CALGreen Code, which would decrease the Project water demand. Because the LADWP has determined that it can supply the anticipated growth in the City of Los Angeles through the year 2045 based on the growth projections of the 2020 UWMP, and the Project would be designed with operational flexibility to reduce water levels as required by LADWP's WSCP, the Project's contribution to cumulative impacts would not be cumulatively considerable. As such, cumulative impacts on water supply would be less than significant.

As described in the discussion for Impact 3.18-4, the proposed Project would not result in a significant impact to landfill capacities. The majority of the Project's waste generation would occur during construction activities. However, Sunshine Canyon Landfill, Scholl Canyon Landfill, and LACSD's inert landfills have adequate capacity to accept construction waste and inert solid waste and soil that would be generated by the Project during temporary periods of construction, as well as the relatively lower daily amounts that would be generated during operation and maintenance activities. Further, the proposed Project would not result in a significant impact to solid waste reduction goals the proposed work would be conducted in compliance with all local, state, and federal regulations related to solid waste and its disposal. Similarly, the related projects would generate solid waste during construction and throughout their operational lifespans. Landfills in the related projects' region have adequate capacity to accept wastes generated by each of the related projects into the foreseeable future. Further, the related projects would also be required comply with all federal, state, and local statutes and regulations related to solid waste and its disposal. Compliance with regulatory measures as they relate to solid waste generation would ensure that cumulative impacts remain less than significant through each project's operation schedule. Thus, the proposed Project's contribution to impacts related to solid waste would not be cumulatively considerable. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.18.6 Summary of Impacts

Table 3.18-2 summarizes the impact significance determinations and lists mitigation measures related to utilities and service systems.

**TABLE 3.18-2
 SUMMARY OF PROPOSED PROJECT IMPACTS TO UTILITIES AND SERVICE SYSTEMS**

Impact	Mitigation Measure	Significance
3.18-1: Utilities Expansion or Relocation	Mitigation Measure UTIL-1	LTSM
3.18-2: Water Supplies	None Required	LTS
3.18-3: Wastewater Treatment	None Required	LTS
3.18-4: Solid Waste	None Required	LTS
3.18-5: Solid Waste Regulations	None Required	LTS
3.18-6: Cumulative	None Required	LTS

NOTES:

NI = No Impact, no mitigation proposed
 LTS = Less than Significant, no mitigation proposed
 LTSM = Less than Significant Impact with Mitigation Incorporated
 SU = Significant and Unavoidable

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3.19 Wildfire

This section addresses the potential wildfire impacts associated with implementation of the proposed Project. This section includes a description of the wildfire history and conditions in the proposed Project area, regulatory framework, and an evaluation of the potential impacts of the proposed Project related to wildfire. Project design features include **PDF-WF-1: Fire Code**, **PDF-WF-2: Open Flame**, **PDF-WF-3: Smoking Prohibited**, **PDF-WF-4: Signage**, through **PDF-WF-5: Brush Clearance Activities**, and **PDF-TRA-1: Construction Traffic Management Plan**. Impacts to wildfire are less than significant and no mitigation is required.

3.19.1 Environmental Setting

Project Area Characteristics

The proposed Project would be located in the Silver Lake neighborhood of the City of Los Angeles. As described in Section 3.11, *Land Use and Planning*, the Silver Lake neighborhood is primarily made up of residential uses, with some smaller commercial areas and some existing public access in and around the Silver Lake Reservoir Complex (SLRC) that allows park uses. The proposed Project area is a mix of developed land and vegetative communities. The majority of the proposed Project area is occupied by the Silver Lake and Ivanhoe Reservoirs. The exterior is a collection of vegetated areas, parks, trails, and other recreational facilities.

Significant geographic features near the proposed Project area include the Santa Monica Mountains in the area of Griffith Park to the north and the Angeles National Forest to the northeast. The climate in the region is Mediterranean, with dry summers and moderately wet winters; however, the region has experienced severe drought conditions in recent years (USGS 2021). The proposed Project area is also subject to Santa Ana Winds, which are dry, strong, downslope winds that affect Southern California, and typically occurs after the dry summer. High winds and drier climate conditions can exacerbate fire risk as dry vegetation acts as a fire fuel and the high winds can carry these flames creating larger wildfire risk.

Fire Environment

Fire environments are dynamic systems and include many types of environmental factors and site characteristics. Fires can occur in any environment where conditions are conducive to ignition and fire movement. The three major components of fire environment are vegetation (fuels), climate, and topography. The state of each of these components and their interactions with each other determines the potential characteristics and behavior of a fire at any given moment. It is important to note that wildland fire may transition to urban fire if structures are receptive to ignition. Understanding the existing wildland vegetation and fuel conditions on and around the proposed Project area is necessary to understand the fire environment.

The climate of Southern California, including the proposed Project area, has been characterized by fire climatologists as the worst fire climate in the United States with high winds (Santa Ana) occurring during autumn after a six-month drought period each year (J.E. Keeley et. al. 2011). As discussed above, Santa Ana winds can carry flames or sparks that can exacerbate wildfires. This

is compounded by the higher coverage of dry vegetation as a result of the dry summer climate in the area.

As defined by the Public Resources Code (PRC) Section 4126, State Responsibility Areas are State- and privately-owned forest, watershed, and rangeland for which the primary financial responsibility of preventing and suppressing wildland fires rests with the State. State Responsibility Areas, by definition, do not include any lands within city limits. As defined by the California Department of Forestry and Fire Protection (CAL FIRE), the proposed Project site lies entirely within a Local Responsibility Area (CAL FIRE 2021a). CAL FIRE provides recommendations for fire hazard severity zones (FHSZ) within Local Responsibility Areas but the responsibility for mapping Local Responsibility Areas lies within the local jurisdiction responsible for fire management and control within the Local Responsibility Area. While fire hazard severity zones do not predict when or where a wildfire will occur, they do identify areas where wildfire hazards could be more severe and therefore are of greater concern.

Cal Fire identifies the Very High Fire Hazard Severity Zone (VHFHSZ), and a city, by ordinance, designates areas as VHFHSZ or non-VHFHSZ within their jurisdiction. Where local fire protection agencies, such as the Los Angeles Fire Department (LAFD), are responsible for wildfire protection, the land is classified as a Local Responsibility Area (LRA). According to CAL FIRE's FHSZ Viewer, the proposed Project area would be located within an area designated as a VHFHSZ (CAL FIRE 2021b).

Fire History

Fire history information can provide an understanding of fire frequency, fire type, most vulnerable locations, and significant ignition sources. The fire history data for the proposed Project area is based on CAL FIRE's California Statewide Fire Map that displays fires through 1950 and CAL FIRE's Fire Resource Assessment Program (FRAP) database that assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and identifies alternative management and policy guidelines. These tools show there is not a significant potential for wildfire near the proposed Project area, but the proposed Project vicinity could be subject to the occasional wildfire encroachment, most likely originating from open space and forested areas like Griffith Park located approximately 1.3 miles north of the proposed Project area (CAL FIRE 2021c, d).

The SLRC is currently used as a source of water for firefighting operations. Under an agreement with LADWP, both the City and the County of Los Angeles Fire Departments may use the reservoir water for firefighting purposes, and both departments have used the water in the past. The proposed Project was designed to include minimal vegetation along the south end, where water is drawn from via helicopter in order to continue to support the use of the reservoir for firefighting needs.

The environmental analysis in this section was conducted in consultation with the City of Los Angeles Fire Department (Personal communication 2022).

3.19.2 Regulatory Framework

Federal

National Cohesive Wildland Fire Management Strategy

The U.S. Forest Service (USFS), in coordination with other federal, tribal, state, and local partners/agencies developed the National Cohesive Wildland Fire Management Strategy (The National Strategy), which has three key components: Resilient Landscapes, Fire Adapted Communities, and Safe and Effective Wildfire Response. (USFS 2014)

Resilient Landscapes addresses the need for sustainable and resistant landscapes, specific to a local region's environment, to aid in recovery from wildfires. In the National Cohesive Wildland Fire Management Strategy (April 2014), Landscape Classes are identified to help inform potential management options and/or policies to maintain fire prone landscaped areas that are specific to a particular region. Fire Adapted Communities would account for a community's ability to prepare for, respond to, and recover from a wildfire. Safe and Effective Wildfire Response addresses enhancing wildfire response preparedness, while emphasizing structural protection and wildfire prevention. The National Strategy provides various actions and activities that can be implemented at the national, regional, and local levels to achieve reduced wildfire threats to landscapes, communities, the public, and emergency responders.

All of Los Angeles County is within Landscape Class A, *Urban Developed Built*, which is identified to have a high percent of forested area, a moderate area burned (2002-2011), a moderate historical fire frequency, a moderate index of prescribed fire activity, a moderate federal ownership, a very high average of urban value, a low natural landscape percentage, and a moderate natural-mixed landscape percentage.

State

California Fire Code & California Building Code

The California Fire Code (CFC), Chapter 9 of Title 24 of the California Code of Regulations (CCR), was created by the California Building Standards Commission based on the International Fire code and is updated every three years. The overall purpose of the CFC is to establish the minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to firefighters and emergency responders during emergency operations. Chapter 49 of the CFC contains minimum standards for development in the wildland-urban interface and fire hazard areas. The CFC also provides regulations and guidance for local agencies in the development and enforcement of fire safety standards.

Chapter 7A of the California Building Code (CBC) regulates building materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a wildland-urban interface fire area. This chapter establishes minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or a wildland-urban interface fire area to resist the intrusion of flames or burning embers projected by a vegetation fire and contributes to a

systematic reduction in conflagration losses. New buildings located in such areas are required to comply with the ignition resistant construction standards outlined in Chapter 7A.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) serves and safeguards the people and protects the property and resources of over 31 million acres of California's privately-owned wildlands within the State Responsibility Area (SRA). CAL FIRE foresters and fire personnel work closely with other agencies to encourage and implement fuels management projects to reduce the threat of uncontrolled wildfires. CAL FIRE provides varied emergency services in 36 of the State's 58 counties via contracts with local governments. CAL FIRE's Fire Prevention Program consists of multiple activities including wildland pre-fire engineering, vegetation management, fire planning, education, and law enforcement. Typical fire prevention projects include brush clearance, prescribed fire, defensible space inspections, emergency evacuation planning, fire prevention education, fire hazard severity mapping, and fire-related law enforcement activities. CAL FIRE's mission emphasizes the management and protection of California's natural resources; a goal that is accomplished through ongoing assessment and study of the state's natural resources and an extensive CAL FIRE Resource Management Program (FRAP). Fire Hazard Severity Zone map indicates the entirety of the Project site lies within a VHFHSZ in an LRA. Fire Hazard Severity Zones are defined per Government Code Sections 51175 - 51189.

Senate and Assembly Bills

Senate Bill 209: Wildfire Forecast and Threat Intelligence Integration Center

Senate Bill 209 was approved by the Governor on October 2, 2019, establishing the Wildfire Forecast and Threat Intelligence Integration Center which is composed of representatives from specified state and other entities. This bill requires the center to serve as the state's integrated central organizing hub for wildfire forecasting, weather information, and threat intelligence gathering, analysis, and dissemination and to coordinate wildfire threat intelligence and data sharing, as provided. The bill also requires the center to, among other things, develop a statewide wildfire forecast and threat intelligence strategy, as provided, and protect and safeguard sensitive information.

Senate Bill 901

The Budget Act of 2018 appropriated \$99,376,000 to the Office of Emergency Services for the purposes of local assistance. Senate Bill (SB) 901, approved by the Governor on September 21, 2018, revises the Budget Act of 2018, allowing for \$25,000,000 of those appropriated funds to be applied to support activities directly related to regional response and readiness. Such activities related to regional response and readiness would include pre-deployment of Office of Emergency Services fire and rescue, and local government resources that are part of the California Fire and Rescue Mutual Aid System or additional resources upon the authority and approval of the Office of Emergency Services to meet the requirements for state resources called up for pre-disaster and disaster response.

Assembly Bill 1054

Assembly Bill (AB) 1054, approved by the Governor on July 12, 2019, establishes the California Wildfire Safety Advisory Board, which consists of seven members appointed by the Governor, Speaker of the Assembly, and Senate Committee on Rules. The Board is required to advise and make recommendations related to wildfire safety to the Wildfire Safety Division, or on and after July 1, 2021, to the Office of Energy and Infrastructure Safety, which was established by AB 111 or SB 111 of the 2019-20 Regular Session.

Local

Local Responsibility Area Maps

Government Code 51175-51189 directs CAL FIRE to identify areas of very high fire hazard severity zones within an LRA. (Cal FIRE 2021b) These areas are referred to as VHFHSZ. VHFHSZs are based on data and models of potential fuels over a 30-50 year time horizon, their associated expected fire behavior, and expected burn probabilities, which are used to quantify the likelihood and nature of vegetation fire exposure to buildings. In late 2005, the California Building Commission adopted California Building Code Chapter 7A, which became effective in 2008 and requires new buildings in VHFHSZs to use ignition resistant construction methods and materials. These new codes include provisions to improve the ignition resistance of buildings, especially from firebrands. VHFHSZs are used by building officials for new building permits in LRAs. The zones are also used to identify property whose owners must comply with natural hazards disclosure requirements at the time of property sale and 100-foot defensible space clearance requirements. The proposed Project area is located entire within a VHFHSZ within an LRA.

City of Los Angeles Fire Department Strategic Plan 2018-2020: A Safer City 2.0

A Safer City 2.0 (Los Angeles Fire Department 2018) has four areas of focus that align with the Mayor's priority outcomes: A Safe City, A Well Run City Government, A Livable and Sustainable City, and A Prosperous City. Within these focus areas are five goals: Goal 1) Provide exceptional public safety and emergency service; Goal 2) Embrace a healthy, safe and productive work environment; Goal 3) Implement and capitalize on advanced technology; Goal 4) Enhance LAFD sustainability and community resilience; and Goal 5) Increase opportunities for personal growth and professional development. Each of these goals include a number of strategies aimed at providing communities and the public with fire protection, emergency medical services, preservation of life and property, and promoting public safety.

City of Los Angeles Emergency Operations Plan: Brush Fire Hazard Specific Annex

The Emergency Management Department (EMD) leads the City's effort in the development of citywide emergency plans, revises and distributes the Emergency Operations Master Plan and Master Procedures and Annexes and updates and disseminates guidelines for the emergency response and recovery plans. The department also reviews and tests departmental emergency plans to ensure City departments are ready to fulfill their respective emergency missions. The Brush Fire Hazard Specific Annex (City of Los Angeles 2018) was developed in cooperation and with input from the City departments with primary response/support activities, as well as input

from appropriate non-City agencies with identified activities related to brush fire emergencies, and is reviewed every other year. This Annex details the City’s responsibilities for response to brush fires. It identifies roles and responsibilities for appropriate departments, procedures for rapid notification to City departments and the public in the event of brush fire related emergencies, and ensures consistency with federal, state, county, and other local governments’ emergency response plans and operations.

Los Angeles Municipal Code: Fire Code

The City of Los Angeles Fire Code, Article 7, Chapter V of the Los Angeles Municipal Code (LAMC), consists of the California Fire Code with Los Angeles–specific amendments that are further restrictive. The Fire Code establishes the minimum requirements consistent with nationally recognized good practices for providing a reasonable level of life safety and property protection for the hazards of fire, explosion, panic, or dangerous conditions in new and existing buildings, structures, or premises. The Fire Code also establishes requirements to provide a reasonable level of safety to firefighters and emergency responders during emergency operations.

Section 57.322 states owners of property located within a VHFHSZ must maintain all native brush, weeds, grass, trees and hazardous vegetation within 200 feet of any structures/buildings and within 10 feet of any combustible fence or roadway/driveway used for vehicular travel. Maintenance requirements specify acceptable height and/or volume of grasses, brush, trees and shrubs, acceptable clearance distance requirements between vegetation and roofs and chimneys, and general tree maintenance. Dead trees, shrubs, undergrowth, palm fronds, and branches must be removed from the clearance zone.

Section 57.503.1.4 requires an approved, posted fire lane whenever any portion of an exterior wall is more than 150 feet from the edge of a roadway.

Specific regulations regarding fire prevention and protection are identified in Section 3.14, *Public Services*.

City of Los Angeles Brush Clearance Ordinance

California has seen an increase in frequency and size of wildfires, including historic brushfires in the City such as the La Tuna, Creek, and Skirball fires. Additionally, smaller brushfires have been accidentally started by well-intentioned residents performing brush clearance. On October 17, 2018, Los Angeles City Council adopted Ordinance No. 185789. This Ordinance addresses Section 57.305.5.2 and 57.332.1, 57.322.1.1.10 and 57.322.1.1.10.1 and amended Section 57.322.1.1 to Article 7, Chapter V of the LAMC. Through the Ordinance, the new and amended sections of the LAMC prohibit the use of certain metal cutting blades for brush clearance activities in VHFHSZs, and establish specific requirements, and penalties for violations for brush clearance activities. The applicable requirements (from each LAMC section) for brush clearing activities in the VHFHSZ are listed as project design features of this Project in Section 3.19.4 below.

City of Los Angeles General Plan

The City of Los Angeles General Plan Safety Element recognizes that most jurisdictions rely on emergency personnel (police, fire, gas, and water) to respond to and handle emergencies. The Safety Element of the City of Los Angeles General Plan sets forth specific policies and objectives related to safety. These policies and objectives emphasize hazard mitigation, emergency response, and disaster recovery.

3.19.3 Significance Thresholds and Criteria

The significance criteria used to evaluate the proposed Project impacts to wildfire are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, the proposed Project would have a significant impact if it would:

- Substantially impair an adopted emergency response plan or emergency evacuation plan. (Refer to Impact 3.19-1)
- Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose proposed Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. (Refer to Impact 3.19-2)
- Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. (Refer to Impact 3.19-3)
- Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. (Refer to Impact 3.19-4)

The 2006 L.A. CEQA Thresholds Guide does not include thresholds of significance pertaining to wildfire.

3.19.4 Project Design Features

The following Project Design Features (PDF) are applicable to the proposed Project as well as PDF-TRA-1: Construction Traffic Management Plan as described in Section 3.16, *Transportation*.

PDF-WF-1: Fire Code. The Project Manager is responsible for compliance with applicable LAMC Fire Code Section 57 et seq. for construction sites on, adjacent to or in the immediate vicinity of a VHFHSZ as designated through LAMC Sections 57.4908.1.1 through 57.4908.1.3 and identified on City maintained databases such as NavigateLA and Zone information and Map Access System (ZIMAS) (which maintain digitalized LA General Plan and zoning maps).

PDF-WF-2: Open Flame. Pursuant to LAMC Section 57.4908.5 open flame is prohibited upon any road, street, or fire road with the VHFHSZ.

PDF-WF-3: Smoking Prohibited. No smoking is allowed where conditions are such as to make smoking a hazard and in spaces where flammable or combustible materials are stored or handled per Section 310.2 of the California Fire Code. Further, it shall be

unlawful for any person to light, ignite or smoke any cigar, cigarette, tobacco in a pipe or other form of smoldering substance within the VHFHSZ compliant with LAMC Section 57.4908.6. The Section also prohibits open flame upon any road, street, or fire road within the VHFHSZ.

PDF-WF-4: Signage. No person, except one authorized and acting within the scope of his official duties, shall remove, deface, mar, mutilate, or change the position of any sign, installed by the Chief pursuant to this article, designating “CLOSED AREA,” “NO SMOKING,” “NO OPEN FIRES,” “RESTRICTED ENTRY,” or other sign or device installed to give warning and to regulate persons’ actions within the VHFHSZ as stated in Section 57.4908.9.1.

PDF-WF-5: Brush Clearance Activities. Pursuant to Ordinance No. 185789 which added Sections 57.305.5.2, 57.305.5.2.1, 57.322.1.1.10 and 57.322.1.1.10.1, and amended Section 57.322.1.1 to Article 7, Chapter V of the LAMC, the applicable requirements for brush clearing activities in the VHFHSZ would apply including, but not limited to:

- Use of metal cutting blades for grass or brush clearance shall be limited to those which are nonferrous/non-sparking.
- Brush clearance cannot be done on red flag days, when fire weather conditions are at their peak.
- Individuals engaged in brush clearance operations shall not engage in any other activities during their actual clearance of grass or brush.
- Individuals engaged in grass or brush clearance operations shall use an appropriate extinguishing agent immediately to extinguish a fire.
- All fires, regardless of size, shall be reported immediately via the 9-1-1 system to the Fire Department.
- An approved fire extinguisher, or a pressurized garden hose with attached nozzle shall be within 10 feet of any grass or brush clearance operation, to quickly extinguish a small fire before it burns out of control.
- Where a gasoline container is present at the site of the grass or brush clearance operation, a minimum 4A 60 BC dry chemical fire extinguisher shall be within 10 feet of the brush clearance operation.
- A cell phone capable of dialing 9-1-1 shall be charged and readily accessible to the grass or brush clearance operation.
- A safety strap shall be used at all times for any tool or appliance with hot exhaust. Hot exhaust shall not come in contact with any brush, grass, flash fuels, or other flammable material.

3.19.5 Impacts and Mitigation Measures

Emergency Response Plan

Impact 3.19-1: Would the proposed Project substantially impair an adopted emergency response plan or emergency evacuation plan?

Construction

The proposed Project area is located within an LRA VHFHSZ. As discussed in Section 3.9, *Hazards and Hazardous Materials*, the EMD and EOO maintains plans for the area which include information for the public about what to do if an emergency or disaster were to occur. The City's All-Hazard Mitigation Plan, EOP, and Safety Element do not identify any specific evacuation areas or routes within the proposed Project area; therefore, construction activities within the proposed Project area would not interfere with an emergency evacuation plan. However, construction activities would require increased construction truck trips around the proposed Project area, which could cause delays along the local roadways. As such, and explained further in Section 3.16, *Transportation*, the additional truck traffic and slower moving construction vehicles on local roadways surrounding the proposed Project area, could interfere with emergency responder access if an emergency or disaster were to occur within the proposed Project or surrounding areas. The proposed Project would not require full road closures, but partial road closures would be required during implementation of offsite improvements, including restriping along Silver Lake Boulevard. In addition, work along Silver Lake Boulevard and work along the proposed Project edges for pathways and other improvements could impact sidewalks around the SLRC. Traffic control measures would be employed to re-route pedestrians during the temporary construction period. The proposed Project would require preparation of a Traffic Control Plan as outlined in PDF-TRA-1 (see Section 3.16, *Transportation*), which would be coordinated with the Los Angeles Department of Transportation, as necessary, as well as with emergency responders, which include fire departments, police departments, and ambulances that have jurisdiction within the proposed Project area. The proposed Project would not impair an emergency response plan or an evacuation plan, and impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Once constructed, the proposed Project would be a public park facility. The proposed Project area would allow for emergency vehicle access throughout the SLRC, as walking paths and roads would be constructed to accommodate park maintenance and LADWP maintenance vehicles. In addition, with the removal of the perimeter fence, access to the Project site would be further improved. Operation and maintenance activities as outlined in Chapter 2, *Project Description*, would require a total of approximately 5 new full-time staff daily. These new staff would perform routine operation and maintenance activities, horticulture maintenance and water management, and security. Although visitorship to the proposed Project area would be expected to increase,

operational activities and park visitors would not impact surrounding rights-of-ways or impair an adopted emergency response plan or emergency evacuation plan. In addition, the proposed Project would not include new residential units and would not induce population growth. Nevertheless, the proposed Project would include preparation the Operations and Maintenance as outlined in Section 2.7.1, *Operations and Maintenance Plans* that would ensure that the new development within the SLRC is consistent with RAP and LAFD evacuation readiness protocols for City parks. Operation and maintenance activities within the proposed Project area would be similar to current conditions respective to emergency response and evacuation. Except for a small number of daily vehicle trips for new workers and security personnel traveling on roadways to the proposed Project area, no operation or maintenance activities would occur within surrounding rights-of-way. The anticipated increases to park visitors would not impact surrounding rights-of-way or impair an adopted emergency response plan or emergency evacuation plan. Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Exposure to Pollutant Concentrations

Impact 3.19-2: Would the proposed Project, due to slope, prevailing winds, and other factors; exacerbate wildfire risks, and thereby expose Project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Construction

The proposed Project site is located within an LRA VHFHSZ. During proposed Project construction, the operation of construction equipment and vehicles and use of combustible materials such as diesel fuel could pose a wildfire risk to people and property with possible ignition sources such as internal combustion engines, gasoline-powered tools, and equipment that could produce a spark, fire, or flame. The use of spark-producing construction machinery could expose proposed Project workers and contractors to pollutant concentrations from a wildfire resulting in a potentially significant impact. However, all personnel within the proposed Project area would have to comply with PRC Sections 4427, 4428, 4431, and 4442, regulations relating to the handling of combustible fuels and equipment that can exacerbate fire risks. During construction, adherence to existing State and local fire hazard regulations would ensure that any risk to exacerbate wildfire would be reduced. Additionally, all construction activities and crews must comply with fire protection and prevention requirements specified by the CCR and Cal/OSHA. This includes various measures such as easy accessibility of firefighting equipment, proper storage of combustible liquids, no smoking in service and refueling areas, and worker training for firefighter extinguisher use.

The risk of construction-based ignition events could also be exacerbated by Santa Ana winds, which are known to occur in the proposed Project area. The proposed Project would comply with

State and local regulations and would adhere to PDF-WF-1 through PDF-WF-5. Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Once operational, the proposed Project would pose little risk to exacerbate wildfire, even during Santa Ana wind events, since the proposed Project would include routine operations and maintenance such as routine cleaning and maintenance of park spaces and park facilities, clearing paths and walkways, trash removal, and cleaning of park facilities such as the proposed Education Center, Multi-Purpose Facility, and restrooms, as well as horticulture maintenance and water maintenance. Operation-related activities could involve a limited number of maintenance trucks for inspections and material delivery, and new staff vehicles. These trucks and personal vehicles would be limited to established access roads and parking lots, which have a low potential of producing sparks, fire, or flame, that could result in uncontrolled spread of wildfire. The majority of the proposed Project area would include the existing reservoirs, which would pose little risk to exacerbate wildfire. Future planned vegetation within the Project site and the proposed Meadow park zone would be irrigated with water pumped from the reservoirs, which would reduce overall fire hazard. Although the proposed Project would increase visitors to the site, the Project site would be located in an urbanized area which would limit the potential for wildland fire hazards. Furthermore, following the City guidelines and PDF-WF-1 through PDF-WF-5, the risk of exposure to the occupants to the pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire would be reduced. Additionally, the Project, consistent with existing City Fire Code and other fire safety requirements, would include smoke/fire alarms in the proposed Education Center, fully sprinklered indoor spaces, and irrigated landscaped areas with native vegetation, which would serve to reduce potential hazards related to wildland fires. Furthermore, an Operations and Maintenance Plan would be prepared by the City with guidance from RAP. The Operations and Maintenance Plan would include a Brush Clearance Plan which would reduce wildfire risk. The Brush Clearance Plan would be prepared in coordination with the Fire Department to reduce potential fuel on the Project site as described in Section 2.7.1, *Operations and Maintenance Plans*. Because of the urbanized nature of the surrounding development and implementation of the provisions of the LAMC and other recommendations of the LAFD during the design process, the Project would not expose people or structures to a significant risk involving wildland fires. Impacts regarding pollutant concentrations from a wildfire or uncontrolled spread of a wildfire would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Infrastructure that Exacerbates Wildfire Risk

Impact 3.19-3: Would the proposed Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Construction

The proposed Project would include the construction of proposed park zones within the SLRC, along with associated structures and buildings as discussed in Chapter 2, *Project Description*. The potential to exacerbate wildfire risk would be limited to construction and maintenance activities, during which all personnel would be required to comply with the regulations and policies discussed above for Impact 3.19-2, to limit potential for wildfire. The use of construction equipment would adhere to CCR Title 24, the CBC, and City of Los Angeles Safety Element discussed above in Section 3.19.2. These regulations and policies provide guidance on proper operation of diesel-fueled construction equipment that could exacerbate wildfire and proper safety equipment to extinguish a fire should one become present during construction. Adherence to applicable federal, state, and local laws and regulations would reduce construction impacts to a less than significant level.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Once operational, the proposed Project would include a redesigned SLRC with expanded community park amenities and would largely resemble existing conditions for wildfire risk. The proposed Project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, or power lines) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment. Although underground utilities would be installed for the proposed park zones, once in place, concrete foundations would be placed on top to allow for mobility/pedestrian access. The Project would be located in an urban area with a full network of streets and infrastructure; therefore, utilities would connect with existing infrastructure.

The proposed Project would promote a more natural condition including areas where native habitat would be encouraged and increased slopes that can exacerbate fire hazards conditions. These vegetated areas could become overgrown and pose some additional fire risk if not maintained properly. The Operations and Maintenance Plan would include a Brush Clearance Plan which would reduce wildfire risk. The Brush Clearance Plan would be prepared in coordination with the Fire Department to reduce potential fuel on the Project site. Because of the urbanized nature of the surrounding development and implementation of the provisions of the LAMC, Brush Clearance Plan, and other recommendations of the LAFD during the design

process, the Project would not expose people or structures to a significant risk involving wildland fires. Impacts would be less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Post-Fire Slope or Drainage

Impact 3.19-4: Would the proposed Project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Construction

Site alteration through movement of substantial quantities of soil and earth materials could result in landslides as a result of runoff or drainage changes during construction. As discussed in Section 3.7, *Geology, Soils and Mineral Resources*, given that the size of the proposed Project exceeds one acre, the proposed Project would be required to comply with the *NPDES General Permit for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ) (Construction General Permit) and local stormwater ordinances. These state and local requirements were developed to ensure that erosion is controlled on construction sites. The Construction General Permit requires preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP), which requires applications of Best Management Practices (BMPs) to control run-on and run-off from construction work sites. The BMPs would include, but would not be limited to, physical barriers to prevent erosion and sedimentation, construction of sedimentation basins, limitations on work periods during storm events, use of infiltration swales, protection of stockpiled materials, and a variety of other measures that would substantially reduce or prevent erosion from occurring during construction. In the event that a wildland fire is followed by a rain event, and results in downstream flooding or landslides as a result of post-fire runoff, the BMP measures required to be implemented under the SWPPP would reduce the risk of runoff, post-fire slope instability, and drainage changes. The proposed Project would comply with the existing laws such as those in LAMC Fire Code Section 57 et seq. mentioned in PDF-WF-1 through PDF-WF-5, for construction sites. Impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Operation

Once constructed, the proposed Project area would continue to operate similar to existing conditions along the South Valley and would increase areas of public access throughout the rest of the proposed Project area with public park amenities. The Project site would be improved with structures, hardscape, wetland habitats, topographical variability, and landscaping. Operation of the Project could result in a limited degree of soil erosion from vegetated areas. Nonerosive drainage features such as infiltration gardens, swales, and biofiltration planting would be implemented, and maintenance of these structures would be conducted over the operational life of the Project in accordance with the City's Low Impact Development (LID) Ordinance. Although the proposed Project includes sloped features, the proposed Project would be designed in accordance with the recommendations of a site-specific geotechnical investigation as required by the CBC. The new topography would be modest and localized within the park. The modifications would not alter the SLRC's southerly drainage direction or erosion potential. As noted in the Project Description, the Project would contour the site to increase stormwater capture and reduce runoff from the SLRC compared to existing conditions, consistent with MS4 NPDES permit requirements. Therefore, through compliance with applicable regulatory requirements and geotechnical design recommendations, the proposed Project would not result in run-off, post-fire slope instability, or drainage changes as a result of potential wildland fire. As a result, impacts would be considered less than significant.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

Cumulative Impact

Impact 3.19-5: Would the proposed Project construction and operation, when considered with related projects in the geographic scope, result in a cumulatively impact to wildfire?

A significant cumulative impact associated with wildfire would result if the Project would contribute to cumulative impacts related to impairment of an adopted emergency response plan or emergency evacuation plan; exacerbate wildfire risks of, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment; or expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. As discussed in Section 3.19, *Wildfire*, the City's All-Hazard Mitigation Plan, EOP, and Safety Element do not identify any specific evacuation areas or routes within the proposed Project area; therefore, the proposed Project would not impair an emergency response plan or an evacuation plan. Furthermore, it was concluded that the proposed Project would not exacerbate wildfire risks; require the installation or maintenance of associated infrastructure that may exacerbate fire risk or that may result in temporary or ongoing impacts on the environment; or expose people or structures to significant risks, as a result of runoff, evacuation routes, post-fire slope instability, or drainage changes. Similar to the proposed Project, the Thirteen related

projects that are planned or under construction in the immediate vicinity of the Project Site would be required to comply with PRC Sections 4427, 4428, 4431, and 4442, regulations relating to the handling of combustible fuels and equipment that can exacerbate fire risks and use of construction equipment would adhere to CCR Title 24, the CBC, City of Los Angeles Safety Element, and existing laws such as those in LAMC Fire Code Section 57 et seq.. As such, the Project’s contribution to cumulative impacts would not be cumulatively considerable.

Mitigation Measures:

None Required

Significance Determination:

Less than Significant Impact

3.19.6 Summary of Impacts

Table 3.19-1 summarizes the impact significance determinations and lists mitigation measures related to Wildfire.

**TABLE 3.19-1
 SUMMARY OF PROPOSED PROJECT IMPACTS REGARDING WILDFIRE**

Impact	Mitigation Measure	Significance
3.19-1: Emergency Response Plan	None Required	LTS
3.19-2: Exposure to Pollutant Concentrations	None Required	LTS
3.19-3: Infrastructure that Exacerbates Wildfire Risk	None Required	LTS
3.19-4: Post-Fire Slope or Drainage	None Required	LTS
3.19-5: Cumulative	None Required	LTS

NOTES:

- NI = No Impact, no mitigation proposed
- LTS = Less than Significant, no mitigation proposed
- LTSM = Less than Significant Impact with Mitigation Incorporated
- SU = Significant and Unavoidable

3.19.7 References

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CHAPTER 4

Other Environmental Considerations

This chapter addresses significant irreversible environmental changes that would be caused by the proposed Project should it be implemented, including the use and consumption of nonrenewable resources or long-term commitments of these resources. The proposed Project's potential for growth inducement is also addressed in this chapter.

4.1 Effects Found Not to Be Significant

The analyses presented in Chapter 3 of this Draft EIR concluded that the proposed Project would result in no impact or a less-than-significant impact, without any required mitigation, for the following resource areas:

- Agriculture and Forestry Resources
- Energy
- Greenhouse Gas Emissions
- Hydrology and Water Quality
- Land Use
- Population and Housing
- Public Services
- Transportation
- Wildfire

The analyses presented in Chapter 3 of this Draft EIR concluded that the proposed Project would result in a less-than-significant impact with mitigation incorporated, for the following resource areas:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology, Soils, and Minerals
- Hazards and Hazardous Materials
- Tribal Cultural Resources
- Utilities and Service Systems

4.2 Significant Environmental Effects that Cannot Be Avoided by the Proposed Project Should it Be Implemented

Section 15126.2(c) of the State CEQA Guidelines states that the EIR must describe any significant impacts, including those that can be mitigated but not reduced to a less-than-significant level. Where there are impacts that cannot be alleviated without imposing an

alternative design, their implications and the reasons the project is being proposed, notwithstanding their effect, should be described.

As discussed in Section 3.12, *Noise and Vibration*, while implementation of mitigation measures would reduce noise level and associated impacts at noise-sensitive receptors during construction, noise levels could still exceed local jurisdiction significance thresholds when taking into account the potential worst-case overlap of the various construction phases. All receptors would experience a 10 dBA noise level reduction from implementation of muffling devices under Mitigation Measure NOISE-3. Noise barriers are assumed to reduce noise levels by 10 dBA at receptors where a noise barrier would block the line-of-sight between the receptor and the Project site. However, the elevation of the surrounding residential areas increases moving away from the Project Site and elevated receptors may still have a direct line-of-sight to the Project site and may not benefit from the installation of a noise barrier. Noise barriers are not capable of blocking noise at noise-sensitive receptors that are elevated above a construction work site, such as residential units that are above grade of the Project site. It is not feasible to install noise barriers with height sufficient to block the line-of-sight for all noise-sensitive receptors located at higher elevation residential units due to barrier foundation and wind load restrictions. Because there could be receptors elevated above the construction work sites throughout the Project area within the upper levels of a noise-sensitive receptor, building construction noise would represent a temporary noise increase in excess of standards for receptors and would result in a significant and unavoidable impact.

While Mitigation Measure NOISE-4, applicable to amplified speaker systems for special events, would require a special event permit and establish guidelines for speaker placement and directionality, operating hours, and the use of temporary noise barriers, blankets, or baffles may be required on either side of and behind speakers to limit the amount of excess noise reaching nearby sensitive receptors, noise from the amplified speaker system for special events may still temporarily exceed the significance threshold at sensitive receptors near to the amplified speaker system at location R3. Because special events may include outdoor concerts, movie nights, luncheons, or other similar types of events that draw members of the community, it may not be feasible to reduce the volume of the amplified speaker system to a level below the significance threshold while still retaining a sufficient volume level for people in the Meadow park zone to adequately hear and enjoy the special event. Therefore, while Mitigation Measure NOISE-4 would minimize sound from the amplified speaker systems for special events to the extent feasible, impacts would be significant and unavoidable.

In addition, the Project could potentially exceed applicable thresholds for human annoyance due to vibration impacts during construction. Vibration impacts regarding human annoyance at nearby sensitive receptors could exceed the significance thresholds (72 Vibration velocity [VdB] at residential uses). Potential mitigation measures to reduce vibration impacts from on-site construction activities with respect to human annoyance include the installation of a wave barrier, which is typically a trench or a thin wall made of sheet piles installed in the ground (essentially a subterranean sound barrier to reduce noise). However, wave barriers must be very deep and long to be effective and are not considered feasible for temporary applications, such as Project construction. Per the Caltrans Transportation and Construction Vibration Guidance Manual, the

wave barrier would need to be at least two-thirds of the seismic wavelength and the length of the barrier must be at least one wavelength (typical wavelength can be up to 500 feet). In addition, constructing a wave barrier to reduce the Project's construction-related vibration impacts would, in and of itself, generate groundborne vibration from the excavation equipment. In addition, it is not possible to prohibit the use of construction equipment within certain distances of sensitive receptors as such equipment would be required to be used to construct the various Project components at the proposed locations. Thus, it is concluded that there are no feasible mitigation measures that could be implemented to reduce the temporary vibration impacts from on-site construction associated with human annoyance at the vibration-sensitive receptors. Therefore, Project vibration impacts from construction activities with respect to human annoyance would be significant and unavoidable.

As discussed in Section 3.15, *Recreation and Parks*, the proposed Project would result in significant and unavoidable construction and operational impacts related to recreational facilities as construction noise and noise associated with amplified music from special events would remain significant and unavoidable as discussed above.

4.3 Significant Irreversible Environmental Changes that Would be Caused by the Proposed Project Should it be Implemented

Section 15126.2(c) of the CEQA Guidelines indicates that uses of nonrenewable resources during the initial and continued phases of a project may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as a street improvement that provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with a project. Irretrievable commitments of resources should be evaluated to ensure that such current consumption is justified.

Implementing the proposed Project would commit nonrenewable (e.g., petroleum) or slowly renewable (e.g., timber) resources during construction and operation. In order to construct the proposed Project, machinery, equipment, materials (e.g., lumber, sand, gravel), and workers would be required, representing an irreversible commitment of some of these resources. Similarly, during operation, some of these resources (e.g., energy, electricity) would again be needed, representing a long-term commitment and permanent investment. The consumption and use of some of these resources would limit their availability for future generations. However, the proposed Project would provide public recreational facilities to primarily the local and occasionally the regional community. In addition, the proposed Project would be designed to meet the City's sustainability goals. Therefore, the significant irreversible changes have been deemed acceptable in light of the proposed Project's overall benefits.

4.4 Growth-Inducing Impacts

According to Section 15126.2(e) of the State CEQA Guidelines, growth-inducing impacts of the proposed Project must be discussed in the EIR. Growth-inducing impacts are those effects of the

proposed Project that might foster economic or population growth or the construction of new housing, either directly or indirectly, in the surrounding environment. According to CEQA, increases in the population may affect capacity of existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

Induced growth is any growth that exceeds planned growth and results from new development that would not have taken place without implementation of the proposed Project. Typically, the growth-inducing potential of a project would be considered significant if it results in growth or population concentration that exceeds those assumptions included in pertinent master plans, land use plans, or projections made by regional planning authorities. However, the creation of growth-inducing potential does not automatically lead to growth, whether it would be below or in exceedance of the projected level. Under CEQA, it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. The proposed Project involves the enhancement and addition of public park amenities within the SLRC. The proposed Project would not directly induce new residential development or result in population growth in the service area. The proposed Project would include expansion and construction of park facilities within a parcel designed as Open Space. The proposed Project is not intended to facilitate growth, but instead serve the recreational needs of the surrounding communities. Impacts related to growth would be considered less than significant and no mitigation would be required.

4.4.1 Direct Population-Generating Uses

The proposed Project would not include development of new housing or other population-generating uses that would directly induce population growth or attract a substantial number or workers. The proposed Project would redesign of approximately 116-acres of the 127-acre SLRC to include community park facilities. The proposed Project would not directly induce new residential development or result in population growth in the service area. There would be no impact, and no mitigation would be required.

4.4.2 Economic Growth Inducement

The proposed Project would not include housing or commercial/industrial components. The proposed Project would not provide for increased employment opportunity such that there would be any potential for economic growth within the City.

4.4.3 Expansion of Public Services or Utilities

The proposed Project would not include new residential units, commercial space, industrial space, or any development of new land uses. In addition, it would not affect the capacity of existing community service facilities, thereby requiring the construction of new facilities, which could cause significant environmental effects. The proposed Project would include expansion and renovation of existing public park spaces, such as the recreation center, the dog park and the existing Meadow, as well as construction and redevelopment of the existing LADWP facility into community spaces open to the public. The new facilities could result in an increase in visitorship of approximately 390 visitors a day. These visitors would be accommodated within the new

enhanced and proposed facilities as shown in Tables 2-7 and 2-8. As discussed in Sections 3.14, *Public Services* and 3.18, *Utilities and Service Systems*, implementation of the proposed Project would not require the expansion of public services or utilities beyond the recreational improvements being proposed for the Project.

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CHAPTER 5

Analysis of Alternatives

5.1 Introduction

Under California Environmental Quality Act (CEQA), and as indicated in California Public Resources Code (PRC) Section 21002.1(a), the identification and analysis of alternatives to a Project is a fundamental aspect of the environmental review process and is required to ensure the consideration of ways to mitigate or avoid the significant environmental effects of a project. Specifically, Public Resources Code Section 21001 states, in part, that the environmental review process is intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives which will avoid or substantially lessen such significant effects.

Section 15126.6(a) of the CEQA Guidelines requires that an EIR “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project.” The State CEQA Guidelines require the analysis of a “no Project” alternative and, depending on the circumstances, evaluation of alternative location(s) for the Project, if feasible. An environmentally superior alternative is to be identified from among the alternatives evaluated. In general, the environmentally superior alternative is the alternative with the least adverse impacts on the environment. If the environmentally superior alternative is the “no Project” alternative, the EIR shall also identify another environmentally superior alternative among the other alternatives.

Section 15126.6(d) of the State CEQA Guidelines states that alternatives analysis need not be presented to the same level of detail as the assessment of the Project. Rather, the EIR is required to provide sufficient information to allow meaningful evaluation, analysis and comparison with the Project. If an alternative would cause one or more significant impacts in addition to those of the Project, analysis of those impacts is to be discussed, but in less detail than for the Project.

5.1.1 Project Objectives

Section 15124(b) of the CEQA Guidelines states that a project description shall contain “a statement of the objectives sought by the proposed project,” and further states that “the statement of objectives should include the underlying purpose of the project.” As stated in Chapter 2, *Project Description*, the proposed Project’s fundamental objective is, as follows:

- Create a clear, bold design that repurposes the SLRC into a public park, while preserving and enhancing its unique character. The underlying purpose of the Project is to put the SLRC to a

beneficial public park use because it is no longer usable for storing potable water due to government regulations. Because LADWP is required to maintain the reservoirs for other environmental purposes, including maintaining the dams, the proposed Project would use the reservoirs as part of a park to benefit area residents.

Other objectives of the proposed Project are, as follows:

- Preserve and enhance the unique character of the SLRC with increased points of access, improved internal circulation and access to the water's edge, and increased spaces for community and family gatherings.
- Expand existing active recreational uses and increase passive recreational uses.
- Enhance and expand wildlife habitat by introducing wetland and aquatic ecologies and improving upland habitat.
- Provide opportunities for the public to connect with nature and provide facilities for onsite environmental education and stewardship while limiting human/wildlife interactions through design and operations to protect habitat.
- Allow for continued underlying LADWP operations, access, and future use of designated areas of the site, thereby allowing continued use of the reservoirs and adjacent facilities that are intended to remain for proprietary use by LADWP.

5.1.2 Review of Significant Environmental Impacts

The proposed Project would result in significant and unavoidable impacts as itemized below:

- Noise during construction and during operation for special events;
- Vibration during construction;
- Recreation and parks due to secondary impacts associated with noise during construction and during operation for special events;
- Cumulative noise during construction and during operation for special events.

Impacts to aesthetics, air quality, biological resources, cultural resources, geological resources, tribal cultural resources, and utilities are less than significant with implementation of mitigation. All other environmental impacts are less than significant.

5.2 Alternatives Rejected from Further Consideration

Section 15126.6(c) of the State CEQA Guidelines requires that an EIR “identify any alternatives that were considered by the Lead Agency but were rejected as infeasible during the scoping process,” as well as explain the reasons for the Lead Agency’s determination. An alternative may be eliminated from consideration if it (1) fails to meet most of the project’s basic objectives, (2) is infeasible, or (3) is unable to avoid significant environmental impacts.

The following alternatives were considered and eliminated from further evaluation:

Recreation Focused Alternative. Under the Recreation Focused Alternative, the project would include more intensive active recreational uses identified in the SLRC Master Plan such as a new

playground, pool, splashpad, boat house, pool house, and café. Public water activities including boating and swimming would be permitted. Under this alternative, the project site would be intended to accommodate special events on a regular basis and extended hours would be allowed with additional lighting for nighttime activities. Project elements related to wildlife habitat creation, including wetland terraces, islands, and embankment enhancements would not occur. This alternative would not serve to reduce any of the proposed Project's significant impacts. This alternative would increase operational noise impacts with the increase in park attendance focused around the reservoir and active recreational activities. This alternative would also increase water use related to swimming pool and splashpad operations. In addition, this alternative would not meet two of the project objectives: 1) to enhance and expand wildlife habitat by introducing wetland and aquatic ecologies and improving upland habitat; and 2) to provide opportunities for the public to connect with nature and provide facilities for onsite environmental education and stewardship. These two objectives that focus on enhancing the natural environment opportunities at the park were developed during the master plan development process and represented a fundamental vision for the redevelopment of the park. The Recreation Focused Alternative would not enhance natural values of the park. As a result, since no significant impacts are avoided, and two project objectives would not be met, this Alternative was rejected and not considered further.

Alternative Project Site. The proposed Project is the redevelopment of the Silver Lake Reservoir Complex. Creating new recreational facilities in a different location would not meet the fundamental project objective to repurpose the site. The City already owns the Project site and cannot reasonably be expected to acquire, control, or access an alternative site that would meet the Project's basic objectives in a timely fashion. It is anticipated that significant and unavoidable impacts associated with noise for any other site within Los Angeles where land is available for use as a park would still occur, as the City is built out, and funds for acquiring a new property are not available. Therefore, this Alternative site is not considered feasible since the City does not own another suitable site that would achieve the underlying purpose and objectives of the proposed Project.

5.3 Alternatives to the Proposed Project

As shown in Chapter 3, *Environmental Analysis*, of this Draft EIR, the proposed Project would not have significant long-term impacts due to Project construction that would require consideration of alternatives that would reduce such impacts. However, the proposed Project would have significant and unavoidable noise impacts during operation activities that cannot be fully mitigated through feasible noise control measures, and includes several potential project impacts that were reduced to less than significant with the incorporation of mitigation measures as described in Section 5.1.3 *Review of Significant Environmental Impacts*. The following alternatives to the Project were selected to inform evaluation of the Project in light of the significant and unavoidable environmental impact of the Project (i.e., construction noise and vibration, operational noise during special events, and recreational facilities due to construction noise and operational noise during special event noise), significant impacts of the Project that would be mitigated to a level of less than significant, the objectives established for the Project

(listed above), the feasibility of the alternatives considered, and public input received during the scoping period:

- Alternative 1 – No Project Alternative
- Alternative 2 – Reduced Project Alternative
- Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative

Alternative 1 is a No Project/No Build Alternative pursuant to CEQA Guidelines Section 15126.6(e). Alternatives 2 and 3 were developed pursuant to CEQA Guidelines Section 15126.6(a).

The three Alternatives are summarized and compared to the Project in **Table 5-1**. The three Alternatives are described in greater detail below.

**TABLE 5-1
PROJECT ALTERNATIVE AND PARK ZONE CONSTRUCTION COMPARISON**

Proposed Project		Alternatives to the Project		
Park Zone	Proposed Project's Park Space, Use, or Activity	Alternative 1 No Project	Alternative 2 Reduced Project	Alternative 3 Natural Lands/ Open Space Preserve
The Meadow	Reconfigure and expand lawn	None of the features would be implemented	Similar to proposed Project	Similar to proposed Project
	Add: Education Center, seating terraces, ornamental gardens, picnic grove, informal play area, floating dock, and wetland terraces	None of the features would be implemented	No Education Center, seating terraces, informal play area, or floating dock	Expand ornamental and rain gardens. No Education Center, seating terraces, informal play area, or floating dock
	Special events	No special events would occur	No special events would occur	No special events would occur
	Lighting	No new lighting	Reduced lighting	No new lighting
The Knoll	Upland habitat improvements	None of the features would be implemented	Similar to proposed Project	Remove damaged or dying trees only. Reduced tree succession plan tree planting.
	Add: shade structure, , nature trail, seating terraces, and habitat fences	None of the features would be implemented	No shade structure or seating terraces. Nature trail becomes elevated boardwalk, minimal grading required	No nature trails, or seating terraces, no public access to the Knoll Move shade structure/pavilion to the Meadow
	Lighting	No new lighting	Reduced lighting	No new lighting
Ivanhoe Reservoir	Expand walking path/promenade	None of the features would be implemented	Similar to proposed Project	Similar to proposed Project
	Add: habitat terraces, shade pavilion, wetland footpaths and observation platforms, embankment improvements, habitat fences	None of the features would be implemented	No shade pavilion, wetland footpaths and observation platforms, or embankment improvements	None of the features would be implemented
	Lighting	No new lighting	Reduced lighting	No new lighting

Proposed Project		Alternatives to the Project		
Park Zone	Proposed Project's Park Space, Use, or Activity	Alternative 1 No Project	Alternative 2 Reduced Project	Alternative 3 Natural Lands/ Open Space Preserve
The Eucalyptus Grove	Upland habitat improvements	None of the features would be implemented	Similar to proposed Project	Remove damaged or dying trees only. Reduced tree succession plan tree planting.
	Add: habitat terraces, overlook, seating terraces, promenade, habitat fences	None of the features would be implemented	No overlook or seating terraces	No overlook, seating terraces, or habitat fences. Move promenade away from water's edge.
	Lighting	No new lighting	Reduced lighting	No new lighting
The East and West Narrows	Update and expand walking path/promenade	None of the features would be implemented	Similar to proposed Project	Similar to proposed Project
	Add: embankment enhancements, seating terraces, overlook, fitness circuit	None of the features would be implemented	Only embankment enhancements	None of the features would be implemented
	Lighting	No new lighting	Yes	No new lighting
The South Valley	Update and reconfigure existing Silver Lake Recreation Center	None of the features would be implemented	Updates to Recreation Center	Similar to proposed Project
	Renovate and expand Dog Park	None of the features would be implemented	Minor updates to Dog Park	Similar to proposed Project
	Relocate play field, relocate and resize basketball court	None of the features would be implemented	None of the features would be implemented	Similar to proposed Project
	Add/relocate picnic tables	None of the features would be implemented	None of the features would be implemented	Similar to proposed Project
	Add: trees, entry plaza and seating, new Multi-Purpose Facility	None of the features would be implemented	Only trees	Similar to proposed Project
	Lighting	No new lighting	Similar to proposed Project	Similar to proposed Project
Habitat Islands	Add: Habitat islands and introduce fish and other aquatic wildlife to the reservoir	None of the features would be implemented	Similar to proposed Project	No habitat islands or introduction of fish Add: buffer around Silver Lake Reservoir where feasible
Other Improvements	Add parking along West Silver Lake Drive	None of the features would be implemented	No new parking	Similar to proposed Project
	Add parking/bike improvements along Silver Lake Boulevard	None of the features would be implemented	Only bike improvements	Only bike improvements
	Add streetlights/beacons for crossing purposes	None of the features would be implemented	Similar to proposed Project	Similar to proposed Project
	Perimeter fence removed	Maintain existing fence	Similar to proposed Project	Existing fence to be replaced with new fence
	Tree removal	No trees would be removed	Similar to proposed Project	Reduced tree removal, focus on dead trees
	Nighttime access (5:00 a.m. to 10:30 p.m.)	No nighttime access (open from dusk to dawn)	Similar to proposed Project	No nighttime access (open from dusk to dawn)

5.3.1 Alternative 1 – No Project Alternative

Under the No Project Alternative, improvements to the SLRC would not occur and existing operations by LADWP and RAP would continue. The Project site would not be redesigned with new community park amenities. The perimeter fence would not be removed and additional areas within the SLRC would not be open to the public. The SLRC would remain as an enclosed facility, with public access limited to the existing areas managed by RAP. The existing amenities (the Meadow and South Valley Recreation Center facilities and Dog Park) would continue to be operated and maintained by RAP similar to existing conditions. Under the No Project Alternative, no wetland or upland habitat improvements, new lighting, pedestrian, or offsite improvements would occur. LADWP facilities would continue to operate under existing protocols, including maintenance of the dams and reservoirs. Access and use of existing facilities by LADWP would be maintained. Refer to Table 5-1 for a comparison of the proposed Project components to Alternative 1, No Project Alternative.

5.3.2 Alternative 2 – Reduced Project Alternative

The Reduced Project Alternative, Alternative 2, would modify the existing SLRC into a public park, similar to the proposed Project, but it would not build any new structures. Alternative 2 would be constructed within a similar overall footprint as the proposed Project and would only focus on the habitat enhancement aspect of the proposed Project. For example, recreational facilities such as a new Multi-Purpose Facility, play field, expanded dog park, or reconfiguration of the existing Recreation Center would not be constructed. Refer to Table 5-1 for a comparison of the proposed Project components to Alternative 2. **Table 5-2** lists the proposed Project components which would not be implemented as part of Alternative 2. **Figure 5-1** illustrates the proposed Project and **Figure 5-2** illustrates the components of the proposed Project that would be implemented under Alternative 2.

Alternative 2 would reduce the overall construction and operation intensity by eliminating some of the public-use built structures as detailed on Table 5-2. Under Alternative 2, the seating terraces, informal play area, and the floating dock would not be implemented in the Meadow. The Education Center, Multi-Purpose Facility, and shade structures would not be constructed. With the removal of the Education Center in the Meadow and the new Multi-Purpose Facility in the South Valley, educational and recreational opportunities would be reduced.

This alternative would include some updates to the South Valley's existing Recreation Center, but the center would not be reconfigured. Updates to the Dog Park would include improvements within the existing footprint of the Dog Park, adding grass and some seating areas for owners. Lighting throughout the project site would be reduced. Special events would not be allowed as part of this alternative. Similar to the proposed Project, Alternative 2 would remove the perimeter fence to allow for increased public access and improved wildlife access to the water. Alternative 2 would also be operated similarly to the proposed project. Tree removals would still be required similar to the proposed Project. Offsite bike improvements would occur along Silver Lake Boulevard and no new parking would be added near the South Valley along West Silver Lake Drive.

**TABLE 5-2
PROJECT COMPONENTS NOT IMPLEMENTED UNDER ALTERNATIVE 2**

The Meadow
No Education Center, seating terraces, informal play area, or floating dock
No special events would occur
The Knoll
No shade structure or seating terraces
Ivanhoe Reservoir
No shade pavilion, wetland footpaths and observation platforms, or embankment improvements
The Eucalyptus Grove
No overlook or seating terraces
East and West Narrows
No seating terraces, overlook, or fitness circuit
The South Valley
No reconfiguration of Recreation Center renovation and expansion of Dog Park
No relocation of play field, no relocation or resizing of basketball court
No relocation or addition of picnic tables
No entry plaza and seating, and no new Multi-Purpose Facility
Other Improvements
No street parking added along Silver Lake Boulevard or West Silver Lake Boulevard



SOURCE: Hargreaves Jones Landscape Architects, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 5-1
Proposed Project Components





SOURCE: Hargreaves Jones Landscape Architects, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 5-2
Alternative 2 – Reduced Project

5.3.3 Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative

Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative was proposed during the public scoping period and as a result is essentially a hybrid of project components, focused on improving/maintaining current habitat values in much of the park, while maintaining some recreational features such as the Multi-Purpose Facility in the South Valley. Alternative 3 would be constructed within a similar overall footprint as the proposed Project and would focus on limiting public access to the Knoll, Eucalyptus Grove, and the water's edge. It would include a reconfigured and expanded lawn in the Meadow, with expanded ornamental and rain gardens. In the Knoll, only damaged or dying trees would be removed and as a result, the tree succession plan for tree planting would be reduced. There would be no public access to the Knoll, and the Education Center, Nature trails and seating terraces would not be constructed. For the Ivanhoe Reservoir, only the walking path would be expanded. In the Eucalyptus Grove, only damaged or dying trees would be removed, and the tree succession plan for tree planting would be reduced. In the East and West Narrows, the walking path would be updated and expanded. Refer to Table 5-1 for a comparison of the proposed Project components to Alternative 3.

Table 5-3 lists the proposed Project components which would not be implemented as part of Alternative 3. **Figure 5-3** illustrates the components of the proposed Project that would be implemented under Alternative 3.

As part of this Alternative, an 8-foot high, non-scalable, continuous perimeter fence with access gates would be constructed. Alternative 3 would focus on improving upland habitat and would include wetland creation along the shoreline. The proposed promenade and walking paths would be constructed under this alternative, but would be moved further away from the water's edge where feasible. This alternative would retain all current public use facilities while improving the more heavily-used facilities on the South Valley.

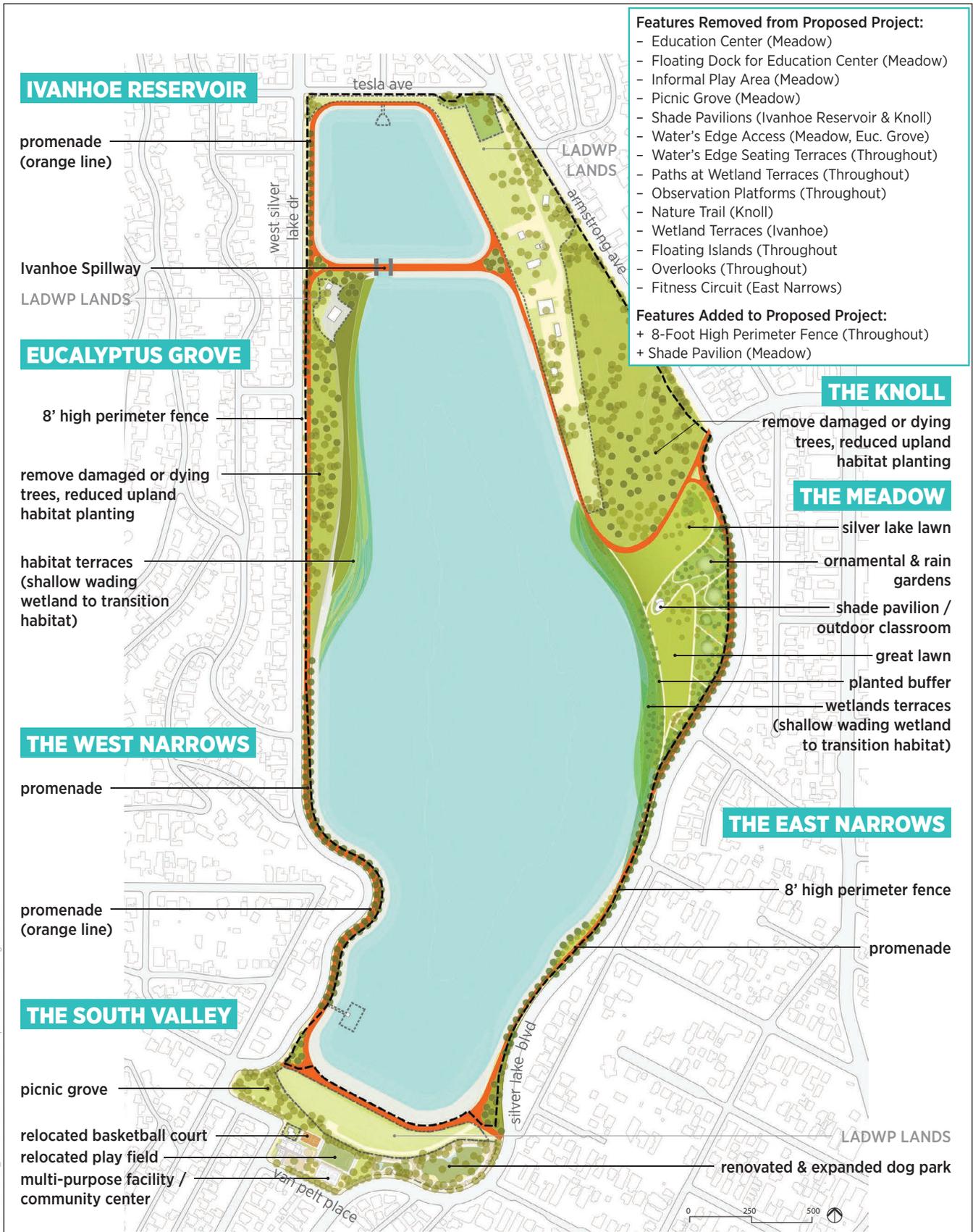
Alternative 3 would move the proposed outdoor shade pavilion on the Knoll's hillside to a flat area in the Meadow, requiring less grading. In addition, Alternative 3 would reduce the overall construction and operation intensity by eliminating some of the public-use built structures as detailed on Table 5-3 and grading associated with improvements to the Knoll. As summarized in Table 5-3, Alternative 3 would eliminate all improvements within the Ivanhoe Reservoir zone (except the promenade), Education Center building, floating dock, and seating terraces throughout the project. This alternative would create less wetland habitat and only around the perimeter of Silver Lake Reservoir; no habitat islands would be added, and no embankment improvements would occur. The reservoirs would remain similar to existing conditions with open water. With the removal of the Education Center, educational opportunities would be reduced, when compared to the proposed Project.

New lighting would only be added within the South Valley for the proposed sports facilities, Dog Park, and Recreation Center, similar to the proposed Project. However, no visitor access to the Knoll would be allowed and no nighttime access would occur within the other park zones. Gates would be locked from dusk to dawn. Tree removal for habitat improvements would still be required, but this alternative would focus on removing damaged or dying trees and preserving mature trees where feasible. Offsite bike improvements would occur along Silver Lake

Boulevard and parking would be added near the South Valley along West Silver Lake Drive. Special events would not be allowed.

**TABLE 5-3
PROJECT COMPONENTS NOT IMPLEMENTED UNDER ALTERNATIVE 3**

The Meadow
No Education Center, seating terraces, informal play area, or floating dock
No special events would occur
No new lighting
The Knoll
No nature trails or seating terraces
No public access to the Knoll
Shade pavilion moved to the Meadow
Reduced tree success plan, remove dead or dying trees only
No new lighting
Ivanhoe Reservoir
No habitat terraces, shade pavilion, wetland footpaths and observation platforms, embankment improvements, or habitat fences
No new lighting
The Eucalyptus Grove
No overlook, seating terraces, promenade at water's edge, habitat fences
Reduced tree succession plan, remove only dead or dying trees only
No new lighting
East and West Narrows
No embankment enhancements, seating terraces, overlook, or fitness circuit
No new lighting
The South Valley
N/A
Habitat Islands
No habitat islands and no introduction of fish or other aquatic wildlife to the reservoir
No public access to water's edge, where feasible
Other Improvements
No fence removal, chain-link fence will be replaced with a new fence
No parking improvements to Silver Lake Boulevard
No nighttime access



SOURCE: Hargreaves Jones Landscape Architects, 2022

Silver Lake Reservoir Complex Master Plan Project

Figure 5-3
Alternative 3 – Silver Lake Reservoir
Natural Lands and Open Space Preserve

5.4 Alternatives Suggested in Public Engagement Process

CEQA Guidelines Section 15126.6(a) requires that an EIR consider a “reasonable range” of alternatives. **Table 5-4** summarizes all project alternatives that have been suggested by the public and stakeholders through the master plan public engagement process and through the CEQA NOP scoping process. Each alternative suggested has been considered and included in this alternatives analysis either as components of Project Alternatives or as Rejected Alternatives as described in Section 5.2.

**TABLE 5-4
PROJECT ALTERNATIVES**

Alternatives Proposed	Alternatives Assessed in EIR
Master Plan Alternative Designs	
Passive Recreation Only – focus on enhancement of habitat values. No built structures.	Alternative 2: Reduced Project Alternative (No Built Structures)
Active Recreation Only – playground, pool, splashpad, no floating island, kayaking, boat house, pool house, café. Add playing fields?	Recreation-Focused Alternative (rejected from further consideration)
Blended Spaces	Proposed Project Alternative
Islands and Overlook – limited wetland and transition habitat to floating islands, no embankment edge, floating pool	Alternative 3: Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative (A hybrid alternative with no water’s edge access, no new lighting, no Education Center, no terraces, no habitat islands, no access to knoll, and perimeter fence maintained)
Alternatives Suggested in Letters/Comments	
Silver Lake Natural Lands and Open Space Preserve Alternative would nourish and maintain the Reservoir area as designated Open Space, as it is now zoned, free of man-made buildings and structural intrusions	Alternative 3: Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
No South Valley Construction Alternative	Alternative 2: Reduced Project Alternative
No Water Contact - No terraced seating, no boat launch, safety around lake	Alternative 3: Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
No Construction at the Knoll – no hardscape, no Community Center	Alternative 2: Reduced Project Alternative
Keep Perimeter Fence	Alternative 3: Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
No New Lighting	Alternative 3: Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
SLWS-1: Reduced Intensity Alternative	Alternative 2: Reduced Project Alternative
SLWS-2: Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative	Alternative 3: Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
Other Alternatives	
CEQA No Project Alternative	Alternative 1: No Project Alternative

5.5 Evaluation of CEQA Alternatives

The impacts of each of the alternatives are briefly described below and are compared to the objectives of the proposed Project. The analysis includes a discussion of a No Project Alternative as required under Section 15126(e)(1) of the CEQA Guidelines so that decision-makers can compare the impacts of approving the proposed Project with the impacts of not approving the proposed Project.

5.5.1 Alternative 1 - No Project Alternative

Under the No Project Alternative, the fundamental objective of the proposed Project, to repurpose the SLRC as a public park, would not be met. The 116-acre Project Site would remain as reservoirs, dams, buildings and structures, water and stormwater infrastructure, interior roads, and some public recreational facilities. Exiting operations of RAP and LADWP would continue under Alternative 1. The additional objectives of the proposed Project as described in Section 5.1.2 related to increased public access, recreational opportunities, habitat improvements, and educational opportunities would also not be met. Although the No Project Alternative would not result in significant environmental impacts, it would also not include the benefits that would occur with implementation of the proposed Project, Alternative 2 – Reduced Project, or Alternative 3– Natural Lands and Open Space Preserve.

Aesthetics

Under the No Project Alternative, no project components would be constructed, and the SLRC would continue to operate as under existing conditions. As such, no impacts to scenic vistas or scenic resources would result from this Alternative since no construction or physical improvements would occur. However, the beneficial effect of the proposed Project relative to visual character and quality through an expanded and improved upland habitat with implementation of the Tree Succession Plan, improved recreational opportunities, and offsite safety improvements would not occur under this Alternative. This alternative would avoid impacts associated with additional lighting and reflective surfacing of new structures. As such, overall, the No Project Alternative would result in fewer impacts than the Project relative to aesthetics.

Agriculture and Forestry Resources

Because Alternative 1 would not result in any changes at the project site, there would be no potential for conversion of or conflict with any agricultural uses or zoning. The project site does not contain lands zoned for forest land or timberland. Under Alternative 1, no impacts on agriculture or forestry resources would occur, which would be similar to the proposed Project.

Air Quality

Under this Alternative, no construction activities would be necessary and no addition of various community park facilities would occur. Accordingly, no additional air pollutant emissions would be generated by implementation of this Alternative and therefore no impacts to localized or regional construction emissions would occur. Similarly, given no net increase in air pollutant

emissions, no impacts related to AQMP consistency would occur. Operational emissions associated with existing maintenance activities would continue. Impacts would be less than the proposed Project relative to air quality. At the same time, by not building the proposed recreational facilities, opportunities for vehicular trips to be replaced by trips by foot and bicycle would be reduced, which would potentially reduce any offsetting reduction in vehicular emissions and associated improvement in long-term air quality. As such, the No Project Alternative would result in fewer impacts than the Project relative to air quality.

Biological Resources

Under the No Project Alternative, no new construction would occur and existing operations and maintenance activities would continue. Construction activities would not result in any physical changes to the environment. Additionally, the lack of physical impacts under this Alternative would serve to avoid impacts to wildlife corridors and conflicts with local ordinances protecting biological resources. Construction impacts to biological resources would be less than under the proposed Project due to the lack of any physical development or ground disturbance or need for tree removals. However, the proposed Project, which would result in the addition of approximately 500 trees to the Project site, and the proposed wetland and upland habitat improvements would not be realized. As such, the No Project Alternative would result in fewer impacts and fewer habitat improvements compared with the proposed Project.

Cultural Resources

Due to the lack of ground disturbing activities or physical development under this Alternative, no impacts to archaeological, paleontological, or historic resources would occur. Existing resources at the project site, both known and undiscovered, would not be affected by implementation of this Alternative. As such, impacts to cultural resources would be less than the proposed Project.

Energy

The No Project Alternative would not involve any changes to the project site and would, therefore, not involve construction activities that have the potential to result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Because the No Project Alternative would not introduce any new uses, there would be no change in energy consumption under this alternative, and no impacts would result related to energy. However, existing energy demands on site would be met with older, less energy-efficient fixtures. Therefore, the increased energy demand would be avoided, but the opportunity to increase energy efficiency would not occur. Impacts under the No Project Alternative may be slightly reduced compared to the proposed Project.

Geology, Soils, and Mineral Resources

The No Project Alternative would not result in any physical changes to the project site, and therefore would not have the potential to expose people or structures to increased risks associated with seismic ground shaking or seismic-related ground failure. Similarly, no impacts related to landslides, soil erosion, geologic stability, or alternative wastewater disposal systems would result

from this Alternative since no additional development would occur. This Alternative would not result in any ground disturbing activities, so no impact to paleontological resources or unique geologic features would occur. In addition, this Alternative would not result in any impact related to mineral resources. Geology, soils, and minerals impacts under this Alternative would be less than the proposed Project.

Greenhouse Gas Emissions

No new development would occur under the No Project Alternative, and exiting operations and maintenance activities would continue. As such, no new additional GHG emissions would result from its construction. Therefore, this Alternative would not result in any adverse impacts related to GHG emissions or consistency with any applicable plan, policy, or regulation to reduce GHG emissions, and impacts would be less than the proposed Project.

Hazards and Hazardous Materials

The No Project Alternative would not involve any construction activities and would not include ground-disturbing activities that could result in the release of hazardous materials into the environment. This Alternative would not result in construction activities or operations that would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing schools. Similarly, his alternative would not interfere with emergency response plan or emergency evacuation plan since no construction or operation would occur under this Alternative. In addition, the No Project Alternative would not involve any changes to the project site, therefore, would not introduce new conditions that have the potential to exacerbate wildfire risks. Therefore, no impacts related to hazards and hazardous materials would occur under the No Project Alternative, and impacts would be reduced compared to the proposed Project.

Hydrology and Water Quality

Implementation of the No Project Alternative would not involve any physical changes to the environment, including construction activities or operational activities that could result in impacts regarding drainage patterns and flooding potential or increased stormwater runoff. Alternative 1 would not affect groundwater recharge or groundwater supplies or alter the drainage of the Project site. No impacts related to hydrology and water quality would occur under the No Project Alternative. Therefore, impacts would be reduced compared to the proposed Project.

Land Use and Planning

The No Project Alternative would not entail any approvals or physical improvements. As such, this Alternative would have no potential to physically divide an established community or result in conflicts with existing plans, policies, or regulations applicable to the Project site. Therefore, land use impacts would be similar to the proposed Project.

Noise

Under the No Project Alternative, no physical changes to the environment would occur, and therefore would not have any potential to generate noise or vibration beyond what currently

exists. Because this Alternative would not result in any construction activities or planned events and would not modify the existing operation of facilities within the SLRC, no impacts related to noise or vibration would occur. The Alternative would avoid a significant and unavoidable noise impacts associated with planned events at the park and construction and would avoid a significant unavoidable impact of construction vibration. Therefore, noise and vibration impacts would be less than under the proposed Project.

Population and Housing

Under the No Project Alternative, no new homes or businesses would be constructed and no residential uses or associated existing population would be removed. Therefore, no impact to population and housing would occur and impacts would be similar to the proposed Project.

Public Services

The No Project Alternative would not involve any construction or operational activities at the project site and would not result in any increased demand on public services. Alternative 1 would result in no impacts related to public services, and impacts would be reduced compared to the proposed Project.

Recreation and Parks

The No Project Alternative would not involve the construction or operation of a new recreational facilities at the project site. As such, because Alternative 1 would not provide new recreational facilities to meet the existing or future demand, this alternative could result in the increased use of existing neighborhood or regional parks or other recreational facilities such that substantial deterioration could occur, or could require the construction of new or expanded parks elsewhere, which might have adverse impacts on the environment not already identified in this EIR. However, Alternative 1 would avoid all of the significant and unavoidable impacts associated with recreation and parks due to construction and event noise. Therefore, Alternative 1 would result in fewer impacts related to recreation compared to the proposed Project.

Transportation

Under the No Project Alternative, no construction activities would occur, and therefore would not result in construction truck trips that would have the potential to conflict with a program, plan, ordinance, or policy addressing the circulation system. Alternative 1 would not introduce any new uses at the site and, as such, would not generate any new sources of traffic traveling to or from the project site. The No Project Alternative would not substantially increase hazards due to a geometric design feature. In addition, this Alternative would not result in inadequate emergency access. The No Project Alternative would not improve the bike lanes along Silver Lake Boulevard. As a result, the Alternative would not improve conditions or implement priorities of the City's Mobility Plan. However, since fewer visitors would visit the site under Alternative 1, impacts would be reduced compared to the proposed Project.

Tribal Cultural Resources

The No Project Alternative would not involve any ground-disturbing activities. Therefore, this Alternative would not have the potential to damage or destroy any previously unidentified archaeological resources. No impacts would occur on tribal cultural resources under the No Project Alternative, and impacts would be reduced compared to the proposed Project.

Utilities and Service Systems

Alternative 1 would not introduce any new uses at the project site and would not increase demand on any utilities. No impacts related to utilities would occur under Alternative 1, and impacts would be reduced compared to the proposed Project.

Wildfire

Alternative 1 would not introduce any new uses at the project site and would not increase potential human-related ignition sources. No impacts related to wildfire would occur under Alternative 1, and impacts would be reduced compared to the proposed Project.

Relationship to Project Objectives

Alternative 1 would avoid or reduce impacts related to the majority of the resource areas. However, Alternative 1 would not meet the fundamental project objective to repurpose the SLRC into a public park. Alternative 1 would meet one of the project objectives, related to continued use by LADWP, because LADWP is required to maintain the reservoirs and dams. Alternative 1 would not achieve any of the other objectives, including to preserve and enhance the unique character of the SLRC with increased points of access, improved internal circulation and access to the water's edge, and increased spaces for community and family gatherings; expand existing active recreational uses and increase passive recreational uses; enhance and expand wildlife habitat by introducing wetland and aquatic ecologies; or provide opportunities for the public to connect with nature and provide facilities for onsite environmental education and stewardship.

5.5.2 Alternative 2 – Reduced Project Alternative

The Reduced Project Alternative, Alternative 2, would modify the existing SLRC into a public park, similar to the proposed Project, but it would not construct any new structures. Alternative 2 would be constructed within a similar overall footprint as the proposed Project and would only focus on the habitat enhancement aspect of the proposed Project. For example, recreational facilities such as a new Multi-Purpose Facility, play field, expanded dog park, or reconfiguration of the existing Recreation Center would not be constructed. Please refer to Table 5-1 and Figure 5-2 for a summary of the project elements included in Alternative 2.

Aesthetics

Under the Reduced Project Alternative, some of the public amenities of the proposed Project would be eliminated as outlined in Table 5-2. Views of the reservoirs would be similar to the proposed Project, since the perimeter fence would be removed and public access to water features would be implemented. The Alternative would remain consistent with land use plans policies

toward visual resources and character of park land uses. In addition, similar to the proposed Project, additional the new lighting plan would alter the existing nighttime condition in areas accessible to the public. Impacts would be similar to the proposed Project.

Agriculture and Forestry Resources

The project site is currently not used for agriculture and does not contain agricultural resources that meet the Prime and Statewide soil criteria. The project site does not contain lands zoned for forest land or timberland. Under Alternative 2, impacts on agriculture or forestry resources would be similar to the proposed Project.

Air Quality

Under Alternative 2, duration of construction activities would be less than the proposed Project since no new structures would be built. Although daily emissions during peak grading days would be similar to the proposed Project, but the duration of construction would be reduced. Once constructed, visitorship to the park would be slightly less due to the elimination of special events. Operational air pollutant emissions from vehicle traffic generated by the park would be similar to the proposed Project. Impacts would be less than the proposed Project.

Biological Resources

During construction, sensitive species and protected trees would be affected similar to the proposed Project. Also, similar to the proposed Project, wildlife corridors would not be adversely affected, and no impact to habitat conservation plans would occur under this Alternative. Once constructed, this Alternative 2 would support wildlife and habitat values similar to the proposed Project. Human disturbance would be experienced under Alternative 2, similar to the proposed Project due the location of the park within a densely populated urban area. Impacts to biological resources would be similar to the proposed Project.

Cultural Resources

Due to ground disturbing activities and physical development under this Alternative, impacts to archaeological, paleontological, or historic resources would be similar to the proposed Project. Impacts to existing resources at the project site, both known and undiscovered, would be similar under Alternative 2.

Energy

Alternative 2 would include grading and replanting throughout the park similar to the proposed Project. The Alternative would not result in wasteful, inefficient, or unnecessary consumption of energy resources. However, since no new structures would be built, new energy-efficient fixtures would not be installed to replace existing demands. Nonetheless, energy impacts under Alternative 2 would be similar to the proposed Project.

Geology, Soils, and Mineral Resources

Alternative 2 would grade and replant the park similar to the proposed Project, with fewer structures. There would be a similar potential to expose people or structures to increased risks

associated with seismic ground shaking or seismic-related ground failure. Similarly, no impacts related to landslides, soil erosion, geologic stability, or alternative wastewater disposal systems would result from this Alternative. Ground disturbing activities would have the potential to encounter paleontological resources similar to the proposed Project. Nor would this Alternative result in any impact related to mineral resources. Geology, soils, and minerals impacts under this Alternative would be similar to the proposed Project.

Greenhouse Gas Emissions

Under Alternative 2, construction durations would be similar or slightly shorter than the proposed Project. GHG emissions associated with construction would be slightly less than the proposed Project. Similar to the proposed Project, this Alternative would be consistent applicable plans, policies, and regulations to reduce GHG emissions. Impacts would be slightly less than the proposed Project.

Hazards and Hazardous Materials

Similar to the proposed Project, Alternative 2 would comply with regulatory requirements to minimize the risk of emitting hazardous emissions. The Alternative would not handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing school. Since the park would remain an attraction to the local community, this alternative would be designed to avoid interference with emergency response plan or emergency evacuation plan, similar to the proposed Project. Therefore, impacts would be similar to the proposed Project.

Hydrology and Water Quality

Construction activities would occur under this Alternative that could result in impacts to drainage patterns, flooding, or impacts stormwater runoff water quality. Similar to the proposed Project, Alternative 2 would not affect groundwater recharge or alter the drainage of the Project site. Groundwater needed for the reservoirs would be similar under this Alternative with the proposed Project. Some new facilities would be avoided that could reduce impervious surfaces compared with the proposed Project, but would not affect groundwater recharge substantially. On-site stormwater capture features would protect runoff water quality similar to the proposed Project. Impacts related to hydrology and water quality would be similar to the proposed Project.

Land Use and Planning

Similar to the proposed Project, Alternative 2 would not require any General Plan or zoning amendments. Similar to the proposed Project, this Alternative would have no potential to physically divide an established community or result in conflicts with existing plans, policies, or regulations applicable to the Project site. Therefore, no land use impacts would occur and impacts would be similar to the proposed Project.

Noise

Fewer construction activities would occur under Alternative 2 that could generate noise or vibration. As a result, construction noise and vibration would be slightly less than the proposed Project. Construction noise would remain significant and unavoidable. However, construction

related vibration would be eliminated since no new structures would be built. Once implemented, the Reduced Project Alternative would not allow permitted special events. This would avoid a significant and unavoidable impact of the project related to operational noise. Therefore, operational noise and construction vibration impacts would be less than under the proposed Project.

Population and Housing

Similar to the proposed Project, no new homes or businesses would be constructed and no residential uses or associated existing population would be removed under Alternative 2. Therefore, no impact to population and housing would occur and impacts would be similar to the proposed Project.

Public Services

Similar to the proposed Project, Alternative 2 would not result in increased demand on public services. Impacts would be similar to the proposed Project.

Recreation and Parks

Alternative 2 would support public access of the park similar to the proposed Project. It would not result in increased use of other neighborhood or regional parks or recreational facilities such that substantial deterioration could occur, or could require the construction of new or expanded parks elsewhere, which might have adverse impacts on the environment not already identified in this EIR. Since special events would not occur, Alternative 2 would avoid a significant and unavoidable operation impact to Recreation and Parks, although construction noise would remain significant and unavoidable. Therefore, Alternative 2 would adversely impact recreation and parks less than proposed Project.

Transportation

Fewer construction activities would occur under this Alternative that would require construction truck traffic to the site. Once constructed, the park would remain a public attraction. Similar to the proposed Project, the bike lane would be improved under Alternative 2. As a result, Alternative 2 would not conflict with any program, plan, ordinance, or policy addressing the circulation system, including the Mobilization Plan. Alternative 2 would not substantially increase hazards due to a geometric design feature. In addition, this Alternative would not result in inadequate emergency access. Impacts related to transportation and circulation under Alternative 2 would be similar to the proposed Project.

Tribal Cultural Resources

Fewer construction activities would occur under Alternative 2. Nonetheless, similar to the proposed Project, excavation would have the potential to damage or destroy any previously unidentified archaeological resources. Impacts to tribal cultural resources under Alternative 2 would be similar to the proposed Project.

Utilities and Service Systems

Fewer construction activities would occur under this Alternative. Similar to the proposed Project, Alternative 2 would not increase demand on any utilities. Impacts would be similar to the proposed Project.

Wildfire

Fewer construction activities would occur under this Alternative. However, the same wildfire management actions would be required to ensure that fuel management is implemented to minimize wildfire risk from constructed habitats similar to the proposed Project. Impacts would be similar to the proposed Project.

5.5.3 Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative

Alternative 3 would be a hybrid of project components. Alternative 3 would be constructed within a similar overall footprint as the proposed Project and would focus on limiting public access to the Knoll, Eucalyptus Grove, and the water's edge. It would include a reconfigured and expanded lawn in the Meadow, with expanded ornamental and rain gardens. In the Knoll, only damaged or dying trees would be removed and as a result, the tree succession plan for tree planting would be reduced. There would be no public access to the Knoll, and the Education Center, Nature trails and seating terraces would not be constructed. For the Ivanhoe Reservoir, only the walking path would be expanded. In the Eucalyptus Grove, only damaged or dying trees would be removed, and the tree succession plan for tree planting would be reduced. In the East and West Narrows, the walking path would be updated and expanded. An 8-foot high, non-scalable, continuous perimeter fence with gates for pedestrian and wildlife access would be constructed. The reservoirs would remain similar to existing conditions, with some new wetland habitat around the perimeter of the Silver Lake Reservoir. Promenades and walking paths would be constructed under this alternative, but would be moved further away from the water's edge at both reservoirs where feasible. This alternative would retain all current public use facilities while improving the more heavily-used facilities on the South Valley.

Aesthetics

Under the Alternative 3, the intensity of the proposed Project would be reduced and habitat areas (without the habitat islands) would provide some opportunities to create and conserve greenspace and open space, and encourage growth of native plant species to create habitat. This Alternative would limit public access to the water and would not include habitat islands or other built facilities. Impacts to scenic vistas or scenic resources would be similar to the proposed Project. Retention of the fence would affect views of the SLRC from off-site, but would remain consistent with land use plans policies toward visual resources and character of park land uses. However, since this alternative would avoid impacts associated with additional lighting and reflective surfacing of new structures, it would result in fewer impacts than the proposed Project relative to aesthetics.

Agriculture and Forestry Resources

The Project site is currently not used for agriculture and does not contain agricultural resources that meet the Prime and Statewide soil criteria. The project site does not contain lands zoned for forest land or timberland. Under Alternative 3, impacts on agriculture or forestry resources would be similar to the proposed Project.

Air Quality

Under Alternative 3, duration of construction activities would be reduced slightly since fewer community park facilities would be built. However, daily emissions during peak construction days would be similar to the proposed Project. Once constructed, visitorship to the park would be less due to fewer facilities and no special events. However, operational air pollutant emissions from vehicle traffic generated by the park would be similar to the proposed Project. Impacts would be slightly less than the proposed Project.

Biological Resources

Alternative 3 would promote natural features of the park and reduce public access to areas that could support wildlife. Fewer visitor serving structures would be constructed, and the reservoirs would remain similar to existing conditions. Wetland habitat would be created around the perimeter of the Silver Lake Reservoir, although habitat islands would not be installed. Also, similar to the proposed Project, wildlife corridors would not be adversely affected, and no impact to habitat conservation plans would occur under this Alternative. Since only damaged or dying trees would be removed, the tree succession plan for tree planting would be reduced. Once constructed, Alternative 3 would create new wetland habitat and modestly improve existing upland habitat. Some areas would have limited public access and the perimeter fence would be retained, reducing disturbance to habitat. In summary, although some biological values would be prioritized under Alternative 3, impacts to biological resources from construction would be similar to the proposed project, but the enhancement and reduced access would benefit wildlife resulting in reduced impacts compared to the proposed Project.

Cultural Resources

Due to ground disturbing activities and physical development under this Alternative, impacts to archaeological, paleontological, or historic resources would be similar to the proposed Project, although to a lesser extent. Impacts to existing resources at the project site, both known and undiscovered, would be slightly less under Alternative 3.

Energy

Alternative 3 would construct fewer structures on the project site, but would still include grading and replanting throughout the park. Similar to the proposed Project, the Alternative would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Energy impacts under Alternative 3 would be similar to the proposed Project.

Geology, Soils, and Mineral Resources

Alternative 3 would construct no new buildings and fewer shade -structures on site, but would still grade and replant the park. With fewer structures there would be less potential to expose people or structures to increased risks associated with seismic ground shaking or seismic-related ground failure. Similarly, no impacts related to landslides, soil erosion, geologic stability, or alternative wastewater disposal systems would result from this Alternative. Ground disturbing activities would have the potential to encounter paleontological resources similar to the proposed Project. Nor would this Alternative result in any impact related to mineral resources. Geology, soils, and minerals impacts under this Alternative would be similar to the proposed Project.

Greenhouse Gas Emissions

Fewer construction activities would occur under this Alternative, and as a result, GHG emissions associated with construction would be slightly less than the proposed Project. Similar to the proposed Project, this Alternative would be consistent applicable plans, policies, and regulations to reduce GHG emissions. Impacts would be slightly less than the proposed Project.

Hazards and Hazardous Materials

Fewer construction activities would occur under Alternative 3 that could result in the release of hazardous materials into the environment. However, similar to the proposed Project, this alternative would comply with regulatory requirements to minimize the risk of emitting hazardous emissions. Alternative 3 would not handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing school. Since the park would remain an attraction to the local community, this alternative would be designed to avoid interference with emergency response plan or emergency evacuation plan, similar to the proposed Project. Therefore, impacts would be similar to the proposed Project.

Hydrology and Water Quality

Fewer construction activities would occur under this Alternative that could result in impacts to drainage patterns, flooding, or impacts stormwater runoff water quality. Similar to the proposed Project, Alternative 3 would not affect groundwater recharge or alter the drainage of the Project site. Groundwater needed for the reservoirs would be similar under this Alternative with the proposed Project. Some new facilities would be avoided that could reduce impervious surfaces compared with the proposed Project, but would not affect groundwater recharge substantially. On-site stormwater capture features would protect runoff water quality similar to the proposed Project. Impacts related to hydrology and water quality would be similar to the proposed Project.

Land Use and Planning

Similar to the proposed Project, Alternative 3 would not require any General Plan or zoning amendments. Similar to the proposed Project, this alternative would have no potential to physically divide an established community or result in conflicts with existing plans, policies, or

regulations applicable to the Project site. Therefore, no land use impacts would occur and impacts would be similar to the proposed Project.

Noise

Fewer construction activities would occur under Alternative 3 that could generate noise or vibration. As a result, construction noise and vibration would be less than the proposed Project, but still remain significant and unavoidable. Once constructed, Alternative 3 would not allow permitted special events with the use of amplified sound. This would avoid a significant and unavoidable impact of the proposed Project during operations. Therefore, operational noise impacts would be less under Alternative 3 than under the proposed Project.

Population and Housing

Similar to the proposed Project, no new homes or businesses would be constructed and no residential uses or associated existing population would be removed under Alternative 3. Therefore, no impact to population and housing would occur and impacts would be similar to the proposed Project.

Public Services

Similar to the proposed Project, Alternative 3 would not result in increased demand on public services. Impacts would be similar to the proposed Project.

Recreation and Parks

Alternative 3 would support public access of the park in certain areas, but less than the proposed Project. It would not result in increased use of other neighborhood or regional parks or recreational facilities such that substantial deterioration could occur, or could require the construction of new or expanded parks elsewhere, which might have adverse impacts on the environment not already identified in this EIR. Since special events would not occur, Alternative 3 would avoid a significant and unavoidable operation impact to Recreation and Parks, although construction noise would remain significant and unavoidable. Therefore, Alternative 3 would impact recreation and parks less than the proposed Project.

Transportation

Fewer construction activities would occur under this Alternative that would require construction truck traffic to the site. Once constructed, the park would remain a public attraction, but fewer visitors may use the facilities due to the more limited facilities and lack of public access to certain areas. However, similar to the proposed Project, the bike lane would be improved under Alternative 3. As a result, Alternative 3 would not conflict with any program, plan, ordinance, or policy addressing the circulation system, including the Mobilization Plan. Alternative 3 would not substantially increase hazards due to a geometric design feature. In addition, this Alternative would not result in inadequate emergency access. Impacts related to transportation and circulation under Alternative 3 would be similar to the proposed Project.

Tribal Cultural Resources

Fewer construction activities would occur under Alternative 3. Nonetheless, similar to the proposed Project, excavation would have the potential to damage or destroy any previously unidentified archaeological resources. Impacts to tribal cultural resources under Alternative 3 would be similar to the proposed Project.

Utilities and Service Systems

Fewer construction activities would occur under this Alternative. Similar to the proposed Project, Alternative 3 would not increase demand on any utilities. Impacts would be similar to the proposed Project.

Wildfire

Fewer construction activities would occur under this Alternative. However, the same wildfire management actions would be required to ensure that fuel management is implemented to minimize wildfire risk from constructed habitats similar to the proposed Project. Impacts would be similar to the proposed Project.

5.5.4 Consideration of Hybrid Alternatives

This EIR has identified and analyzed a range of several possible project alternatives. One alternative considered but rejected had increased recreation facilities and water-based activities; another project alternative considered but rejected an alternative site location. Alternatives identified and analyzed in detail include the No Project Alternative (Alternative 1), where existing operations continue, the Reduced Project Alternative (Alternative 2), which focuses on creating wetland and upland habitat improvements (versus adding new recreational facilities), and the Natural Lands and Open Space Preserve Alternative (Alternative 3), which focuses more on preserving open space, maintaining existing conditions of the reservoirs, and limiting public access to the Knoll, Eucalyptus Grove, and the water's edge. If components of any of these alternatives were combined to create a new alternative, it is not likely that the new project alternative would result in a substantially different conclusion when comparing environmental impacts relative to the proposed Project.

5.6 Comparison of CEQA Alternatives

5.6.1 Avoidance of Significant Environmental Impacts

Table 5-5 identifies environmental impacts that would result from the proposed Project and each of the alternatives. **Table 5-6** compares the severity of the impacts resulting from the project alternatives with the proposed Project. The two action alternatives would result in reduced construction impacts and would eliminate the significant and unavoidable impact associated with operational noise during permitted special events at the SLRC.

**TABLE 5-5
SUMMARY OF CEQA ANALYSIS BY ALTERNATIVE**

Environmental Resource	Alternative 1 - No Project Alternative	Proposed Project	Alternative 2 – Reduced Project Alternative	Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
Aesthetics	No Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	Less than Significant Impact
Agriculture and Forestry Resources	No Impact	No Impact	No Impact	No Impact
Air Quality	No Impact	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation
Biological Resources	No Impact	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation
Cultural Resources	No Impact	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation
Energy	No Impact	Less than Significant Impact	Less than Significant Impact	Less than Significant Impact
Geology, Soils, and Mineral Resources	No Impact	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation
Greenhouse Gas Emissions	No Impact	Less than Significant Impact	Less than Significant Impact	Less than Significant Impact
Hazards and Hazardous Materials	No Impact	Less than Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation
Hydrology and Water Quality	No Impact	Less than Significant Impact	Less than Significant Impact	Less than Significant Impact
Land Use and Planning	No Impact	Less than Significant Impact	Less than Significant Impact	Less than Significant Impact
Noise	No Impact	Significant and Unavoidable Impact for construction noise, construction vibration, operational noise, and cumulative noise	Less than Significant Impact with Mitigation for Operational Noise and construction vibration Significant and Unavoidable for construction noise and cumulative noise	Less than Significant Impact with Mitigation for Operational Noise Significant and Unavoidable for construction noise and vibration and cumulative noise
Population and Housing	No Impact	Less than Significant Impact	Less than Significant Impact	Less than Significant Impact
Public Services	No Impact	Less than Significant Impact	Less than Significant Impact	Less than Significant Impact
Recreation and Parks	No Impact	Significant and Unavoidable Impact	Significant and Unavoidable for construction noise Significant and Unavoidable for operation during special events	Significant and Unavoidable for construction noise Significant and Unavoidable for operation during special events
Transportation	No Impact	Less than Significant Impact	Less than Significant Impact	Less than Significant Impact
Tribal Cultural Resources	No Impact	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation
Utilities and Service Systems	No Impact	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation	Less than Significant Impact with Mitigation
Wildfire	No Impact	Less than Significant Impact	Less than Significant Impact	Less than Significant Impact

**TABLE 5-6
COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT**

Environmental Resource	Alternative 1 – No Project	Alternative 2 – Reduced Project Alternative	Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
Aesthetics	-1	0	0
Agriculture and Forestry Resources	0	0	0
Air Quality	-2	-2	-1
Biological Resources	-1	0	-1
Cultural Resources	-2	0	0
Energy	-1	0	0
Geology, Soils, and Mineral Resources	-1	0	0
Greenhouse Gas Emissions	-2	-2	-1
Hazards and Hazardous Materials	-1	0	0
Hydrology and Water Quality	-1	0	0
Land Use and Planning	0	0	0
Noise	-3	-3	-2
Population and Housing	0	0	0
Public Services	-1	0	0
Recreation and Parks	-2	-1	-1
Transportation	-1	0	0
Tribal Cultural Resources	-1	0	0
Utilities and Service Systems	-1	0	0
Wildfire	-1	0	0
Total	22	-8	-6

NOTES:

(-3) = Impacts considered to be substantially reduced when compared with the proposed Project.

(-2) = Impacts considered to be moderately reduced when compared with the proposed Project.

(-1) = Impacts considered to be somewhat reduced when compared with the proposed Project.

(0) = Impacts considered to be equal to the proposed Project.

(+1) = Impacts considered to be somewhat increased when compared with the proposed Project.

(+2) = Impacts considered to be moderately increased when compared with the proposed Project.

(+3) = Impacts considered to be substantially increased when compared with the proposed Project.

Where significant unavoidable impacts would occur across different alternatives but there are impact intensity differences between those alternatives, numeric differences are used to differentiate alternatives (i.e., in some cases, there are differences at the individual impact level, such as differences in number of impacts or relative intensity).

5.6.2 Ability to Meet Project Objectives

Table 5-7 provides a comparison between each project alternative and the project objectives. The No Project Alternative meets only one project objective: maintaining LADWP access and use of the facility. Alternative 2 – Reduced Project Alternative meets all of the project objectives but some less so than the proposed Project. Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve would meet some of the project objectives. It would not enhance the public points of access to the water’s edge or improve community and family gathering opportunities. Alternative 3 would also not enhance and expand wildlife habitat by introducing wetland and

aquatic ecologies. The habitat enhancements that would occur under Alternative 3 would be focused on limiting public access to the Knoll, Eucalyptus Grove, and the water's edge.

**TABLE 5-7
ALTERNATIVES COMPARISON TO PROJECT OBJECTIVES**

Objective	Alternative 1 – No Project	Alternative 2 – Reduced Project Alternative	Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
<p>Create a clear, bold design that repurposes the SLRC into a public park, while preserving and enhancing its unique character. The underlying purpose of the Project is to put the SLRC to a beneficial public park use because it is no longer usable for storing potable water due to government regulations. Because LADWP is required to maintain the reservoirs for other environmental purposes, including maintaining the dams, the proposed Project would use the reservoirs as part of a park to benefit area residents.</p>	<p>No. The No Project Alternative would not repurpose or enhance the character of the SLRC</p>	<p>Yes. Alternative 2 would repurpose, preserve and enhance the SLRC, but with fewer improvements than the proposed Project.</p>	<p>Yes. Alternative 3 would repurpose, preserve and enhance the SLRC, but with a priority to preserve open space for wildlife and limit public access to the facility.</p>
<p>Preserve and enhance the unique character of the SLRC with increased points of access, improved internal circulation and access to the water's edge, and increased spaces for community and family gatherings.</p>	<p>No. The No Project Alternative would preserve the existing condition, but would not enhance or reduce dilapidation of existing public park facilities. Nor would it increase points of access to the water's edge or provide increased space for community gatherings.</p>	<p>Yes. but less so than the proposed Project. This alternative would include the addition of habitat islands and wetland habitat along the perimeter of the reservoir. Circulation and access to the water's edge would be enhanced. Improvements to the South Valley would occur. However seating terraces or shade structures within the park would be limited. The alternative would increase spaces for community and family gatherings, but less so than under the proposed Project. No permitted special events would be allowed under this alternative, limiting the opportunity for community gatherings.</p>	<p>No. While this alternative would increase passive recreational uses, it would not expand existing active recreational uses since proposed park zones would not be developed to include recreational opportunities such as an Education Center, seating terraces, flex lawn, picnic grove, play area. However, the facilities within the South Valley would still be implemented. No permitted special events would be allowed under this alternative, limiting the opportunity for community gatherings. This alternative would not include the addition of habitat islands but would include some wetland habitat along the perimeter of the reservoir. Circulation and access to the water's edge would not be enhanced since overlooks would not be constructed and the proposed pathways/ promenade would be placed further from the water's edge where feasible.</p>

Objective	Alternative 1 – No Project	Alternative 2 – Reduced Project Alternative	Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
<p>Expand existing active recreational uses and increase passive recreational uses.</p>	<p>No. The No Project Alternative would not expand active or passive recreational uses.</p>	<p>Yes. but less so than the proposed Project.</p> <p>This alternative would implement some of the Master Plan's enhancement concepts, but would exclude seating terraces and shade pavilions.</p> <p>The dog park would not be improved and fewer improvements to the South Valley would be implemented. The multi-purpose facility would not be constructed.</p> <p>Habitat would be restored to provide an expanded range of native habitats to sustain species biodiversity of plants, birds and animals, including open water, marsh, riparian and upland habitats, which would meet this project objective. Habitat would be created within the Knoll and along the reservoirs' edges. The floating habitat islands would be constructed.</p>	<p>Partially Yes..</p> <p>While this alternative would increase some passive recreational uses, it would not include access to the Knoll, or recreational opportunities such as an Education Center, seating terraces, ornamental gardens, flex lawn, picnic grove, and informal play area. Improvements to existing recreational facilities in the South Valley would still occur.</p> <p>The perimeter fence would limit public access, resulting in less recreational opportunities than under the proposed Project.</p>
<p>Enhance and expand wildlife habitat by introducing wetland and aquatic ecologies.</p>	<p>No. No improvements would be made to enhance or expand wildlife habitats.</p>	<p>Yes. Habitat would be restored to provide an expanded range of native habitats to sustain species biodiversity of plants, birds and animals, including open water, marsh, riparian and upland habitats, which would meet this project objective. Habitat would be installed within the Knoll. However, habitat would be created along the reservoirs' edges and the floating habitat islands would be constructed.</p>	<p>No.</p> <p>Habitat would be restored to include open water with some limited wetland habitat along the reservoir's edge, and upland habitats, which would not meet this project objective. Habitat would be expanded within the Knoll. However, the floating habitat islands would not be created and fish would not be introduced.</p>
<p>Provide opportunities for the public to connect with nature and provide facilities for onsite environmental education and stewardship.</p>	<p>No. Under the current condition, the SLRC provides limited opportunities for connecting with nature. As a public park, some landscaping provides recreational opportunities, but only limited natural areas that could provide for onsite environmental education and stewardship.</p>	<p>Yes. but less so than the proposed Project.</p> <p>The alternative would enhance natural habitats including upland, wetland, and aquatic habitats, providing opportunities for connection with nature. It would not include the construction of the Educational Center.</p>	<p>Partially Yes.</p> <p>The alternative would enhance natural habitats, providing opportunities for connection with nature. However, the public access to the natural areas would be limited, including the retention of a perimeter fence to control access and to close areas at night. It would not include the construction of the Educational Center or facilities for onsite education and stewardship.</p>

Objective	Alternative 1 – No Project	Alternative 2 – Reduced Project Alternative	Alternative 3 – Silver Lake Reservoirs Natural Lands and Open Space Preserve Alternative
Allow for continued underlying LADWP operations, access, and future use of designated areas of the site, thereby allowing continued use of the reservoirs and adjacent facilities that are intended to remain for proprietary use by LADWP.	Yes. the No Project Alternative would retain the underlying LADWP operations, access and future uses.	Yes the Reduced Project Alternative would retain the underlying LADWP operations, access and future uses.	Yes. The Alternative would retain the underlying LADWP operations, access and future uses.

5.7 Environmentally Superior Alternative

Section 15126.6 of the CEQA Guidelines requires that an “environmentally superior” alternative be identified. The environmentally superior alternative is the alternative that would be expected to generate the least amount of significant impacts. As shown in Table 5-5, each of the Alternatives to the proposed Project would eliminate the significant and unavoidable impacts of the proposed Project which is the noise impacts from permitted special events at the SLRC. Although the No Project Alternative would result in the fewest impacts on the existing environment, this alternative would not result in the benefits anticipated under the proposed Project, Alternative 2, or Alternative 3, or meet the fundamental project objective of repurposing the Project Site into a public park.

Pursuant to Section 15126.6(e)(2) of the CEQA Guidelines, when the No Project Alternative is identified as the environmentally superior alternative, the EIR must also identify an environmentally superior alternative from the remaining alternatives. As noted in Table 5-6, impacts associated with Alternative 2 and Alternative 3 would be less than the proposed Project due to the reduced amount of construction and elimination of permitted special events. Since Alternative 2 would construct the fewest structures, it would result in the least amount of construction and least noise, vibration, and air emissions. However, Alternative 3 would result in a greater benefit to habitat values. Nonetheless, Alternative 2 is considered the Environmentally Superior Alternative. CEQA Guidelines do not require an agency to select the environmentally superior alternative (CEQA Guidelines 15042-15043), and allow for the selection of alternatives that more effectively meet project objectives and obtain project benefits. Alternative 2 would meet all of the project objectives, but to a lesser degree than the proposed Project. Eliminating the ability to provide special events at the park diminishes the objective to “increase spaces for community and family gatherings.” In addition, by eliminating all built structures, Alternative 2 would not provide all the recreational and community benefits included in the proposed Project and envisioned in the primary project objective.

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CHAPTER 6

Preparers, Contributors, and Oversight

The purpose of this chapter is to meet requirements described in Section 15129 of the CEQA Guidelines, Organizations and Persons Consulted, which states the following regarding EIRs prepared pursuant to CEQA:

“The EIR shall identify all federal, state, or local agencies, other organizations, and private individuals consulted in preparing the draft EIR, and the persons, firm, or agency preparing the draft EIR, by contract or other authorization (Authority Cited: Section 21083, Public Resources Code; Reference: Sections 21104 and 21153, Public Resources Code).”

6.1 City of Los Angeles

Bureau of Engineering

Deborah Weintraub, AIA, LEEDAP,
Chief Deputy City Engineer
Mary Nemick, *Director of Communications*
Bertram (Bert) Moglebust, *Permit Case Management Division – Principal Civil Engineer*
Wendy Delgado, *Architect, CPM*
Dr. Jan Green Rebstock, *Environmental Affairs Officer*
Christopher Adams, *Environmental Specialist III*
Neel Mistry, *Construction Management Division – Civil Engineer*

Department of Recreation and Parks

Elena Maggioni, *Environmental Supervisor*
Darryl Ford, *Superintendent Of Planning And Construction*
Steve Dunlap, *Principal Grounds Maintenance Supervisor II – RAP Forestry*

Planning Department

Craig Weber, *Principal City Planner*
Priya Mehendale, *Senior City Planner*

Planning Department – Office of Historic Preservation

Lambert Giessinger, *Architect*

Los Angeles Department of Water and Power

Jane Hauptman, *Environmental Affairs Officer*
Christine Truong, *Civil Engineering Associate*
Kathryn Laudeman, *Environmental Engineering Associate*

Bureau of Sanitation

Ida Meisami-Fard, *Civil Engineer*
Kevin Ho, *Environmental Engineering Associate III*

Councilmember Nithya Raman, 4th District

Geoff Thompson, *Deputy Chief of Staff*
Helene Rotolo, *Senior Deputy, Capital Projects*

Councilmember Mitch O’Farrell, 13th District

Christine Peters, *Policy Director*

Los Angeles Fire Department

Eric French, *Fire Captain 1*
Matthew Craig, *Inspector II*

Los Angeles Police Department

James Nichols, *CPD*

Board of Public Works

Rachel Malarich, *City Forest Officer*

**Los Angeles Department of
Transportation**

Tomas Carranza, *Principal*

Transportation Engineer

Wes Pringle, *Transportation Engineer*

6.2 Environmental Science Associates

Tamseel Mir, *Project Director*

Nicolle Ianelli Steiner, *Project Manager*

Tom Barnes, *Technical Advisor*

Alan Sako, *Air Quality, Climate, & Acoustics Director*

Elbert Hsiung, *Air Quality, Acoustics, and Greenhouse Gas Emissions Analyst*

Tim Witwer, *Noise and Energy Specialist*

Monica Strauss, *Cultural Resources Director*

Sara Dietler, *Cultural Resources Specialist*

Margarita Jerabek, *Historic Resources Director*

Shannon Papin, *Historic Resources Specialist*

Barbra Calantas, *Biological Resources Director*

Ryan Gilmore, *Biological Resources Specialist*

Amanda French, *Biological Resources Specialist*

Douglas Gordon-Blackwood, *Arborist*

Michael Burns, *Environmental Scientist*

Claudia Watts, *Environmental Planner*

Andray Cardoza, *Environmental Planner*

Katelyn Matroni, *Environmental Planner*

Shannon McAlpine, *Environmental Planner*

Nicole Sanchez Sullivan, *Publications Services Manager*

6.3 Hargreaves Jones

Meghen Quinn, *Principal*

6.4 Jano Baghdanian and Associates

Jano Baghdanian, *President*

Sam Wang, *Principal Traffic Engineer*

Bryan Hamilton, *Transportation Engineer*